Investigating literacy development among learners with a second language as medium of education – The effects of an emergent literacy stimulation program in Grade R

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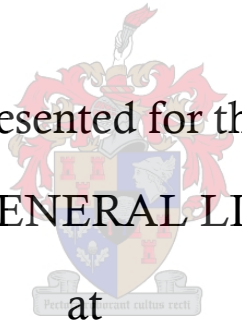

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DECLARATION

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ABSTRACT

Addressing the low literacy rates in South Africa poses a mountainous challenge. However, identifying children at risk for reading difficulties and providing timely and preventative intervention might be a good starting point to addressing this challenge. This study aimed at making a contribution to the existing body of literature on emergent literacy skills of learners who are educated in a second or additional language. The study investigated English Language Learners' (ELLs) emergent literacy skills prior to entering Grade 1 and evaluated the effectiveness of an evidence-based stimulation program in the South African context.

The main research question this study attempted to answer was: "What is the effect of a stimulation program for emergent literacy skills in Grade R on the development of literacy of English Language Learners in Grade 1?" In a quasi-experimental design, ELLs' emergent literacy skills were assessed with an adapted version of the Emergent Literacy Assessment battery (Willenberg 2004) and were compared to those of English first language (L1) and of ELL control groups, both prior to and after an 8-week purpose-designed stimulation program. Results indicated that while learners showed significant improvement on six out of the eight subtests, the particular intervention program did not significantly improve ELLs' emergent literacy skills (those pertaining to alphabet knowledge, phoneme awareness, print awareness and oral language skills, amongst others) when compared to learners in the respective control groups. When controlling for receptive language abilities, English L1 learners did not perform any better than their L2 peers on any of the eight measures of emergent literacy prior to intervention. Furthermore, upon entering Grade 1, there was no statistical significant difference in the performance of the English L1 learners and ELLs on any of the eight subtests after intervention. Possible independent variables contributing to the dearth of intervention effect included socio-economic status, learners' L1, and teacher and classroom specific characteristics. These variables were addressed, and clinical implications for speech-language therapists with regards to assessment, intervention, service delivery and outcome measures were highlighted.

OPSOMMING

Die aanspreek van Suid-Afrika se geletterdheidsvraagstuk is ‘n reuse uitdaging. Die vroeë identifisering van kinders met ‘n hoë risiko vir leesprobleme en die verskaffing van tydige en voorkomende intervensie mag egter ‘n goeie beginpunt wees in die aanspreek van hierdie uitdaging. Hierdie studie het gepoog om ‘n bydrae te lewer tot die bestaande literatuur oor ontluikende geletterdheidsvaardighede van kinders wat in ‘n tweede of addisionele taal onderrig word. Die studie het die ontluikende geletterheidsvaardighede ondersoek van Graad R-leerders wat in Engels onderrig word, maar vir wie Engels nie hul eerste taal is nie, asook die effektiwiteit van ‘n navorsingsgebaseerde stimulasieprogram binne die Suid-Afrikaanse konteks.

Die hoof navorsingsvraag van die studie was: “Wat is die effek van ‘n stimulasieprogram vir ontluikende geletterheidsvaardighede in Graad R op die ontwikkeling van geletterdheid van Engels tweede taal (T2)-leerders in Graad 1?” In ‘n kwasi-eksperimentele ontwerp is Engels T2-leerders se ontluikende geletterheidsvaardighede met ‘n aangepaste weergawe van die *Emergent Literacy Assessment Battery* (Willenberg 2004) geëvalueer, en voor en na ‘n 8-week doelgerigte stimulasieprogram vergelyk met die vaardighede van kontrolegroepe wat bestaan het uit Engels eerste taal (T1)-leerders en Engels T2-leerders onderskeidelik. Alhoewel leerders ‘n beduidende verbetering in ses van die agt subtoetse getoon het, het die spesifieke intervensieprogram nie T2-leerders in die eksperimentele groepe se ontluikende geletterdheidsvaardighede beduidend verbeter in vergelyking met leerders in die twee kontrole groepe nie (dit sluit in onder andere alfabetkennis, foneembewustheid, drukbewustheid en orale taalvaardighede). Wanneer daar vir reseptiewe taalvaardighede gekontroleer is, het die T1-leerders nie beduidend beter gevaar as hul T2-portuurgroep op enige van die agt subtoetse van ontluikende geletterdheid nie, en met toetrede tot Graad 1 was daar gevolglik geen statisties beduidende verskil tussen die T1- en T2-groepe ten opsigte van enige van die agt subtoetse nie. Moontlike onafhanklike veranderlikes wat tot hierdie gebrek aan intervensie-effek kon bydra, sluit sosio-ekonomiese status, leerders se T1 en onderwyser- en klaskamer-spesifieke eienskappe in. Hierdie veranderlikes is aangespreek, en die kliniese implikasies vir spraak-taalterapeute met betrekking tot evaluasie, intervensie, dienslewering en die noukeurige meting van uitkomste is toegelig.

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CHAPTER 1

INTRODUCTION

Reading literacy is understanding, using and reflecting on written texts, in order to achieve one's goals, to develop one's knowledge and potential and to participate in society. (OECD: PISA 2003:15)

Learning to read is a critical key in unlocking the life long process of learning and an important milestone in a child's academic development. Besides the obvious advantages of giving pleasure, building personal confidence and opening up new horizons, being literate also allows a child access to the academic curriculum, to information and ultimately to significant life chances. Scribner (cited in Goldman and Trueba 1987:2) characterizes literacy in terms of three very appropriate metaphors: *literacy as adaptation*, *literacy as power* and *literacy as a state of grace*. Literacy as adaptation encapsulates the pragmatic value of literacy whereas literacy as power emphasizes the role that literacy plays in socio-political and economic advancement. The third metaphor, literacy as a state of grace, captures the elitist status accruing automatically to the literate individual. Each of these metaphors highlights a different perspective on the significance of literacy and underscores why literacy is regarded as one of the main goals of an educational system. The Organization for Economic Co-operation and Development (OECD) in its Program for International Assessment of Students (PISA) aptly sums it up: "Literacy provides the reader with a set of linguistic tools that are increasingly important in meeting the demands of modern societies with their formal institutions, large bureaucracies and complex legal systems." (PISA 2003:108).

The statistics for literacy levels in South Africa sketch a bleak picture. The United Nations Developmental Program Report 2007/2008 estimates South Africa's adult literacy rate to be 82.4%. This figure is however highly conservative and thus to a certain extent misleading, as it refers to some ability to read but not to functional literacy that would include the extended ability to read, write, talk, reason and solve problems which enable successful functioning within the work environment, family and community (Workforce Investment Act 1998). According to Van Heerden (1991:4), up to 70% of the

South African population is guestimated to be functionally illiterate. The situation seems more positive in the Western Cape Province of South Africa where 36% of the population, or 1.13 million people, are regarded as being functionally illiterate (Dugmore 2007).

With regards to the development and monitoring of literacy in the educational system, Klop and Tuomi (2007:59) reported that the Western Cape Education Department (WCED) assessed the reading skills of 34 487 Grade 3 learners in 2004 and found the pass rate to be only 39.5%. Even though these figures seem disconcerting, they reflect a phenomenon that is reported in educational systems worldwide. According to the National Assessment of Educational Progress (2003), 37% of fourth graders in the United States fail to read at even basic levels (Justice 2006a:21). In the 2003 PISA report, 15-year old learners from 41 nations wrote an international scholastic aptitude test which included assessment of reading literacy. This assessment went beyond decoding and literal comprehension; it assessed learners' ability to gain meaning and apply written information functionally. Results were documented on a composite 5-level reading scale with a standard score of 500 (Level 3). The PISA found that the number of learners who operate at a functional literacy proficiency level of Level 2 or below (i.e. more than 100 below the standard score) was 42% in the U.S, 41.3% in France, 34.8% in the Netherlands, 32% in Ireland, 31.12% in Australia and 28.36% in Canada. As South Africa is not a member country of the OECD, but operates as a so-called enhanced engagement country, South African learners were not included in the PISA. However, South African fourth and fifth graders who participated in the recent Progress in International Reading Literacy Study (PIRLS 2006) were ranked the lowest of the 39 participating countries with regards to reading ability. This highlights the ongoing and relatively urgent need to address the issue of literacy in our educational system.

This study aims to make a contribution to literacy development in the English-medium classroom by evaluating the effects of a self-compiled stimulation program on the literacy levels of English Language Learners (ELLs). Different terminologies are used in the literature when referring to learners being educated in English, of which the most common are learners of English as a Second Language (ESL), English Additional Language (EAL) learners, English Language Learners (ELLs) and Culturally and Linguistically Diverse (CLD) learners. For the purposes of this study, the term English

Language Learners (ELLs) will be used; the term will refer specifically to learners who are educated through the medium of English, but who have a first language (L1) other than English. Although such learners may also be in a process of acquiring English as a second language (L2), I distinguish here between learning English as an L2 and learning through medium of English as an L2. This heterogeneous population of learners will be described in more detail in the next chapter.

In an attempt to add to the body of literacy research in the South African context, the main research question this study attempted to answer was:

"What is the effect of a stimulation program for emergent literacy skills in Grade R on the development of literacy of English Language Learners[1] in Grade 1?"

The first aim of this study is to explore the current status of literacy practices in the Southern Cape region of South Africa among learners with an L2 as language of learning.[2] As it is essential to support teachers who are confronted with the reality of young learners developing literacy in and through their L2, the second aim of this study is to report on the development of a literacy stimulation program for Grade R learners which was designed to address the critical aspects of early literacy development in preparing L2 English learners for the challenges of the Grade 1 classroom. A third aim is to determine the efficacy of this stimulation program in three English submersion[3] classrooms, to compare results with L1 and L2 control groups and draw conclusions regarding best practice in emergent literacy intervention for ELLs. The detailed research questions set out in Chapter 5 (5.1) draw on the hypothesis that acquiring literacy poses unique challenges in a context where learning takes place through medium of an L2. Critical aspects of such literacy development were identified and addressed within a stimulation program that was piloted in this study. The research questions also draw on

[1] Recall that the term "L2 English learners" used here refers to learners for whom English is a second or additional language and their language of learning.
[2] As a speech-language therapist working in private practice in the Southern Cape region of South Africa, I have a particular interest in this area as ELLs constitute a significant portion of my caseload.
[3] "Submersion" or "L2-only education" are terms that refer to classrooms in which the L2 of many learners is the only language that is used; such terms indicate that the learner's special language learning needs are not systematically taken into account (Genesee, Paradis and Crago 2004:159). In this study it does not imply that these learners are a language minority as the ELLs might outnumber the English L1 learners in some classrooms in the South African context.

the hypothesis that a well-developed and comprehensive stimulation program will have statistically significant benefits to an L2 learner's emergent literacy skills.

The focus of this study is on emergent literacy skills, where *emergent literacy* refers to the developmental precursors of formal reading that have their origins early in the life of a child. An emergent literacy perspective views literacy-related behaviours during the pre-school period as legitimate and important aspects of the developmental continuum of literacy. It encompasses Teale and Sulzby's (1986:6) theory that literacy development begins at birth and that, through adult mediation, children achieve several literacy milestones incidentally before entering formal schooling. Literacy-related behaviours entail, among other things, Phonological Awareness skills, Print Knowledge, Emergent Writing and Oral Language skills (Justice 2006a:13; Whitehurst and Lonigan 2002:15). Each of these is briefly defined below.

Phonological awareness refers to the understanding that words can be analyzed into sounds and that sounds can be blended into words. This includes early achievements, e.g. rhyming and alliteration (i.e. where the child is able to identify that *cat* "matches" *hat* or to produce *blue block)*, as well as later developing phonemic awareness skills where phonemes are isolated and substituted i.e. where the child can indicate that *pen* starts with a *p* sound or that if *p* in *pen* is substituted by *d* it renders a new word, *den*.

Print knowledge refers to (i) a person's receptive and/or expressive knowledge of the letters and names of the alphabet, as evidenced by among other things the ability to recognize and label letters of the alphabet, (ii) familiarity with print in the environment, such as being able to identify a *McDonald's* or *Woolworths* sign and (iii) familiarity with concepts about print, that is, knowing the rules that govern how print is used and organized across various genres.

Emergent writing includes behaviours such as pretending to and learning to write one's name or using invented spelling – representing sound and meaning with a naïve form of print. Three developmental levels of emergent writing are distinguished, namely pre-communicative, phonetic and conventional spelling (Ukrainetz 2006:227).

Oral language skills refer to a learner's lexical, grammatical and narrative abilities which are positively and causally related to reading at all levels of a child's development of reading (Chiappe, Siegel and Wade-Wooley 2002; Nation and Snowling 2004; Norris and Bruning 1988). These subskills will be defined and discussed in more detail in Chapter 3.

This dissertation is organized as follows: In order to contextualize the study, the relevance of emergent literacy development in the multilingual South African context is discussed in *Chapter 2*. *Chapter 3* provides an overview of emergent literacy assessment and intervention approaches with regards to ELLs, with an emphasis on current evidence-based practices in the field of speech and language therapy. *Chapter 4* outlines the pilot study which compared the emergent literacy skills of L1 and L2 Grade 1 learners and provided the rationale and impetus for the stimulation program used in the main study. The methodology employed in the main study is described in *Chapter 5* and results are set out and discussed in *Chapter 6.* The concluding chapter of this dissertation summarizes and critically reflects on the results of this study and provides clinical implications and suggestions for relevant future research in the field of emergent literacy within the South African context.

CHAPTER 2

EMERGENT LITERACY: DEFINING A POPULATION AT RISK

2.1. INTRODUCTION

Addressing the disturbing literacy rates mentioned in Chapter 1, in a country like South Africa with several social, political and health related issues poses a mountainous challenge. Identifying children at risk for reading difficulties and providing timely and preventative intervention might however be a good starting point to addressing this challenge. Justice (2006a:24) proposes that many children fail to exhibit basic reading proficiency at the expected stage in their development because schools fail to provide adequate educational support to at-risk children who exhibit significant risk factors that make learning to read very difficult. In this chapter, risk factors for literacy development as identified in the literature are first discussed. Then perspectives on the heterogeneous population of ELLs in school systems around the world are given, while the chapter concludes with discussing the need for timely and preventative intervention in emergent literacy skills of ELLs.

2.2. RISK FACTORS FOR LITERACY DEVELOPMENT

Several risk factors which leave pre-schoolers vulnerable to experiencing difficulties in acquiring critical emergent literacy skills have been identified in the literature. These include factors inherent to the child – e.g. language impairment, a family history of reading difficulty, having a mother with low educational attainment, cognitive impairment, hearing impairment or attentional deficits – but also factors pertaining to the environment, e.g. low socioeconomic status (SES) and speaking a language or dialect that differs from that of the local academic curriculum (Catts, Fey, Zhang and Tomblin 2001:38; Cavanaugh, Kim, Wanzek and Vaughn 2004:11; Duncan and Seymour 2000:147; Justice, Invernizzi and Meier 2002:86). According to McGee and Richgels (2003:10), the cumulative effect of limited proficiency in the language of education, minority status and a low SES is the best predictor of which groups of children will fail to learn to read and write well. These three risk factors will be discussed in more depth below.

2.2.1. Limited language proficiency

Several studies have researched the emergent literacy skills that are most predictive of later reading performance. Phonological awareness and written language awareness have emerged as two critically important skills which in turn are strongly associated with oral language competence (Catts *et al.* 2001:38; Chaney 1992: 485; Pullen and Justice 2003:90). Justice, Invernizzi and Meier (2002:87) stated that early literacy knowledge is strongly and reciprocally influenced by a child's language proficiency. Verhoeven (1997:224) suggests that the cognitively confusing effects of teaching literacy in an L2 will influence both structural and functional aspects of literacy development. Within a specific linguistic and cultural environment, these structural and functional aspects need to be identified and their negative impact on the child's literacy development need to be minimized.

In South Africa with its 11 official languages, monolingualism is the exception rather than the norm. This poses several challenges with regards to the selection of language of instruction, teaching and learning in educational programs. The United Nations Educational, Scientific and Cultural Organization (UNESCO) convened a Committee of Experts as far back as 1953 to consider the question of the language of education on a worldwide basis. They proposed three considerations in choosing a language of teaching instruction: (i) do the prospective students know the language well enough to learn effectively through it, (ii) would the proposed choice be consistent with overall nationalist aims and (iii) are the language itself, the material written in it and the number of people able to teach in it adequate for use at the proposed level? In its report, the Committee of Experts (UNESCO 1953) recommended that the first consideration should be given priority when selecting a language of instruction, which implies that ideally mother-tongue education should take place. They further recommended that the use of the mother tongue should be extended to as late a stage in education as possible.

In the Western Cape Province of South Africa, where the three official languages used as L1s by the overwhelming majority, are isiXhosa, English and Afrikaans, The Language Policy of Primary Schools of November 2002 made two central recommendations, namely (i) to implement a policy of mother-tongue based bilingual education in Grades R to 6 as from 2004-2005 in all primary schools in the province and (ii) to institute incentives to guide all children towards electing to take the third official language of the

province as their second additional language. Parents have been encouraged by means of information brochures and media awareness programs to enroll their children in mother-tongue education; however, statistics from the Western Cape Education Department (WCED) (Personal correspondence 2005) indicated that 25.7% of the learners attending English-medium primary schools in the Western Cape did not have English as their home language. In the Southern Cape/Karoo region of the Western Cape, where the present study was conducted, a similar situation was observed. Here 80% of the learners attending English-medium schools had English as their home language, i.e. on average 20% came from homes in which English is not the primary language spoken and in some classrooms this figure might rise to 92.3% (personal correspondence 2007).

Thus, despite recommendations and efforts from the WCED to promote mother-tongue education, English is still widely regarded as a language of prestige and opportunity (Kamper, Mahlobo and Lemmer 2003:165), and there is the trend among non-English-speaking parents to raise their children as L1 English speakers (Anthonissen and George 2003; Willenberg 2002:397). Parents subsequently choose to enter their children into primary schools where English is the language of teaching and learning. This tendency was confirmed by Farmer (2008:151) in a study of language choice and language attitudes of learners in a Western Cape secondary school. Farmer (ibid.) found that the learners in her study attributed more value to English than to Afrikaans (the latter being the L1 spoken by their parents), suggesting that these Afrikaans-speaking parents' preference for English as medium of education for their children resulted not in English-Afrikaans bilingualism in their children but in a clear shift of language preference to English.

One of the recommendations in the UNESCO report of (1953) was that the number of people able to teach in a particular language should be adequate at the proposed level, as stated above. This recommendation, as well as supporters of the two-way bilingual instruction approach[4] (Slavin and Cheung 2004:52; Willig 1985:316) heavily relies on educators who are proficient in two or more official languages or on the availability of teaching assistants who are proficient in the additional languages. In the Western Cape,

[4] Two-way bilingual instruction programs refer to programs where two languages are used in the classroom, i.e. both the dominant language (e.g. English) and a minority language which is the learner's native language (e.g. French in Canada). Both languages are used to teach literacy and academic subjects (Genesee *et al.* 2004:158).

510 teaching assistants were appointed in 2006 in an attempt to improve literacy and mathematical skills of learners in the Foundation Phase (Grades 1 to 3). Only 163 primary schools are however currently benefitting from this initiative. This constitutes about 17% of the total number of public primary schools in the Western Cape Province. While these teaching assistants were exclusively deployed in schools in disadvantaged areas, the current provisions most certainly are not meeting the needs of teachers in the remaining 83% of schools who have to cope with learners with several different L1s in one classroom.

Several researchers (inter alia Christian and Genesee 2001 and Slavin and Cheung 2003) have concluded that the quality of instruction received by ELLs and the approach followed (i.e. submersion or bilingual programs) are of equal importance. This implies that regardless of the approach taken (as both submersion and bilingual programs have advantages and disadvantages), it is important that the teacher and/or teaching assistants are proficient in the language of instruction as well as the learners' L1s.

2.2.2. Minority status

Limited proficiency in the language of education has been identified as a possible risk factor for literacy development difficulties; however, studies that have investigated the influence of oral language proficiency and early literacy knowledge mainly focused on children with specific language impairment (SLI) and children with phonological disorders (Bird, Bishop and Freeman 1995:446; Bishop and Adams 1990:1027; Boudreau and Hedberg 1999:248). Very few studies have investigated the prevalence and literacy development of ELLs with reading disabilities and the literacy development of such learners (Lipka and Siegel 2007:106). While there is wide variation in the effectiveness of educational programs, it is known that minority language students face a higher than average risk of failure or difficulty in L2-only programs (Genesee, Paradis and Crago 2004:159). Indeed, such minority language students face several challenges: acquiring a new language, integrating socially into a new peer group and learning new academic skills and knowledge, often doing so without the support of an educator who is proficient in their home language.

A study that did investigate literacy difficulties of ELLs is that of Lipka and Siegel (2007:126), who found that ELLs in the North Vancouver school district in Canada, in general show the same problems with phonological processing, syntactic awareness and working memory as L1 learners with reading disabilities do. They also found that these ELLs show the same frequency of reading difficulty in English as do L1 learners. However, Lipka and Siegel also concluded that ELLs, unlike L1 learners, demonstrate significant difficulties with syntactic awareness even after several years of exposure to English.

In their article reviewing experimental studies of reading programs for ELLs in the United States of America, Slavin and Cheung (2003:2) state that, despite numerous educational policies and practices to improve reading instruction of ELLs, many children from minority language communities, in particular Latino and Carribean children, are disproportionately likely to perform poorly in reading in school. They reported that only 44% of Latino fourth graders scored at or above the "basic" reading level in comparison to 75% of their Anglo peers (National Assessment of Educational Progress in Slavin and Cheung 2003).

In a longitudinal South African study on literacy levels of ELLs, Jordaan (2007) researched 56 children in three different inner city schools in Gauteng Province. In this inner city area, the great diversity of home languages spoken by the learners and teachers led to English becoming the medium of instruction. Participants in this study demonstrated significant gain of L2 by the end of Grade 2, as opposed to their very low proficiency levels at the end of Grade 1. However, Jordaan (ibid.) found considerable individual variation in rates of language acquisition for the processes relevant to academic language proficiency; due to the highly heterogeneous nature of the ELL population, it is difficult to generalize research findings on ELLs.

2.2.3. Socio-economic status

The influence of socio-economic status (SES) in literacy development is a further risk factor which has been researched quite extensively (Duncan and Seymour 2000:145; Klop and Tuomi 2007; Nancollis, Lawrie and Dodd 2005:325; Vernon-Feagans, Scheffner Hammer, Miccio and Manlove 2002:192). Although SES is mostly defined by

parents' occupation, income and education, many other factors vary systematically with SES (Noble, Farah and McCandliss 2006:350). These include the home literacy environment, degree of early print exposure and quality of early school experience. Noble *et al.* (ibid.) concludes that SES has been repeatedly shown to interact with the home literacy environment and in turn is associated with reading achievement. Whitehurst and Lonigan (1998:857) stated that children from low-income families appear to be "less ready" upon entering school as they have had less experience with books, writing, hearing stories and many other types of early literacy experiences. This was highlighted in a study by Rebello (2004:297) with low income African-American children where a significant correlation between the quality of literacy interaction at home and emergent literacy skills was found.

2.3. ENGLISH LANGUAGE LEARNERS: PERSPECTIVES ON A HETEROGENEOUS POPULATION

The cohort of L2 learners in English submersion educational programs is indeed a highly heterogeneous group of learners, as several factors can influence L2 acquisition and consequently the child's language proficiency upon entering formal education (Moore, Pérez-Méndez and Boerger 2006:35). These factors can broadly be divided into three categories namely:

(i) Timing: **Simultaneous acquisition** of both languages from birth vs. **sequential acquisition** where the L2 is learnt after a degree of proficiency has been reached in the L1.

(ii) Environment: Acquiring a second language while expected to give up the home language (**subtractive bilingual environment**); Maintenance of the home language while acquiring the L2 (**additive bilingual environment**) and the degree (quality and quantity) of exposure to both languages.

(iii) Child Characteristics: These may include the child's motivation, learning style, personality and language aptitude.

In addition to these factors, in the South African context the L1s of learners in one particular classroom often vary considerably. Data from the WCED (Personal communication 2005) confirmed that learners attending English-medium primary

schools spoke one of at least 10 different home languages of which isiXhosa, Afrikaans and isiZulu were the most prevalent. Thus, while multilingual children are often credited with more advanced metalinguistic awareness than their monolingual peers (Bialystok 2001; Genesee *et al.* 2004:55), teachers' limited proficiency in the learner's L1 and the limited availability of teaching assistants in submersion (L2-only education) programs may confine the potential advantages which ELLs should in theory be able to capitalize on.

Environmental factors pertaining to the home environment further contribute to the heterogeneity within the ELL population. Parents' level of proficiency in the child's language of education, their interactive strategies, and their beliefs regarding and values attached to literacy and personal characteristics, e.g. psychological well-being, have all been shown to influence the quality of the home literacy environment (Bennett-Armistead, Duke and Moses 2005: 211; Landry and Smith 2006:136; Willenberg 2004:93). Snow and Ninio (1986:116) reiterated that success in early literacy development relates to both the values attached to literacy at home and the steps parents take to explain this value to their children. Children's experience listening to literature and parent-child joint book-reading are cited in the literature as important activities for developing the knowledge required for eventual success in reading and as such the presence of these activities is a strong predictor of reading achievement (Ezell, Justice and Parsons 2000:122; McGill-Franzen, Lanford and Adams 2002:443; Sénéchal and Cornell 1993:373). The Committee of the Prevention of Reading Difficulties in Young Children (1998) thus recommended that "all children, especially those at risk for reading difficulties, should have access to early childhood environments that promote language and literacy growth and that address a variety of skills that have been identified as predictors of later reading achievements" (McGill-Franzen *et al.* 2002:444).

Finally, in addition to the learner's home environment, the quality of literacy exposure and instruction in the pre-school classroom contributes to the heterogeneous image of the ELL population entering primary school (Morrow 2007:23). As many educators lack knowledge regarding the promotion and facilitation of ELLs oral language skills, the quality of conversational exchanges and literacy-related experiences in pre-school settings are highly variable (Dickinson and Tabors 2001 as cited in Justice 2006a: 128).

In an experimental study, Morrow (1991 as cited in Dickinson and Neuman 2006:260) found that the number of literacy behaviours demonstrated by pre-schoolers in a classroom with general or thematic literacy related materials was greater than the number of literacy behaviours demonstrated by children in the control classroom. Morrow and Rand (1991:401) similarly found that the number of books as well as the number of different kinds of recording materials and labels in the classroom were closely related to the frequency of children's reading and writing during free play.

The quality and level of teacher modeling and instruction have also been investigated in several studies (Christie and Enz 1992:205; Girolametto, Weitzman and Greenberg 2006:36). Results of these studies indicated among other things that children who experienced teacher mediation engaged in more imaginative dramatic play and less repetitive motor play. Troyer (1990) studied pre-school teachers' knowledge of emergent literacy concepts and found their knowledge of concepts such as 'phonemic awareness' and 'segmentation' to be severely limited. Troyer (1990:39) concluded that "in order for fewer students to be labeled 'at risk', it is necessary for kindergarten teachers to become and remain knowledgeable about current conceptualizations of the reading process, particularly in the area of emergent literacy."

In a comprehensive South African study which involved 101 children from historically disadvantaged so-called coloured communities, Willenberg (2004:126) found that children from homes where parents had a relatively strong English background, a higher level of education and higher income tended to score better on measures of language and print skills. The number of children's books in the home environment as well as the age at which children were introduced to the practice of joint book-reading proved to be strong predictors of literacy outcomes, especially improved language and print skills. Willenberg (ibid.) also found that parents in this Afrikaans/English bilingual community, who had used English as primary language with their children, were more likely to read to their children.

In her study, Willenberg (ibid.) raised concerns about the classroom literacy environment of Grade R learners in one historically disadvantaged Western Cape community. She found that the school literacy environments offered limited resources and activities for stimulating literacy, enriching vocabulary development and promoting decontextualized

language skills. Willenberg (ibid.) concluded that teachers in pre-school classes as well as teachers involved in in-service training initiatives in this Western Cape community were insufficiently equipped to promote children's language and literacy development.

When taking the numerous risk factors for reading difficulty as well as the variability of learners' language proficiency in South African classrooms into account, it is clear that teachers need to be pro-active in implementing evidenced-based educational programs that meet the needs of the ELL population.

2.4. EARLY INTERVENTION FOR ENGLISH LANGUAGE LEARNERS: INDICATED OR OVERRATED?

The pre-school years are critical in the development of emergent literacy skills that will ensure smooth transition into formal reading and ultimately facilitate the learning process. According to Dodd and Carr (2003:128), children who find reading and writing difficult in the early stages of education often perform poorly on other academic measures. In relation to the same argument, Catts, Fey, Zhang and Tomblin (2001:45) state that literacy problems can only be properly prevented if early literacy skills are assessed before children become immersed in the mechanics of conventional and formal instruction. They concluded that early recognition of risk for future reading difficulties should result in broad-based language intervention programs that target literacy as well as oral language impairments. While the value of early assessment and stimulation of literacy skills have thus been established, with regards to assessment and early intervention for ELLs, the jury is still out on the questions: *Who* should be assessing and intervening*, When* is the ideal time for assessment and intervention and *How* should assessment and intervention proceed? These questions will be addressed in Chapter 3. This chapter will be concluded with a summary of emergent literacy research in the South African context.

2.5. EMERGENT LITERACY RESEARCH IN THE SOUTH AFRICAN CONTEXT

In her comprehensive overview of research of child language in South Africa, Penn (1998:256) addressed several issues regarding L2 learning in the educational environment. She found that the social and economic realities of the current system make

the issues of mainstreaming in the integrated school and the implementing of successful immersion programs very complex, especially in areas where teachers may not have sufficient competence in the medium of instruction. Penn (1998 ibid.) summarized some of the standard assessments, used by speech-language therapists to diagnose language impairments, that have been translated and adapted for specific South African populations; however, the majority of these assessments were aimed at Afrikaans speaking participants and targeted language domains of grammar (syntax), semantics or phonology with no reference to other literacy skills.

Within a limited body of literacy related research in the South African context, Willenberg (2004:181) documented emergent literacy competencies as well as home and literacy environments of previously disadvantaged pre-schoolers in the Cape Town area in the Western Cape. She found these pre-schoolers to have a good grasp of basic literacy concepts about print, but they performed poorly on tasks of phonological awareness and language competence. While participants were initially regarded as English L1, it became clear that some of them were indeed L2 learners with limited English proficiency. Willenberg found for example that children, who displayed better language and print skills, had a stronger English background and generally were from a higher SES. She concluded by suggesting that there is a need for specialised pre- and in-service literacy training for teachers.

In another study, Jordaan (1993:180) found a focused and structured language intervention program implemented by a speech-language therapist to be more successful in teaching a typically developing group of ELL pre-schoolers syntactic and lexical competence in English than additional classroom-based input in English. Gillon and Dodd (1995:66) however found that traditional speech and language interventions have little direct impact on reading related skills and therefore Jordaan's (ibid.) positive results with regards to language intervention can not necessarily be generalised to literacy related outcomes. Further, Jordaan and Yelland (2002:28) cautioned that the area of language intervention with bilingual or multilingual language impaired children in South Africa is in need of revision. In deciding which language to use in assessment and intervention, speech-language therapists need to consider the nature of the impairment, the parents and teachers' attitudes and knowledge about maintenance of the L1 as well as the appropriate use of trained interpreters (Jordaan and Yelland ibid.). While school-

based intervention with limited resources and generally no availability of interpreters is a stark reality in most South African classrooms, this should not deter us from aiming at providing learners with the best support possible in order to prevent the negative ripple effect of reading difficulties. Best practice in language and literacy assessment and intervention for multilingual children should guide the decision making process for emergent literacy intervention for ELL in the South African context. These practices will be discussed extensively in the next chapter.

2.6. CHAPTER CONCLUSION

A review of the literature identified several risk factors which leave learners vulnerable to developing reading difficulties. Speaking a language or dialect that differs from the school curriculum, in combination with other factors such as coming from a deprived socio-economic background with limited resources at home and/or in the pre-school environment, significantly adds to a learner's risk profile. In providing these learners with the best possible support teachers need to know when and how to assess and intervene. The following chapter will draw on some of the research discussed here in chapter two and will also introduce additional sources that are directly informative to the task of addressing best practice approaches with regards to assessment and intervention of emergent literacy skills in ELLs.

CHAPTER 3

ASSESSMENT AND INTERVENTION OF EMERGENT LITERACY IN ELLs – A CRITICAL REVIEW OF THE LITERATURE

3.1. INTRODUCTION

From the discussion of risk factors for achieving literacy in the previous chapter, it is clear that learners educated in their L2 are particularly vulnerable to reading difficulties. It is a recognized truism that an intervention program should intervene at an appropriate level and target identified and measurable areas of weaknesses. As this study was aimed at preventing literacy difficulties in a high risk population and not at remediating diagnosed reading disorders, diagnostic assessment of ELLs' literacy proficiency was not an area of research. However, as assessment of ELLs is a particularly contentious topic for speech-language therapists and educationalists in South Africa, current practices pertaining to the assessment of emergent literacy skills will be critically discussed in this chapter. These practices will also be related to the Emergent Literacy Assessment (or ELA; Willenberg 2004) battery that was used in this study. Following on from this, effective interventions for emergent literacy development will be discussed and critically reviewed in terms of their use with ELLs.

3.2. ASSESSMENT OF EMERGENT LITERACY SKILLS

In order to provide each learner in their class with the appropriate level of scaffolding to ensure development within his or her own zone of proximal development (Paul 2007:71), teachers need to know each learner's level of development. Having a precise understanding of a learner's current level of language and literacy proficiency is especially critical for at-risk ELLs in order to provide individual and personalized support where indicated (McGee and Richgels 2003:34).

In assessing emergent literacy in ELLs, the danger of double jeopardy is always a looming possibility. We are assessing young learners with limited exposure to formal test situations who might be unfamiliar with task requirements (that is, we are assessing

children with limited exposure to print through the medium of print). And additionally, the learners' language proficiency and cultural background may not be supportive to their early literacy development. This would need to be carefully considered before we can draw any conclusions about abilities or the need for intervention. Effective and appropriate literacy assessment needs to be carefully planned, keeping in mind the purposes of assessment as well as the cultural and linguistic appropriateness, validity and reliability of assessment instruments (McGee and Richgels 2003:35). Johnston and Rogers (2002:378) propose that early literacy assessment should be part of a larger discourse about children, literacy and learning. Literacy, learning and assessment are fundamentally discursive practices involving ways of knowing, believing, valuing, relating, behaving and representing, and thus assessment is fundamentally interpretive, influenced by values, beliefs and language. Three questions regarding assessing ELL's emergent literacy skills need to be addressed when implementing assessment batteries in the educational environment: *When* to assess, *how* to assess and *what* to assess. These three questions are addressed below with particular attention to research that has been used to inform the intervention program developed and used in the main study.

3.2.1. When should emergent literacy skills be assessed?

The timing of assessments is the first aspect that needs careful consideration. In the early identification of reading difficulties, false positives and false negatives need to be limited, and prediction accuracy is crucial – the question is how well the learner's current performance correlates with later reading success or failure (Scarborough 1998:75). Prediction accuracy increases the longer the child has been in school (Torgeson 1998:4). Tests administered at the beginning of Grade 1 are significantly more accurate than tests administered at the beginning of Kindergarten or Grade R. According to Torgeson (ibid.), this can be attributed to varying levels of pre-school learning opportunities which furthermore includes the quality and level of exposure to the language of education. Hakuta, Butler and Witt (2000 as cited in Mathes, Pollard-Durodola, Cárdenas-Hagan, Linan-Thompson and Vaughn 2007:261) speculated that ELLs require between 4 and 7 years to obtain grade level literacy benchmarks. Cummins (2000:68) suggested that it takes 5 to 7 years of immersion in the L2 to achieve cognitive-academic language proficiency (CALP), but that two years' exposure is sufficient to develop basic interpersonal communication skills (BICS). Justice (2006b:285) proposed a three-tier

Response-To-Intervention (RTI) approach which will be discussed in more detail below in 3.3.2. With the RTI approach in mind, a baseline screening assessment is indicated at first tier, while periodic follow-up assessments should track the growth trajectory of learners to identify learners who require supplemental intervention at the second and third tiers. Torgeson (1998:4) recommended that the first screening assessments should not be administered before the beginning of the second semester of Kindergarten (Grade R). In South Africa, learners only enter formal schooling (Grade R) in their sixth year, and these learners then present with varying degrees of language proficiency and prior exposure to literacy. For these reasons, an earlier baseline screening procedure is recommended (i.e. earlier than the second semester of Grade R). An initial screening assessment by the end of the first term of Grade R will provide the teacher with baseline information against which she can measure ELLs' progress by the beginning of the second semester in order to identify those learners whose growth trajectories already lag behind their ELL peers.

Foster and Miller (2007:179) emphasize that effective treatment of literacy deficits must be initiated at the earliest possible time. They stress that schools cannot wait until the second or third grade to initiate "aggressive" support for literacy. By attempting to close the decoding gap only in second or third grade, a substantial text comprehension gap has already developed which gradually widens the literacy achievement gap. This resonates with Klop and Tuomi's (2007) finding in the South African context. In their longitudinal study with 25 monolingual, disadvantaged learners in the Western Cape, it became clear that participants did not outgrow their language impairments and continued to fall behind on measures of language and literacy. While this study did not include ELLs, the persistence of significant delays despite small-group intervention programs, highlights the need for early and preventative measures and active collaboration with educators in an attempt short-circuit Stanovich's (1986) Matthew effect which proposes that learners who start off poorly, might remain poor readers throughout their schooling years.

3.2.2. How should emergent literacy skills be assessed?

When assessing ELLs' emergent literacy, a second aspect that needs consideration is the type of assessment protocol, which relates to the familiarity of such learners with the test

environment, the required tasks and the targeted responses. Especially with regards to literacy related assessments, learners from deprived socio-economic backgrounds might enter Grade R with very limited previous exposure to literacy materials. In their study on the effects of task familiarity on the test performance of Puerto Rican and African American children, Peña and Quinn (1997:324) commented that European American mothers asked significantly more Yes/No and Wh-questions than did African American mothers, who rarely asked any questions. Consequently, European American children produced more question-related communications while African American children produced more spontaneous verbalizations. Peña and Quinn (ibid.) further found that Puerto Rican mothers tend to use fewer nouns and more commands, deixis and object functions. This finding has implications for learning to label pictures and consequently also for literacy development. Dunn and Dunn (1981, cited in Peña and Quinn 1997:324) documented that many children from non-mainstream groups do poorly on vocabulary tests where the adult examiner (presumably) already knows the answers. Thus, as research demonstrated that test performance is affected by experience and task familiarity considerable variation in performance might exist due to a variety of circumstances: experiential, cultural and socio-economic differences as well as different levels of bilingualism and acculturation.

With regards to the assessment of multilingual children's language abilities, Hernandez (1994:4) suggested using a more pragmatic approach in order to reduce bias. In this approach, the emphasis is not on how much a child knows, but on how effectively the child uses his/her languages in meaningful contexts. Hernandez (ibid.) proposes a description assessment approach which attempts to assess communication and its function in holistic ways within natural contexts.

Although a useful assessment battery should enable the speech-language therapist or teacher to describe and analyze a child's literacy development comprehensively, consistently and reliably and relate their analysis to a quantitative score (e.g. a standardized norm), standardized assessments might be an unrealistic goal on several accounts (Müller 2003:6). When assessing ELLs, we are dealing with heterogeneous and often small populations and by implication assessments have to be standardized on all the different language combinations. Two alternatives to the development of standardized assessments are often proposed: (i) translation of tests and (ii) development

of local norms (Bedore and Peña 2008:17). For assessing ELLs, several English assessment instruments are available to utilize; however, these assessments were standardized on monolingual populations. The lack of normative data on typical bilingual development or early sequential bilingual development is furthermore a significant additional limitation in the use of standardized assessment tools in this population. The use of criterion referenced assessment protocols with a pragmatic, qualitative and descriptive perspective might thus be more appropriate for the ELL population.

In compiling a useful assessment battery that enables the comprehensive assessment of emergent literacy skills, while taking into account the specific needs of the ELL population, a dynamic assessment approach which includes both formal and more client-centered tasks is proposed (Paul 2007: 178). By using different tasks (i.e. formal picture selection procedures as well as spontaneous language sample analyses), quantitative as well as qualitative information is gathered. By supplementing formal test measures with dynamic and informal measures, the examiner also has the flexibility to adapt the protocol depending on the child's familiarity with the task and the test environment, and to take important aspects such as code switching into consideration when analyzing and interpreting the child's performance (Müller 2003:6). The Emergent Literacy Assessment Battery (Willenberg 2004:53) fits the criteria as a comprehensive assessment battery including both formal, standardized measures (e.g. the PPVT) and informal spontaneous measures (e.g. the Bear Story Fictional Narrative). The content of this battery however needs further consideration to highlight the strengths and weaknesses of this particular battery of tests. This will be discussed in the following section.

3.2.3. What should an emergent literacy assessment battery consist of?

The content of any assessment battery should be determined by the purpose of the assessment. In the first tier of intervention (RTI; Justice 2006b:285), the assessment battery should act as a baseline measure against which learners' progress can be measured in order eventually to optimize ELLs' learning. It should identify learners' strengths and weaknesses and evaluate how well the intervention program is meeting its goals (Johnston and Rogers 2002:380). In the second and third tiers, the purpose of

assessment becomes the differentiation of learners with literacy disorders from those who are merely on the slow reading track. Identifying and analyzing specific clinical markers for differential diagnoses becomes crucial during these phases. Clinical markers refer to those particular characteristics that lead to a differential diagnosis e.g. linguistic forms such as tense marking which are characteristic of children with specific language impairment (Rice, Wexler and Herschberger 1998:1412) or a specific deficit in single-word decoding which is characteristic of children with dyslexia (Paul 2007: 435).

According to Justice (2006a:12), the most desirable emergent literacy areas to assess are those that (i) directly contribute to and are predictive of later reading and writing achievements and (ii) are amenable to change through intervention. In a meta-analysis conducted by the National Early Literacy Panel (2004, cited in Justice 2006a:13), the following areas were found to consistently and most strongly relate to later reading achievement:

- Alphabet knowledge – i.e. receptive or expressive knowledge of the individual letters of the alphabet as well as phoneme-grapheme awareness (Nancollis *et al*. 2005:327)
- Concepts about print – i.e. knowledge of the rules governing how print is used across various genres for example books or environmental print
- Phonological awareness – i.e. sensitivity to the sound structure of spoken language in particular on phoneme level (Torgeson 1998:6)
- Invented spelling – i.e. representation of the orthography of written language
- Oral language – this includes syntactic, lexical and narrative abilities
- Name writing

(adapted from Justice 2006a:13)

The Emergent Literacy Assessment (ELA: Willenberg 2004) is a comprehensive assessment battery which provides information on both conceptual and procedural emergent literacy skills. This assessment instrument was compiled by a South African researcher and used in her study with Grade R learners in the Western Cape Province. While certain changes were made to the ELA (see Chapter 5: 5.6.2.2), use of the ELA provides the opportunity to compare and contrast results with the comprehensive Willenberg study. Table 3.1 overleaf summarizes the content of the respective ELA subtests.

A Cronbach's Alpha coefficient of .75 for the ten subtests of the ELA indicated a high degree of internal consistency within the battery (Willenberg 2004:53). High coefficients for the separate subtests confirmed that performance on individual subtests was congruent with overall performance on the battery. Apart from the PPVT-III which was normed on an American population and for which validity and reliability results are available (Salinger 2002:412), no other information pertaining to the validity and reliability of the ELA battery is available. While this battery was deemed appropriate to use as assessment measure for the current study in view of its comprehensiveness and the availability of data for a South African population, some limitations were identified and rectified where appropriate. These amendments are discussed in Chapter 5 (5.6.2.2).

Table 3.1 Emergent Literacy Assessment Battery Subtests

Subtest	**Description**	**Emergent Literacy Domain**	**Reference**
Sounds-in-words	A phoneme matching task where children are expected to match two (out of three) words that have either the same initial or final phonemes. Example: cat – ball – bag	Phonological Awareness	Mason and Stewart (1989)
Rhyme Recognition	Children are expected to identify two (out of three) words that rhyme. Example: cat – hat – ring	Phonological Awareness	Willenberg (2004)
Rhyme Production	A rhyming pair is provided and children are required to provide another rhyming word. Example cat-hat-?	Phonological Awareness	Willenberg (2004)
Letter Recognition	Children are provided with two alphabet charts with upper or lower case letters randomly displayed and are expected to name all the letternames they know.	Alphabet Knowledge	Willenberg (2004)
Concepts about Print	This subtest utilizes Clay's (2000) book "Follow me, moon" as stimulus. Concepts such as the front and back of the book, print direction and orientation, and literacy-related terminology such as word, letter or page are assessed.	Concepts about Print	Adapted from Clay (1979)
Word Definitions	This subtest is based on the Word Definition Subtest of the Weschler Intelligence Scale for Children (WISC-R; Weschler 1974) and requires children to define 13 familiar nouns: alphabet, bicycle, bird, clock, diamond, donkey, flower, foot, hat, knife, nail, thief and umbrella.	Oral Language	Weschler (1974)
PPVT-IIIB	The PPVT:III-B is a standardized, norm referenced assessment of receptive vocabulary.	Oral Language	Dunn and Dunn (1997)
Fictional Narrative	The Bear Story consists of three coloured pictures that are presented. Children are expected to formulate a narrative based on these pictures.	Oral Language	Snow, Tabors, Nicholson and Kurland (1995)
Environmental Print	Children are presented with several signs and logo's associated with food, shops or other services in the South African context.	Concepts about Print	Willenberg (2004)
Emergent Writing and Spelling	An adaptation of the Primary Spelling Inventory. Children attempt to write their own names, as well as the following words: fat, pen, dig, mop, rope.	Invented Spelling and Name Writing	Bear, Templeton, Invernizzi and Johnston (2000)

3.3. EMERGENT LITERACY INTERVENTION FOR ELLs: WHAT WE KNOW AND WHAT WE NEED TO KNOW

While the body of research on emergent literacy has expanded exponentially over the last decade, there is still limited evidence to guide decision making in early intervention for ELLs (Mathes *et al.* 2007:261). Although highly plausible, we do not know if findings from English speakers generalize well to ELLs (Mathes *et al.* ibid.). What is well documented is that, on average, ELLs usually experience lower levels of reading achievement than their English L1 peers, and this serves as a strong rationale for continued research in this area. In an overview of the literature regarding best practice for emergent literacy intervention, three contentious issues became apparent: (i) the agents who should deliver intervention, (ii) the timing and (iii) the type of intervention, particularly for children from diverse linguistic backgrounds. These three issues are each discussed below.

3.3.1. Who should be involved in emergent literacy intervention?

Based on the reciprocal relationship between language and literacy, there is a growing appreciation for speech-language therapists as members of literacy teams. As the complexity of reading as a higher order linguistic skill and the psycholinguistic approach to identifying and ameliorating reading and spelling difficulties are better understood, the role of the speech-language therapist in the management of literacy related difficulties should be dynamic and should be revised and redefined on a continuous basis (Justice and Kaderavek 2004:203; Stackhouse and Wells 1997:34; Staskowski and Zagaiski 2003:206). In its Position Statement, the American Speech and Hearing Association (ASHA 2001) outlines the role of the SLT in literacy as the following: (i) the prevention of written language problems by fostering language acquisition and emergent literacy, (ii) the identification of children at risk for reading and writing problems, (iii) the assessment of reading and writing, (iv) the provision of intervention and documentation of outcomes, (v) the provision of assistance to general education teachers, parents and students while advocating for effective literacy practices and (vi) advancing the knowledge base. Staskowski and Zagaiski (2003:208-209) summarize these roles by stating that speech-language therapists should be involved in dynamic and curriculum-

based assessment practices, preventive programs, joint goal setting, intervention and collaboration with classroom teachers and other members of the literacy team. Catts, Fey, Zhang and Tomblin (2001:39) emphasize the preventative role when they suggest that even though some children might not be eligible for traditional speech and language therapy based on their current assessment results, speech-language therapists may still play an important role in designing and implementing programs to reduce their risk for later reading problems.

When addressing the needs of multilingual clients, the role of the speech-language therapist needs to be defined even further. While such therapists are involved in the differential diagnosis of ELLs with language disorders and language delays, there is still a documented long-term tendency for both over-referral and under-referral of children who are L2 speakers of English to intervention services (Moore, Pérez-Méndez and Boerger 2006:33). This can in part be contributed to a long-existent difficulty among professionals in distinguishing language disorders from language differences (Paul 2007:166; Jordaan 2008:97). Thus, apart from the assessment, diagnosis and management of learners with reading disorders, speech-language therapists also need to become increasingly pro-active in addressing the needs of ELLs who are vulnerable to concomitant language difficulties and at-risk for literacy difficulties.

The role of the speech-language therapist in relation to other agents of service delivery, e.g. parents and teachers, also needs consideration. The Vygotskian theory suggests that the social interactions that occur between children and more capable adults provide the context for a shared construction of knowledge and understanding (Weitzman, Girolametto and Greenberg 2006:129). In line with this theory, several researchers have suggested the principles of naturalistic interaction in social contexts and scaffolded exchanges with literacy materials, where the adult assumes the role of facilitator rather than instructor. Vygotsky (1978 as cited in Paul 2007:71), for example, refers to the child's "zone of proximal development" as a level of performance between independence and frustration, and claims that children learn best when facilitators target concepts within this zone. This concept serves as theoretical underpinning for several adult-child shared storybook reading interventions and parent-training programs. A second example is Arnold, Lonigan, Whitehurst and Epstein (1994:235), who developed and researched the effectiveness of the Dialogic Reading Approach which aims to develop language and

literacy skills through appropriate, scaffolded interactions. Further, Justice and Ezell (2000:258) described the Print-Referencing Approach, which also uses the adult-child storybook reading context to encourage explicit and implicit attention to written and oral language. Whereas several studies have confirmed the effectiveness of these two approaches (the Dialogic Reading Approach and the Print-Referencing Approach) in developing certain emergent literacy skills (Crain-Thoreson and Dale 1999:37; Ezell *et al*. 2000:138; Lonigan and Whitehurst 1998:289), other studies highlighted the variables that might impact on the success of these approaches, such as the level and quality of emotional attachment and parental attitudes towards the value of these activities (Bus and van Ijzendoorn 1997:47; Sénéchal, LeFevre, Thomas and Daley 1998:115). It has to be noted that several of the studies that researched and supported these approaches include the same authors who initiated these approaches. Randomized controlled studies by independent researchers will assist in confirming the preliminary positive outcomes of the Dialogic Reading and Print-Referencing approaches. Although the importance of home-based literacy intervention strategies can hardly be overstated, these strategies rely on certain presumptions, namely the involvement of motivated and literate parents who are proficient in the target language, the availability of good quality children's literature and the parents' effective implementation of the scaffolding principles. In the South African and more specifically the Western Cape context in which the general population has a low rate of functional literacy (refer to statistics in chapter 1) as well as significant variability in SES and proficiency levels in English, implementation of these strategies in isolation might render unsatisfactory outcomes for the ELL population.

The consultative model of intervention is widely accepted and has gained ground in the educational environment since the early 1990's (Paul 2007:413). Different service delivery models in which terms such as *team teaching*, *supportive instruction* and *transdisciplinary intervention* are used have been suggested to increase collaboration between speech-language therapists and teachers (Justice and Kaderavek 2004:215). Law, Garrett and Nye (2004:924), however, caution that certain factors need to be considered and put into place to ensure successful application of this consultative model of intervention. Relevant role-players (e.g. teachers, speech-language therapists and parents) need to discuss and negotiate their definition of consultation. Also, while the consultative model can streamline the intervention process and can ensure better collaboration in goal setting as well as integration with the academic curriculum, this model should not be

seen as a panacea. The individual resources and needs of the child and his/her family should still be of primary importance when decisions are made with regards to the agent(s) who will be delivering the intervention.

3.3.2. When should emergent literacy intervention be initiated?

The movement towards speech-language therapy becoming an evidence-based discipline further requires therapists to consider not only the agent, but also the timing of intervention in order to maximize the impact on reading achievement (Justice 2006b:286). Regarding the *When* question and in accordance with the ASHA Position Statement (ASHA 2001), reading interventions delivered during the pre-school period are considered preventive, aimed at lowering a child's risk for developing reading difficulty later by building skills that are causally associated with skilled reading success.

Some suggest that for ELLs, literacy learning should not begin until they have a firm basis in spoken English. The Western Cape Language Policy (2002) stated: "There is clear evidence that learners need a minimum of six years of tuition in their mother tongue in order to achieve enough language skills to cope with the linguistic challenge of learning through the medium of a second language." This statement is not supported with clear empirical evidence in the above-mentioned policy; also, it does not clearly define the quantity and quality of the recommended tuition and does not take into account the significant variability in the rate of language acquisition due to child-specific and environmental factors. Nevertheless, it does imply that the timing of prevention and intervention needs careful consideration.

From a very early age, many children engage in reading and writing activities in unconventional, yet developmentally appropriate ways. Thus emergent literacy represents a legitimate and critical stage in the literacy acquisition process (Justice 2006a:5; Whitehurst and Fischel 2000:54). In the absence of a comprehensive theory of reading acquisition in an additional language, researchers and practitioners tend to rely on existing models for native speakers and assume similar and equivalent underlying processes (Chiappe, Siegel and Wade-Woolley 2002:370; Whitehurst and Lonigan 1998:870). In their Canadian-based study with 727 native English-speaking children and 131 ELLs in pre-school and Grade 1 in the North Vancouver school district, Chiappe *et*

al. (ibid.) found that L1 and L2 learners showed comparable performance in letter identification, decoding and spelling in kindergarten (Grade R) and Grade 1, with L2 learners showing greater growth over this period. The authors conclude that good instruction might serve to close the gap for children from diverse linguistic backgrounds. As no L2 control group was included in the Chiappe *et al.* study, it is however not possible to determine the extent to which the presence of a balanced instructional program impacted on the observed literacy development of the ELLs.

Several studies have indicated that sustained and intensive preventative interventions from pre-school through to Grade 2 are effective in reducing reading difficulties among at-risk learners (Justice 2006b:284; Vaughn, Linan-Thompson and Hickman 2003:408; Vellutino, Scanlon, Sipay, Small, Pratt and Chen 1996:636). As mentioned in section 3.2.1, Justice (2006b) proposes a response to intervention (RTI) approach as a theoretical and practical framework to provide preventive and early intervention and simultaneously differentiate between children with experientially based difficulties and those with cognitively based reading difficulties. As this approach eliminates the use of intelligence testing (i.e IQ testing) as a means of identifying reading disabilities, it might be especially useful for young learners from diverse linguistic and cultural backgrounds in the South African educational context. While the long-term predictive validity of IQ tests for preschoolers is limited (Genesee, Paradis and Crago 2004:51), there is also no tests of general intelligence for second language learners available to reliably reflect these learners' intellectual ability.

RTI involves a "continuum of increasingly intensive, specialized instruction" that is implemented in the earliest stages of reading development and continued until the end of second or third grade (Justice 2006b:285). This dynamic intervention model uses a three-tier approach where the first tier generally involves exemplary classroom instruction from a pre-school level onwards and features systematic and explicit classroom-based reading instruction. The second tier involves supplemental intervention for learners whose growth trajectory lags behind those of their peers. This supplemental intervention is optimally provided to at-risk learners during the pre-school and early school years. The progress of these learners is carefully monitored, and as the third tier of instruction, children who fail to reach criterion levels of reading performance are provided with special education services. This model eliminates the possible influence of lack of

stimulation and exposure to the language of education, by differentiating over a period of time while providing quality literacy instruction. While an RTI framework might overcome obstacles of linguistic, cultural and socio-economic diversity in the South African context, it relies heavily on quality and explicit reading instruction as the first and foundational tier. A key premise in RTI is the establishment of timely and adequate reading instruction for at-risk children. The significant inequities that are still present in the South African educational system result in limited access to quality instruction and inadequate support in several schools. This might impede the successful implementation of an RTI model (du Plessis 2001:195; Willenberg 2002:405).

3.3.3. How should we intervene with a view to early literacy development in ELLs?

The final question "*How should we intervene with a view to early literacy development in ELLs?*" encompasses questions on two levels. Firstly, it is concerned with the content of a framework for the delivery of emergent literacy intervention and secondly, it seeks an answer to how should this framework should be adapted for an at-risk ELL population.

To determine our knowledge base on emergent literacy intervention and its clinical application for ELLs, Justice (2008:7) suggested using structures e.g. treatment studies, systematic reviews and meta-analyses or clearinghouses. For the purpose of this study, I employed two of these available structures, namely treatment studies and clearinghouses, to identify and review current research on emergent literacy intervention programs that were developed for or implemented with ELL populations.

Several researchers have conducted treatment studies to determine the efficacy of intervention programs aimed at enhancing certain aspects of children's emergent literacy. Some of these studies focused on parental involvement (e.g. Bingham 2004; Stadler 2001; Sénéchal and LeFevre 2002), whereas others describe the outcomes of school-based programs (e.g. Blachman, Ball, Black and Tangel 2000; Brickman 2003; Byrne and Fielding-Barnsley 1995; Castle, Riach and Nicholson 1994; Dickinson and Caswell 2007; Jenkins and Bowen 1994; McGill-Franzen, Lanford and Adams 2002; Pietrangelo 1999; Whitehurst, Zevenbergen, Crone, Schultz, Velting and Fischel 1999). According to Vaughn, Linan-Thompson, Pollard-Durodola, Mathes and Hagan (2006:185), however intervention

studies specifically aimed at ELLs seem to be limited. In a systematic review, Vaughn *et al*. (ibid) identified four studies that were conducted as interventions for ELLs: Stuart (1999); Gunn, Biglan, Smolkowski and Ary (2000); Linan-Thomspon, Vaughn, Hickman-Davis and Kouzekanani (2003) and Denton, Anthony, Parker and Hasbrouck (2004). Each of these will briefly be discussed below.

Stuart (1999) compared a systematic phonological awareness program (*Jolly Phonics* – Lloyd and Wernham 1995) with a less structured program (*Big Books* – Stuart 1999) followed by ELLs (n=96) with a mean age of 5 years and with mostly Sylheti as their L1. Two years post-intervention, learners who received the structured systematic program outperformed the control group on several literacy skills, namely alphabetic knowledge, phonics recognition and recall, as well as reading of words and non-words. This study showed that early intervention with a commercially available program and minimal training of teachers could benefit ELLs in whole class situations.

Reading Mastery (Engelmann and Bruner 1988) is a direct-instruction program that was designed to provide explicit and systematic instruction in English language reading for learners from Kindergarten level onwards. This program typically includes seven to nine activities in 30 to 45 minute lessons daily and addresses aspects such as phonemic awareness, letter-sound correspondence, word recognition, vocabulary, oral reading fluency and comprehension. In a randomised control trial, Gunn, Biglan, Smolkowski and Ary (2000) investigated the effects of supplemental reading instruction using either *Reading Mastery* or *Corrective Reading* (Engelmann, Carnine and Johnson 1988 as cited in Gunn *et al.* 2000) with Hispanic and non-Hispanic students who performed below grade level on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS: Good and Jefferson 1998). Participants included a small subgroup (n=19) of non-English speaking learners from Kindergarten to Grade 3 (ELLs). Significant improvements were measured after two years with regards to word attack[5], word identification, oral reading fluency, vocabulary and reading comprehension skills for the non-ELLs, while the gains for the ELLs were statistically significant on one outcome only, namely reading fluency. Although these gains seem modest for ELLs, two important conclusions could be drawn

[5] The Word Attack subtest of the Woodcock-Johnson Tests of Achievement that was used in the Gunn *et al.* study assesses the ability to read irregular words and to use phonic and structural analysis which strongly relates to a learner's decoding ability.

in this study: the authors found teacher experience to be a potentially critical factor in the successful implementation of reading instruction and also suggested that longer term intervention may be necessary for preventing reading failure in low performing students.

Linan-Thompson *et al*. (2003) researched the effectiveness of an intervention program for 26 Grade 2 English-Spanish students at risk for reading problems. Risk status of participants was established on the basis of teacher nomination as well as low scores on the Texas Primary Reading Inventory. In the participating districts, students were placed in English Second Language (ESL) programs as opposed to bilingual programs if English was their dominant language but they were not yet considered to be proficient in English. Eight of the participants in this study (30%) received ESL instruction while the remaining 18 participants were in bilingual education classrooms in early transition programs. These 18 students had received Spanish literacy instruction in previous years, but at the time of the study all participating students in both programs were receiving only English literacy instruction. Participants received 58 supplementary reading sessions of approximately 35 minutes each over a period of 13 weeks, focusing on fluent reading, phonological awareness, instructional-level reading[6], word study[7] and writing. Learners were followed up immediately and again 4 weeks and 4 months post-intervention. In this study significant gains were measured for passage comprehension and oral reading fluency; however, significant loss of skills on phoneme segmentation fluency was measured 4-months post-intervention. The study did not include a control group and therefore the effects of the intervention program could not be separated from the effects of typical classroom instruction. Nevertheless, the authors found that approximately two thirds of the participants' difficulty with English reading and their poor performance on early reading measures seemed to have stemmed from lack of instruction in English rather than reading disability; the remaining group of about one third of the learners performed similarly to monolingual English learners with reading difficulties. In accordance with the study of Stuart (1999), this study supports the practice of providing ELLs with supplementary reading instruction that uses an intensive, explicit approach. They also found that ELLs benefited from instruction regardless of their English oral language proficiency; however, as there was an emphasis on vocabulary development

[6] Instructional-level reading activities provided students with frequent opportunities to practice literacy skills in context and to enhance oral English language skills.
[7] Word study activities involved explicit instruction of the alphabetic principle and word analysis strategies as well as meta-linguistic discussions of similarities or differences between English and Spanish sounds.

throughout the lessons, it is difficult to determine which elements of the program were most effective in improving learners' reading outcomes.

Denton *et al.* (2004) compared the effectiveness of two tutoring programs (*Read Well* – Sprick, Howard and Fidanque 1998 and *Read Naturally* – Ihnot 1992) for the development of English reading of 93 Spanish-English bilingual students with a mean age of 9 years. They had modified the *Read Naturally* program by adding and extending activities related to vocabulary, decoding and comprehension, to accommodate ELLs. Limited positive outcomes were measured for these students: the only significant growth was on word reading for students assigned to the *Read Well* program. Reading comprehension had not improved significantly following any of these programs, leading the authors to conclude that the effects of interventions targeting English vocabulary development for ELLs need to be investigated in future research. In their review of the study, Vaughn *et al.* (2006) concurred that modification to include effective ELL strategies, oral skills and critical linkages between native language and English needs to be systematically incorporated into reading programs to more effectively influence outcomes for ELLs. They propose the provision of systematic, structured and explicit interventions that focus on the critical elements of reading (phonics, spelling, fluency and comprehension) for ELLs.

As only one of the abovementioned studies (Stuart 1999) focused exclusively on emergent literacy outcomes for pre-schoolers, clearinghouses were additionally employed to study an overview of condensed descriptions of the accumulated scientific literature on emergent literacy intervention for preschool ELLs (Justice 2008:10). The "What Works Clearinghouse" of the United States Department of Education was utilized to identify two further relevant intervention studies. These studies have been included based on the following premises: (i) the program targeted emergent literacy concepts and is applicable for use with pre-school learners i.e. prior to Grade 1, (ii) research outcomes with ELLs were available and (iii) results were published in scientifically recognized peer-reviewed publications. These two intervention studies are discussed below.

The *Success for All* program (Slavin and Madden 1999) is widely used in the US and is a comprehensive reading, writing and oral language development program for learners from Kindergarten to Grade 8. This program emphasizes systematic phonics, cooperative

learning and family support programs, and its effectiveness with ELLs has been evaluated in a large number of experimental studies (Hurley, Chamberlain, Slavin and Madden 2001; Livingston and Flaherty 1997; Slavin and Madden 1995). Two methodological issues namely the difficulty separating the effect of intervention from the effect of the classroom (Dianda and Flaherty 1995) and determining the effects of differences in language of instruction (Livingston and Flaherty 1997) were identified as problematic in response to the published results for this program. The fact that one of the program developers was directly involved in the majority of the published results also compromises some of the positive results of this program (Finn, Bothe and Bramlett 2005). The replication of the published results by independent researchers or laboratories will add to the scientific support base of the current findings.

The *Fast ForWord Language*™ (Scientific Learning Corporation 1999) is a computer-based instructional program that is based on the assumption that temporal processing of speech is impaired in children with phonological awareness deficits. It was originally designed for learners with reading difficulties, but has been evaluated with ELLs (Troia 2004). This intensive program aims to build memory, attention, and processing and sequencing skills, and includes seven computer-based exercises with acoustically modified speech and language training. Two methodologically sound studies researched the effects of this program with ELLs and found it to have potentially positive effects on English language development, but no discernable effect on reading achievement (Scientific Learning Corporation 1999; Troia 2004). Troia (ibid.) however mentioned that due to methodological weaknesses and limited treatment fidelity, study results must be interpreted with caution. In a study where the effectiveness of the *Fast ForWord Language*™ program was compared with two other phonological awareness interventions, namely *Earobics* (1998) and the *Lindamood Phonemic Sequencing Program* (Lindamood and Lindamood 1998), only the latter two programs were associated with gains of phonological awareness measures for English-speaking students with reading difficulties. Further, Finn, Bothe and Bramlett (2005) point out that there is a substantial body of research and criticism that claims that the effects of *Fast ForWord*™ are not significantly different from, or in some cases are even worse than, the effects that can be obtained by using a different, equally intensive intervention (Friel-Patti, DesBarres and Thibodeau 2001:214; Frome-Loeb, Stoke, and Fey 2001: 228; Gillam, Crofford, Gale and Hoffman 2001:245). Positive results with the *Fast ForWord*™ program were not

backed by sufficient peer-reviewed evidence, resulting according to Finn *et al.* (ibid.) in ongoing controversy regarding the effectiveness of this program.

In a study that compared two emergent literacy intervention approaches with high-risk pre-schoolers, Justice, Chow, Capellini, Flanigan and Colton (2003) found significantly improved gains for an experimental explicit approach focusing on name writing, alphabet knowledge and phonological awareness in comparison with an adult-child shared storybook reading approach. While this study focused on English-speaking children from deprived backgrounds who had language impairments, results confirmed that children with multiple risk factors demonstrated substantial literacy growth over a twelve week intervention period. This study included a relatively small number of participants (n=18) from a very homogeneous cultural background, and the extent to which these results can be generalized is thus unclear. Also, the study did not specify participants' oral language skills in sufficient detail, limiting any conclusions on the effectiveness of the interventions with regards to this important literacy domain.

Having reviewed the literature with regards to intervention studies for pre-school ELLs, it is now possible to synthesize these findings to determine a framework for the delivery of emergent literacy intervention and so to answer the question "*How should we intervene with regards to early literacy development in ELL?*". Kaderavek and Justice (2004) suggest an integrated approach to intervention. The authors distinguish two approaches to emergent literacy intervention: a "top-down" holistic model and "bottom-up" reductionist learning model. The holistic model emphasizes whole-language principles through child-directed, informal and naturalistic interactions, while the "bottom-up" model emphasizes explicit and directive teaching of the critical literacy concepts. Examples of embedded holistic intervention strategies would include literacy-enriched play settings, print-rich classroom environments and adult-child shared storybook reading (Morrow 2007:38; Whitehurst and Lonigan 2002:22). Examples of more explicit, structured and teacher- or clinician-directed approaches would involve intervention programs that provide deliberate, scaffolded exposure to specific concepts and skills, e.g. phonological awareness, concepts of print and alphabet knowledge. Kaderavek and Justice (2004) propose an embedded-explicit model which synthesizes two strands of evidence-based practices, i.e. whole language and phonological awareness literature, which can be graphically depicted as in Figure 3.1 overleaf.

While this model encapsulates the most strongly supported research-based evidence and allows for quality instruction for all pre-schoolers as well as more systematic and explicit instruction for at-risk learners, it is not clear if such a blanket approach serves the best interest of ELLs.

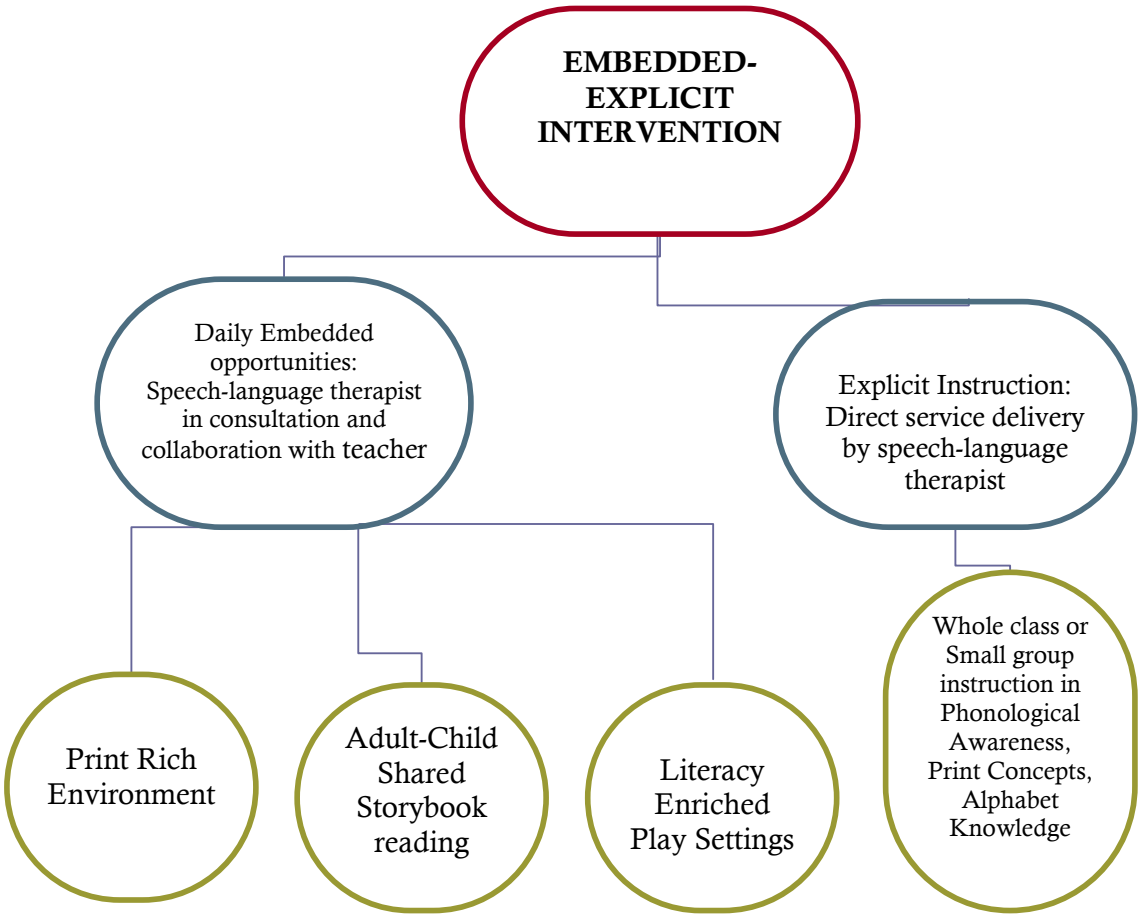

Figure 3.1 Kaderavek and Justice's (2004) Embedded-Explicit Model for literacy intervention

Whitehurst and Lonigan (1998) and Sénéchal, LeFevre, Smith-Chant and Colton (2001) propose two theoretical constructs for emergent literacy which might provide some structure to the ELL intervention process. In the first construct, Whitehurst and Lonigan (ibid.) distinguish between *Outside-In Processes* (knowledge about the concepts of print, emergent reading in context, narrative knowledge and language) and *Inside-Out Processes* (phonetic spelling, letter knowledge, letter-sound knowledge, phonological and syntactic

awareness). Sénéchal *et al*. (ibid.) view emergent literacy as a separate construct to oral language and meta-linguistic skills, as set out in Table 3.2.

Table 3.2 Sénéchal, LeFevre, Smith-Chant and Colton's (2001) view on literacy, oral language and meta-linguistic skills

Emergent Literacy Construct	**Language Construct**	**Meta-linguistic Skills Construct**
• Conceptual knowledge • Acts of reading and writing • Functions of literacy • Self-perception of learning to read • Emergent reading • Procedural knowledge • Pre-conventional spelling • Letter knowledge • Letter-sound knowledge • Word reading	• Narrative knowledge • Vocabulary • Listening comprehension	• Phonological awareness • Syntactic awareness

While both Whitehurst and Lonigan (1998) and Sénéchal *et al.* (2001) attempt to define the different components of emergent literacy, the nature of the relations among the components and the implications for ELLs who enter formal schooling with different levels of language proficiency are still unclear. Sénéchal *et al*. (ibid.) propose that conceptual knowledge about literacy may play a role in the acquisition of emergent procedural knowledge and may be closely related to children's oral language. In contrast, emergent procedural knowledge may play a role in the acquisition of conventional reading as well as in the development of phonological awareness. Similarly, the model Whitehurst and Lonigan (ibid.) propose, does not clarify the causal relationship between the Outside-In and Inside-Out processes; in other words, the question still remains as to what extent the development of Inside-Out processes is contingent on the development of Outside-In processes and how this should inform the decision-making process regarding intervention for ELLs. Especially considering Lipka and Siegel's (2007) findings that ELLs demonstrated significant difficulties with syntactic awareness, the question is whether meta-linguistic skills should be addressed in addition to emergent literacy constructs and also how much emphasis should be placed on the language construct as an expected weakness in the profile of ELLs.

In a study with at-risk learners with low SES, Justice, Meier and Walpole (2005:28) found that incidental exposure to unknown words during small-group storybook reading activities did not result in any significant word-learning gains. They concluded that children with low vocabulary skills benefit from greater adult mediation when exposed to novel words. When a parallel is drawn with ELLs, it raises the question whether Outside-In processes should be addressed with more explicit and direct instruction as opposed to the naturalistic embedded whole-language approach.

In summary, an emergent literacy intervention program should involve (i) embedded, naturalistic opportunities to develop conceptual knowledge, and (ii) structured and systematic instruction regarding procedural knowledge, while taking learners' linguistic and meta-linguistic strengths and weaknesses into account. The "recipe" for an integrated intervention program is thus established but the specific ingredients and quantities need further specification before such a recipe, i.e. a program suited to the needs of ELLs, will be complete. The pilot study for this research was aimed at establishing which critical components need to be included in such an integrated intervention program. This was conducted by comparing emergent literacy skills of English L1 and L2 learners in four pre-schools in the Southern-Cape region of South Africa. The pilot study will be introduced, elaborated and discussed in the next chapter.

3.4. CHAPTER CONCLUSION

Supporting ELLs at risk for literacy difficulties require effective assessment and appropriate and timely intervention. This chapter reviewed scholarly literature and local contextual information in articulating the challenges involved in assessing young learners from diverse linguistic backgrounds. Particularly, it attended to synthesized current intervention studies which aimed at preventing and/or remediating literacy problems in learners who have to acquire this critical skill in their L2. A framework for an integrated emergent literacy intervention program was established; as has been indicated, the next chapter will determine the critical components that need to be included in such a program in order to meet the needs of ELLs.

CHAPTER 4

PILOT STUDY

4.1. INTRODUCTION

Within the theoretical framework of current emergent literacy practices, stage 1 of this research project aimed at establishing what the current status is of literacy practices in the Southern Cape/Karoo region of South Africa among learners with an L2 as language of teaching and learning. Two exploratory questions were investigated during the pilot study:

1. Upon entering Grade 1, how do L2 English learners (ELLs) compare with their English L1 peers in performing tasks that assess different emergent literacy skills?
2. Based on these results, which critical components should be included in a stimulation program aimed at preparing the ELL for acquiring literacy in an English-only classroom?

4.2. METHODOLOGY

After obtaining ethical approval from the Western Cape Education Department and permission from the school principals, Grade 1 teachers in four primary schools in the Eden and Central Karoo Educational region in the Southern Cape in South Africa were requested to provide a class list indicating their learners' home language. Participants in the study were randomly selected from these class lists and consent for their participation in the pilot study was obtained from their parents or guardians. Parents or guardians completed a 6-item questionnaire to determine socio-economic status and Mother's level of Education (du Plessis 2003; Appendix A). After identifying suitable participants from those learners whose parents or guardians consented, the researcher assessed such participants within the first two weeks of the first school term (January 2006), using the Emergent Literacy Assessment (ELA; Appendix B). It is important to note that the original version of the ELA (Willenberg 2004) was utilized in the pilot study. Changes to the ELA were made upon reflection of the pilot study results and an adapted version of

the ELA was then used in the main study. The amended version of the ELA will be discussed under 5.6.2.2.

4.2.1. Participants

Thirty-two Grade 1 learners participated in the pilot study. Participants had a mean age of 6 years 9 months and were balanced in terms of gender and home language (English L1 or English L2). A summary of features of these learners is presented in Table 4.1.

Table 4.1 Description of Participants in Pilot Study

Participant	School[a]	Home language	Age	Gender	SES[b]	ME[c]
A1	A	English	6,8	M	3	4
A2	A	English	6,9	M	2	2
A3	A	English	6,10	M	2	3
A4	A	English	6,11	F	3	2
A5	A	English	6,11	F	2	1
A6	A	English	7,0	F	2	2
A7	A	Afrikaans	7,1	M	3	3
A8	A	Afrikaans	7,3	F	2	1
A9	A	isiXhosa	6,7	M	1	2
A10	A	isiXhosa	6,8	F	1	2
A11	A	isiXhosa	6,10	F	2	3
A12	A	isiXhosa	7,0	M	1	1
B13	B	English	6,8	M	3	2
B14	B	English	6,9	F	3	1
B15	B	English	6,10	F	3	4
B16	B	English	6,11	M	3	4
B17	B	Afrikaans	6,11	F	2	2
B18	B	Afrikaans	6,6	M	3	4
B19	B	isiXhosa	6,10	F	2	2
B20	B	isiXhosa	7,1	M	3	1
C21	C	English	6,11	M	3	3
C22	C	English	6,11	M	3	3
C23	C	English	7,0	F	3	3
C24	C	Afrikaans	6,8	M	1	2
C25	C	isiXhosa	6,10	F	3	3

Participant	School[a]	Home language	Age	Gender	SES[b]	ME[c]
C26	C	isiZulu	7,4	F	2	2
C27	D	English	6,2	M	2	3
D28	D	English	6,8	M	2	2
D29	D	English	7,0	F	3	1
D30	D	isiXhosa	6,7	F	1	3
D31	D	Afrikaans	7,0	F	3	3
D32	D	isiXhosa	7,0	M	1	1

[a]All four school were in the Eden and Central Karoo regions of the Southern Cape and identified as A, B, C or D. [b]Socio-economic status: 1 = Low-SES, 2 = Mid-SES, 3 = High-SES. [c]Mother's level of education: 1=<Grade 8, 2=Grade 12, 3=Tertiary qualification, 4= Postgraduate tertiary qualification

4.3. RESULTS

Using a one-way analysis of variance (ANOVA), participants' performance was compared on the ten subtests, taking into account the following six independent variables: school attended by the participant, participant age and gender, the family's SES, the participant's mother's level of education and the participant's home language. The results for each of these variables will be discussed below.

4.3.1. School

A convenience sample of four primary schools in the Southern Cape/Karoo region of South Africa was included in the pilot study. Schools A and B were English-medium schools, while Schools C and D were parallel-medium schools. In Schools C and D, Afrikaans was the alternative language offered in parallel Grade 1 classrooms. All participants in the latter two schools attended the English Grade 1 classes at their respective schools and were only exposed to the alternative language during break times and social gatherings. The distribution of participants across the schools is depicted in Figure 4.1.

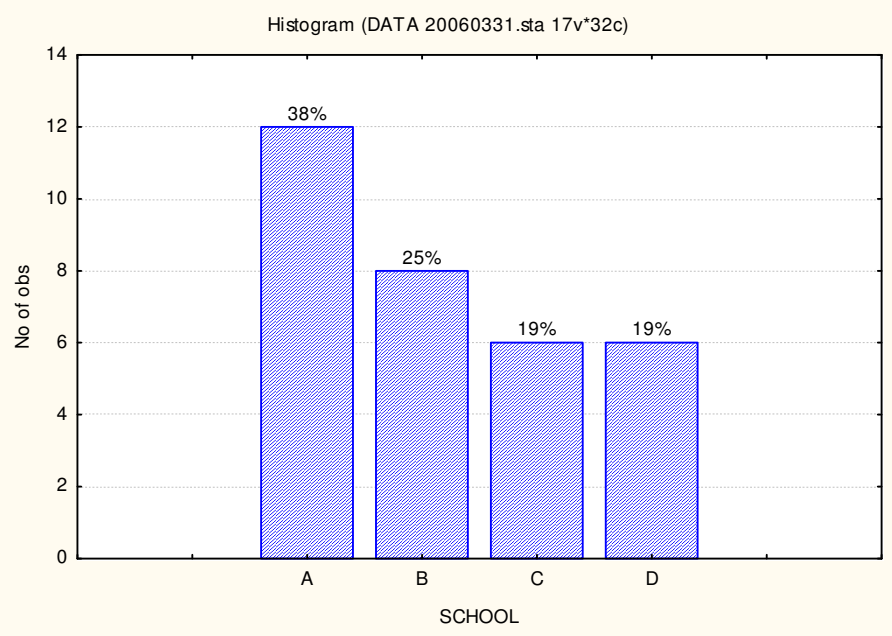

Figure 4.1 Distribution of participants in pilot study across the four participating schools

One-way ANOVA results showed no significant differences in results on any of the ten subtests among the four participating schools ($p>0.05$). The results for each subtest are shown in Table 4.2.

Table 4.2 Mean scores and ANOVA results on ELA for four participating schools

ELA Subtest	**School A**	**School B**	**School C**	**School D**	**F(3.28)**	**p**
Sounds in words	6.1	6.9	6.3	5.3	3.99	0.75
Rhyme Recognition	6.8	6.9	6.7	6.8	0.13	1.0
Rhyme Production	5.2	3.0	2.0	2.0	1.89	0.15
Concepts of Print	9.9	14.3	10.5	9.0	1.37	0.27
Fictional Narrative	6.7	7.8	6.3	5.0	0.62	0.61
Word Definitions	49.9	51.3	45.8	30.7	1.1	0.36
Environmental Print	29.8	25.9	25.2	31.7	0.73	0.54
Letter Recognition	14.1	14.9	13.5	10.0	0.37	0.78
PPVT-IIIB	83.7	94.6	90.0	75.2	1.3	0.29
Emergent Writing/Spelling	3.1	3.6	2.5	2.7	1.0	0.46

4.3.2. Age

Participants in the pilot study ranged in age from 6 years 2 months to 7 years 4 months with an average age of 6 years 9 months. The Spearman correlation coefficient indicated no significant correlation between the age of subjects and performance on any of the ten subtests ($p>0.05$), as shown in Table 4.3.

Table 4.3 The effect of age on performance on the subtests of the ELA in the pilot study

ELA Subtest	Spearman r	p
Sounds in words	0.23	0.21
Rhyme Recognition	0.18	0.32
Rhyme Production	0.11	0.55
Concepts of Print	0.00	0.99
Fictional Narrative	0.11	0.57
Word Definitions	0.04	0.82
Environmental Print	0.21	0.26
Letter Recognition	-0.15	0.42
PPVT-IIIB	-0.17	0.36
Emergent Writing and Spelling	-0.03	0.88

4.3.3. Gender

Sixteen male and sixteen female Grade 1 learners participated in the pilot study. As indicated in Tables 4.4 and 4.5 overleaf, one-way ANOVA results indicated no significant difference in performance between the two genders on any the ELA subtests ($p>0.05$).

While some researchers have suggested that girls perform better than boys in verbal and linguistic functions (Hyde and Linn 1988:68; McCormack and Knighton 1996:218), the current study corroborates with Nancollis *et al.* (2005:333) who found no differences between boys and girls from deprived social backgrounds (mean age 4 years 6 months) on assessments of language, phonological awareness and literacy abilities.

Table 4.4 Mean scores and Standard Deviations of Male and Female Subjects on the subtests of the ELA in the pilot study

Gender		Sounds in Words	Rhyme R	Rhyme P	Concepts of Print	Narrative
Female	Mean	6.06	6.13	3.13	11.19	7.19
(N=16)	SD	2.695	2.277	3.423	5.540	4.277
Male	Mean	6.31	7.44	3.75	10.69	5.94
(N=16)	SD	2.522	1.504	3.568	5.793	3.043
Total	Mean	6.19	6.78	3.44	10.94	6.56
(N=32)	SD	2.571	2.012	3.454	5.582	3.706
Gender		**Word Def**	**Environ Print**	**Letter R**	**PPVT-IIIB**	**Writing**
Female	Mean	42.87	28.63	11.25	79.75	3.13
(N=16)	SD	19.325	9.563	8.888	18.958	1.360
Male	Mean	48.88	27.94	15.56	92.25	2.94
(N=16)	SD	27.276	9.532	8.594	18.806	1.340
Total	Mean	45.88	28.28	13.41	86.00	3.03
(N=32)	SD	23.452	9.399	8.875	19.630	1.332

Table 4.5 One-Way Analysis of Variance Results to determine effect of Gender on performance on the subtests of the ELA in the pilot study

Subtest * Gender	F(1,30)	p
Sounds in Words	0.07	0.79
Rhyme Recognition	3.7	0.06
Rhyme Production	0.26	0.62
Concepts of Print	0.06	0.81
Fictional Narrative	0.91	0.35
Word Definitions	0.52	0.48
Environmental Print	0.04	0.84
Letter Recognition	1.95	0.17
PPVT-IIIB	3.51	0.07
Emergent Writing	0.15	0.7

4.3.4. Socio-economic status (SES)

Based on their total score on a 6-item questionnaire that was adapted from Du Plessis (2003), participants were divided into three SES categories: low SES-1 (0-2), mid SES-

2(3-4) and high SES-3 (5-6). Six subjects were in the low SES group, 11 in the mid group and 15 subjects were in the high SES group. Table 4.6 summarizes the mean scores and one-way analysis of variance results on the ten ELA subtests for the three SES categories:

*Table 4.6 Mean scores and ANOVA results on ELA for three SES categories (p<.01**)*

ELA Subtest	SES-1	SES-2	SES-3	F(3.28)	p
Sounds in words	4.8	5.7	7.1	2.0	0.15
Rhyme Recognition	5.3	6.8	7.3	2.3	0.12
Rhyme Production	1.0	3.6	4.3	2.1	0.14
Concepts of Print	4.3	11.0	13.5	8.7	0.001**
Fictional Narrative	2.7	8.5	6.7	6.7	0.004**
Word Definitions	20.5	47.9	54.5	6.1	0.006**
Environmental Print	27.0	28.0	29.0	0.1	0.91
Letter Recognition	12.8	9.8	16.3	1.8	0.19
PPVT-IIIB	65.7	86.2	94.0	5.9	0.007**
Emergent Writing/Spelling	2.5	2.6	3.5	2.2	0.13

ANOVA results indicated that subjects in the high SES performed significantly better on four of the ELA subtests ($p<0.05$), namely Concepts of print, Fictional narrative, Word definitions and Peabody Picture Vocabulary Test (PPVT-IIIB). The results for these four subtests are graphically illustrated in Figures 4.2 to 4.5.

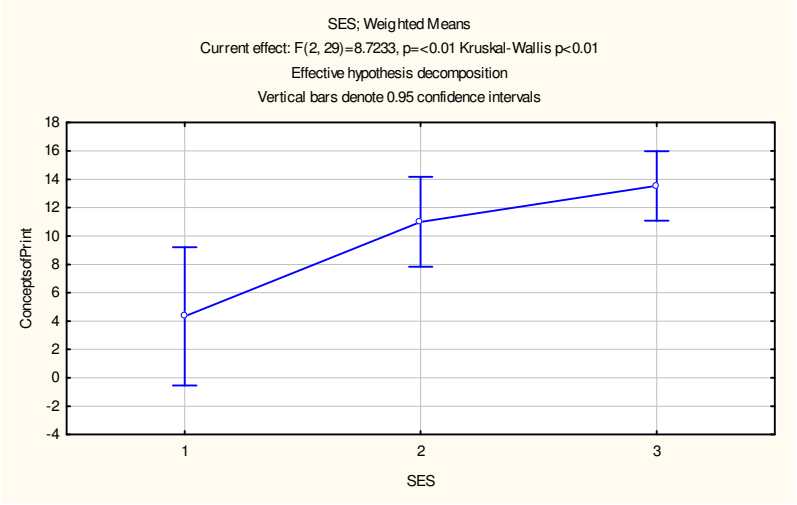

Figure 4.2 Performance of different SES Groups on Concepts of Print subtest of ELA in the pilot study

Regarding **Concepts of Print**, the Bonferroni post-hoc test indicated that the SES-3 ($p<.001$) and the SES-2($p<.05$) groups performed significantly better than the SES-1 group. As the number of hardcover books in the home was one of the items on the SES questionnaire, it is possible that the unavailability of quality children's books for the low-SES group contributed to their poor performance on this subtest.

For the results on the **Fictional Narrative** subtest of the ELA, the Bonferroni test completed post-hoc indicated that the mid SES-2 group ($p<.01$) and the high SES-3 group ($p<.05$) performed significantly better than the low- SES-1 group. This is depicted in Figure 4.3.

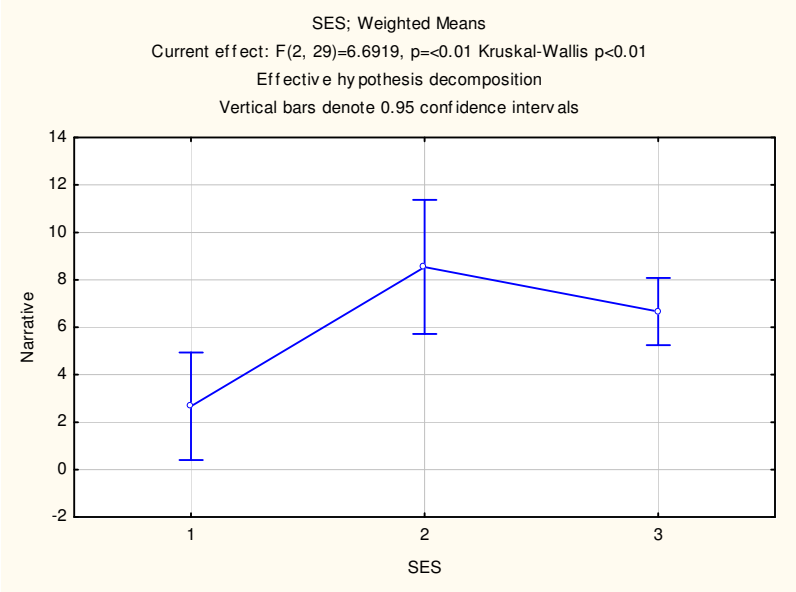

Figure 4.3 Performance of different SES Groups on Fictional Narrative subtest of ELA in the pilot study

The Bonferroni test confirmed that the high-SES group ($p<.01$) and the mid-SES group ($p<.05$) performed significantly better than subjects in the low-SES group on the test of **Word Definitions**, as shown in Figure 4.4.

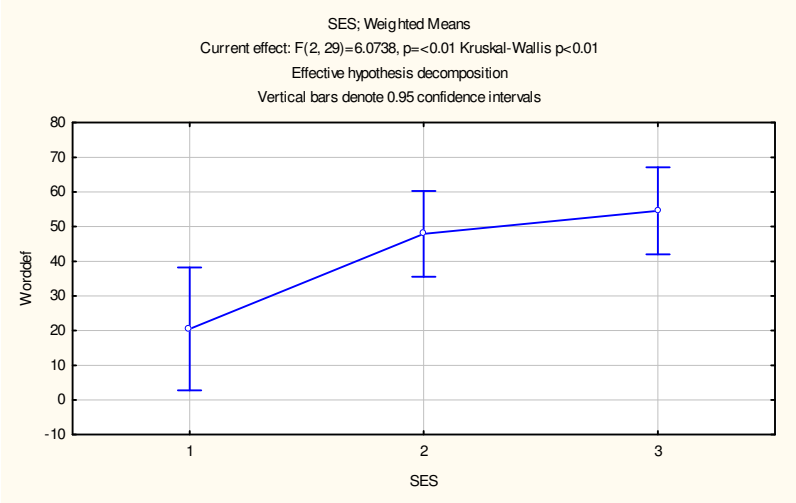

Figure 4.4 Performance of different SES Groups on Word Definitions subtest of ELA in the pilot study

The Bonferroni test further indicated that the high-SES group performed significantly better than the low-SES group (p<.01) with regards to receptive vocabulary ability as measured by the **PPVT-IIIB**. This is depicted in Figure 4.5.

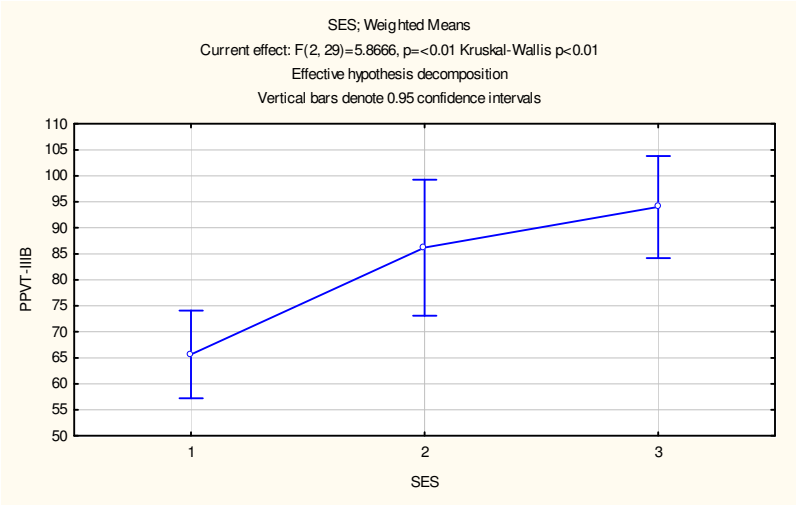

Figure 4.5 Performance of different SES Groups on PPVT-IIIB as subtest of ELA in the pilot study

The results of the pilot study indicated that upon entering Grade 1, learners from a higher socio-economic background performed better on a subtest of Concepts of Print, which may be related to the availability of hardcover books in the home environment. Furthermore subjects from a higher SES performed significantly better than their peers

from a more deprived socio-economic background (SES-1) on three subtests which assess oral language abilities: Fictional Narrative, Word Definitions and PPVT. Although the smaller number of subjects in the low-SES group (n=6) needs to be taken into consideration when interpreting these results, the observed tendency underscores Locke, Ginsborg and Peers's (2002:13) findings that pre-school children from socially disadvantaged backgrounds had significantly poorer spoken language abilities. Locke *et al*. (ibid) concluded that these children may be at risk for developmental delays in written language abilities. Similarly, McGee and Richgels's (2003:10) stated that the cumulative effect of minority status, a low SES and limited proficiency in the language of education are good predictors of groups of children who are likely to experience literacy difficulties.

4.3.5. Mother's level of education

Caregivers were asked to indicate the mother's highest educational qualification. Participants were then divided into four groups accordingly: ME-1 (< Grade 8: n=7), ME-2 (Grade 12: n=11), ME-3 (Tertiary qualification: n=10), and ME-4 (Postgraduate qualification: n=4). Figure 4.6 illustrates the distribution of subjects over the four ME categories.

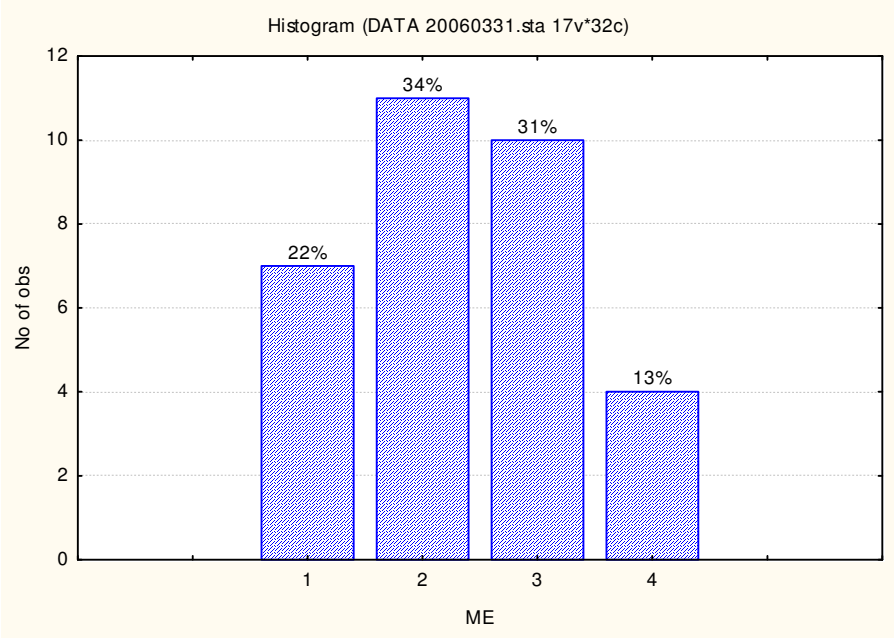

Figure 4.6 Mother's Level of Education pertaining to the participants in the pilot study

One-way ANOVA results indicated no significant difference in performance on any of the ten subtests for participants in each of these four groups (p>.05). These results are summarized in Table 4.7.

Table 4.7 Means Scores and ANOVA results to determine the effect of Mother's level of education on performance on the subtests of the ELA in the pilot study

ELA Subtest	**ME-1 (n=7)**	**ME-2 (n=11)**	**ME-3 (n=10)**	**ME-4 (n=4)**	**F(3.28)**	**p**
Sounds in words	5.1	6.6	5.9	7.5	0.88	0.47
Rhyme Recognition	6.3	6.4	7.4	7.3	0.66	0.58
Rhyme Production	2.6	2.9	4.0	5.0	0.57	0.64
Concepts of Print	7.9	11.3	11.1	15.0	1.5	0.24
Fictional Narrative	6.1	7.6	6.3	5.0	0.57	0.64
Word Definitions	34.6	45.6	46.8	64.0	1.4	0.26
Environmental Print	27.3	26.2	32.2	26.0	0.85	0.48
Letter Recognition	11.3	11.3	15.0	19.0	0.98	0.42
PPVT-IIIB	72.1	86.7	90.1	98.0	1.98	0.14
EmergentWriting/Spelling	2.6	3.2	2.9	3.8	0.73	0.54

Excepting in their performance on two subtests, Fictional Narrative and Environmental Print, subjects with mothers with the highest level of tertiary education (ME4) performed better than subjects with mothers with the lowest level of education (i.e. <Grade 8, ME-1). This was however not statistically significant: what is more, substantial variance in performance amongst the ME-4 group was observed. Considering that the number of participants in ME-4 (n=4) was particularly small, it has to be noted that the observed result in the pilot study is not supported by the large body of literature indicating that parents' level of education does correlate with levels of stimulating interaction and performance on pre-literacy measures (Britto, Fuligni and Brooks-Gunn 2006:315; Catts *et al.* 2001:45 Rebello 2004:1). However, this result might support the findings of other researchers that factors such as parental attitude, frequency of book reading and style of joint book reading interaction also support emergent literacy development (Britto *et al*. ibid). Although such factors were not assessed in this present study, the findings of the pilot study may suggest that while learners from a disadvantaged socio-economic background might be at risk for developing certain emergent literacy skills, low maternal levels of education are not necessarily an indicator of children's potential risk for literacy difficulties; certainly other contextual variables might prove to be greater risk indicators than maternal level of education. In the

South African context, where educators currently are still trying to minimize the ripple effect of the past inequalities in the educational system, this finding has positive implications.

4.3.6. Language

Sixteen English L1 and 16 English L2 learners (ELLs) were included in the study. Of the 16 ELLs, 9 had isiXhosa as L1, 6 had Afrikaans as L1 and 1 learner had isiZulu as her native language. For the purpose of the pilot study, The L1 of the ELL participants was not treated as a separate variable. Descriptive statistics of subjects according to their L1 (English L1 learners and ELLs) are presented in Table 4.8.

Table 4.8 Descriptive statistics for the pilot study participants' results on the ELA test battery, grouped according to English L1 or English L2

Subtest	**Mean for L1 learners**	**SD[a]**	**Mean for ELLs**	**SD**	**Group Mean (L1 + ELL)**	**SD**
Sounds in Words	7.13	2.25	5.26	2.6	6.19	2.57
Rhyme Recognition	7.63	1.09	5.94	2.38	6.78	2.01
Rhyme Production	5.38	2.99	1.5	2.78	3.44	3.45
Concepts about Print	13.25	4.14	8.63	5.99	10.94	5.58
Fictional Narrative	7.81	2.48	5.31	4.35	6.56	3.71
Word definitions	58.69	20.62	33.06	19.01	45.88	23.45
Environmental Print	29.31	7.86	27.25	10.88	28.28	9.4
Letter Recognition	16.69	8.38	10.13	8.34	13.41	8.87
PPVT	98.5	11.77	73.5	18.01	86.0	19.63
Emergent Writing and Spelling	3.31	1.3	2.75	1.34	3.03	1.33

[a]SD= standard deviation

Data was analyzed using one-way ANOVAS and results for eight of the ten subtests are depicted below, in Figures 4.7 to 4.14. No statistically significant difference was observed for two of the subtests, namely Emergent Writing and Spelling ($F(1, 30) = 1.45$, $p = 0.24$) and Environmental Print ($F(1, 30) = 0.38$, $p = 0.54$), which indicates that these two areas might be areas of relative strength for L2 learners upon entering Grade 1.

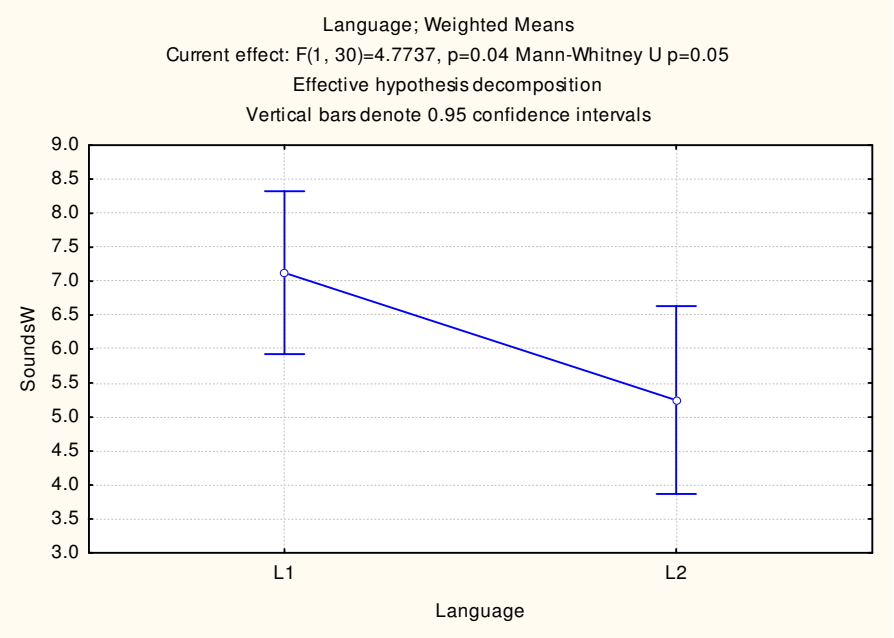

Figure 4.7 Performance of L1 learners and ELLs on Sounds in Words subtest of ELA in the pilot study

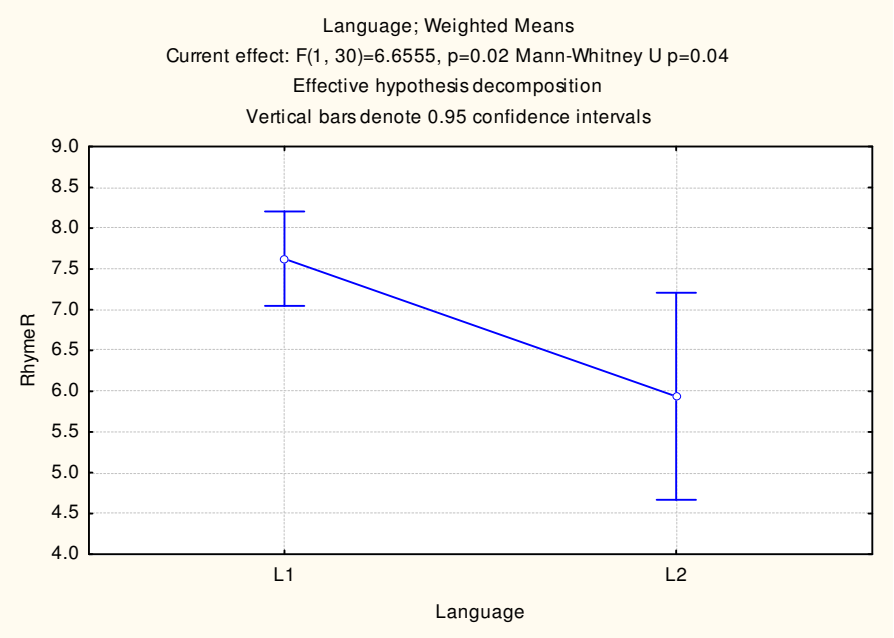

Figure 4.8 Performance of L1 learners and ELLs on Rhyme Recognition subtest of ELA in the pilot study

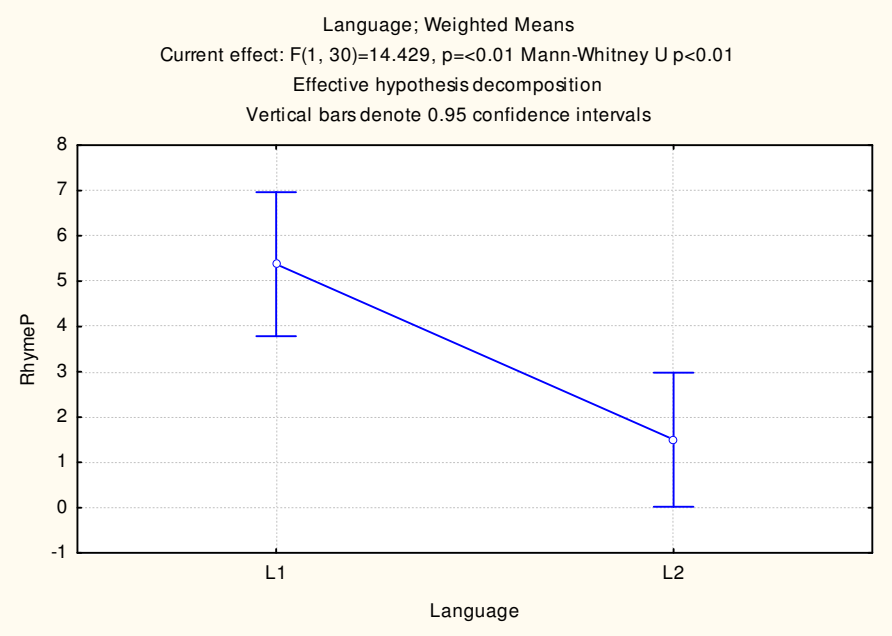

Figure 4.9 Performance of L1 learners and ELLs on Rhyme Production subtest of ELA in the pilot study

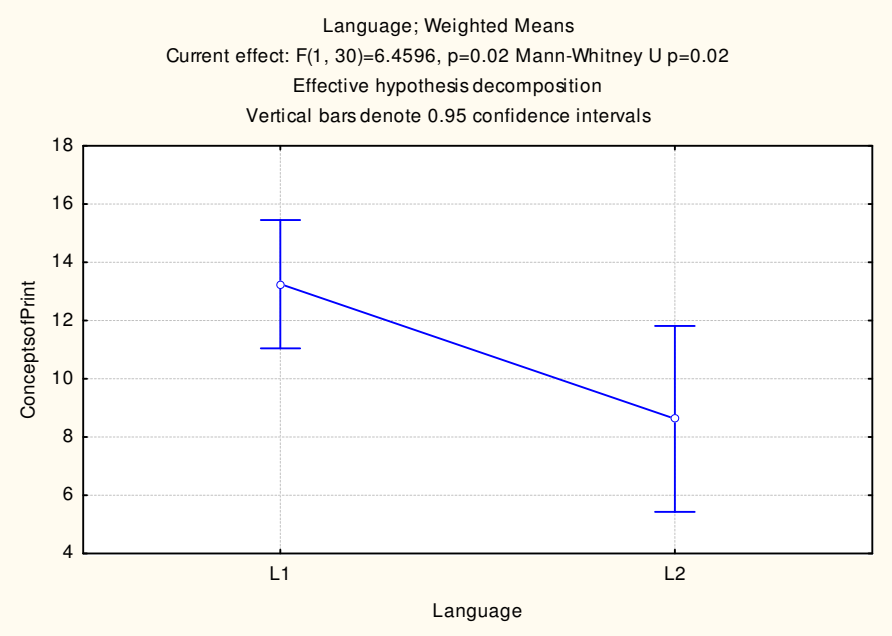

Figure 4.10 Performance of L1 learners and ELLs on Concepts of Print subtest of ELA in the pilot study

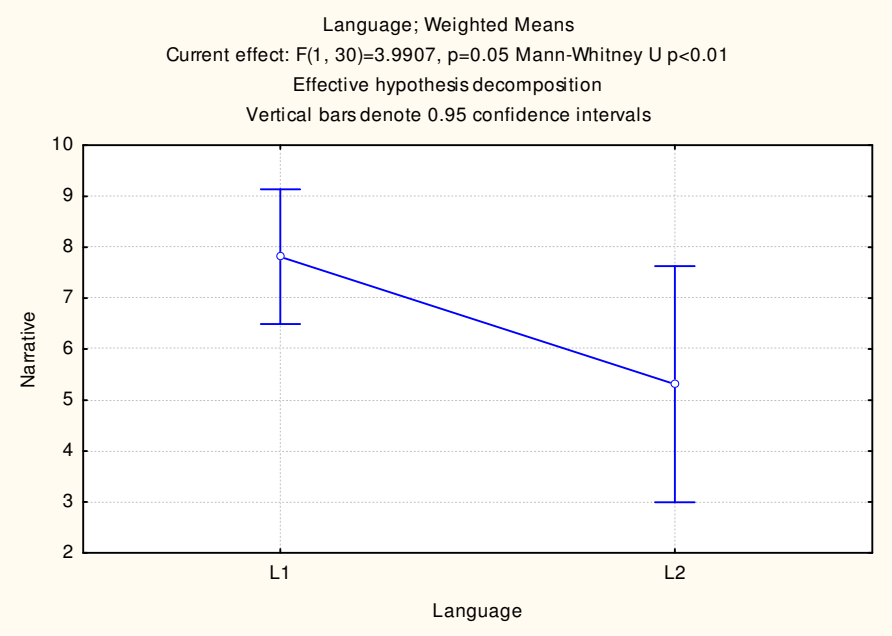

Figure 4.11 Performance of L1 learners and ELLs on Fictional Narrative subtest of ELA in the pilot study

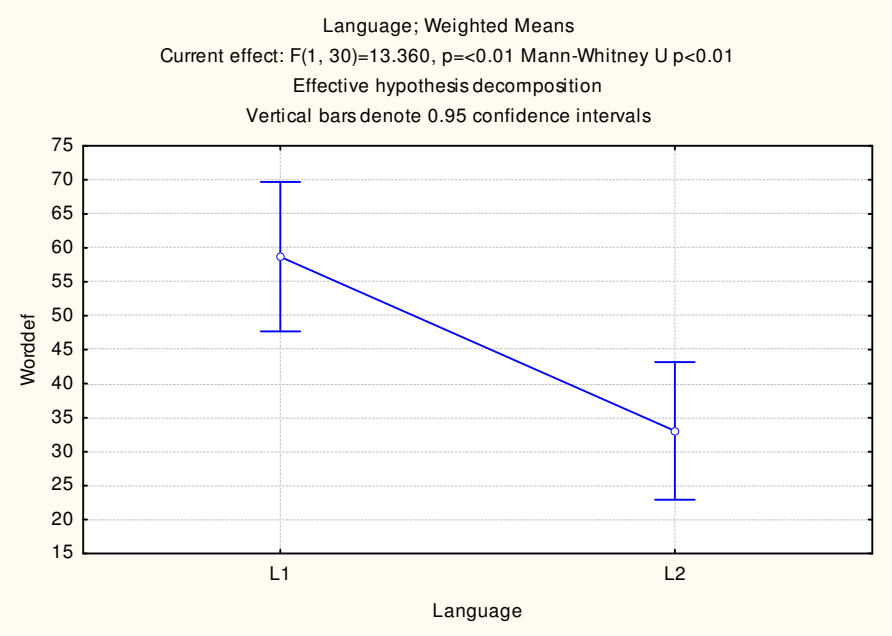

Figure 4.12 Performance of L1 learners and ELLs on Word Definitions subtest of ELA in the pilot study

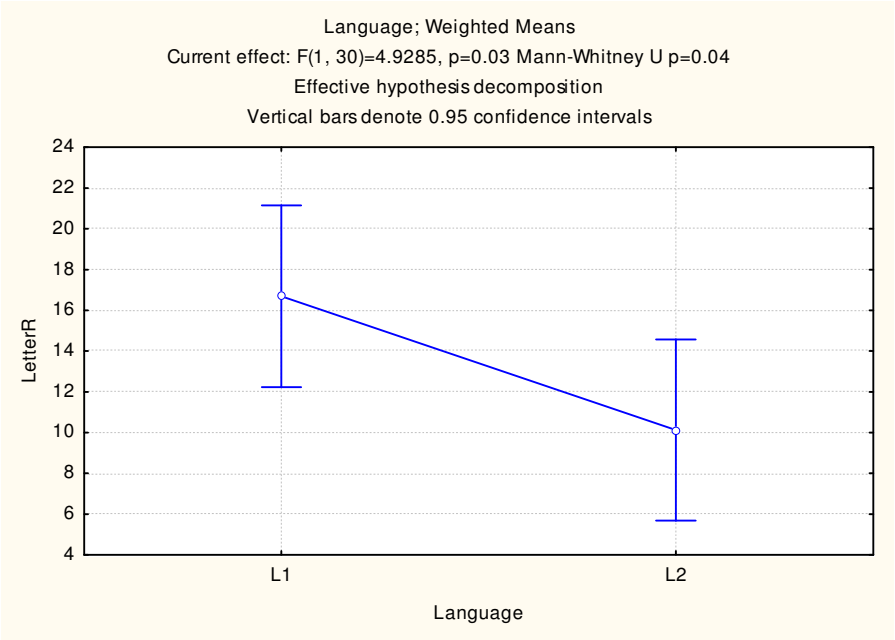

Figure 4.13 Performance of L1 learners and ELLs on Letter Recognition subtest of ELA in the pilot study

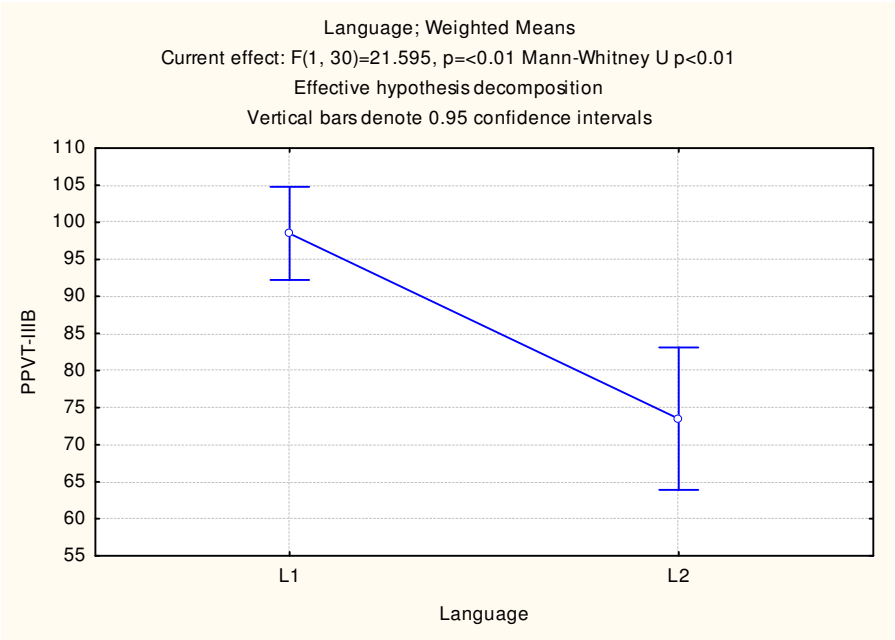

Figure 4.14 Performance of L1 learners and ELLs on PPVT-IIIB as subtest of ELA in the pilot study

The results of the pilot study indicated that English L1 learners performed significantly better ($p<0.05$) than their ELL peers on eight of the ten ELA subtests. Given this result that ELLs perform significantly poorer than their L1 peers on the majority of measures of emergent literacy, lends support to the assumption that acquiring literacy in an L2 is likely to pose challenges for ELLs.

4.4. COMPILING THE STIMULATION PROGRAM FOR USE IN THE MAIN STUDY

In an attempt to answer the second question posed in the pilot study, namely "Which critical components should be included in a stimulation program aimed at preparing the L2 English learner for acquiring literacy in an English-only classroom?" the following theoretical framework was used:

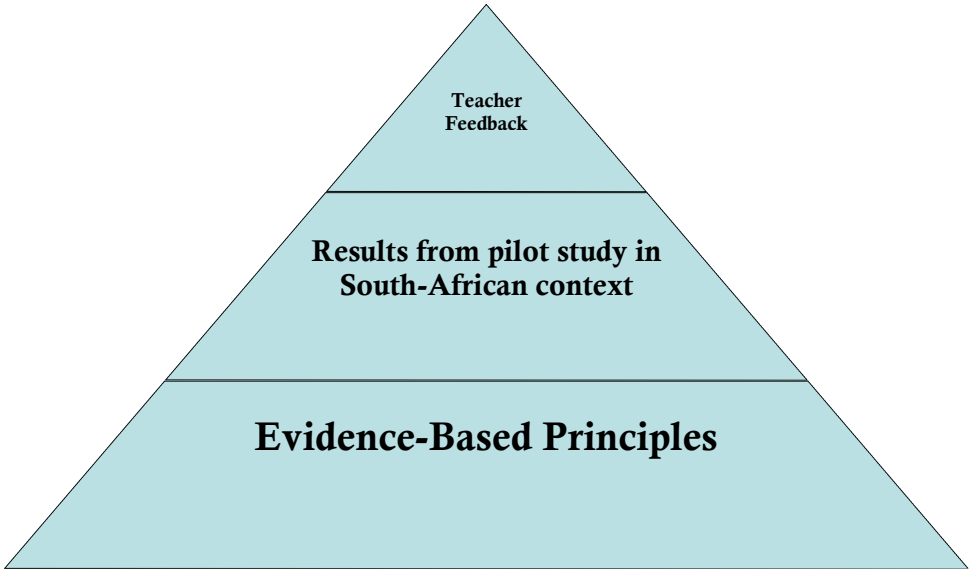

Figure 4.15 Framework used in compilation of BEARS program

Based on the Response to Intervention Model (RTI) (Justice 2006b) for preventative intervention regarding literacy skills, the stimulation program of this study was aimed at the first tier, which involves supplemental intervention for learners at risk for developing reading difficulties.

As the aim of the stimulation program was to be preventative in nature, it was designed to target the pre-school population in Grade R, which is the mandatory reception year prior to entering formal schooling in South Africa. Most of the previous intervention studies with ELLs were aimed at a later stage, with the emphasis on rehabilitation, and had mixed levels of success (Denton Anthony, Parker and Hasbrouck 2004; Gunn *et al*. 2000; Linan-Thompson *et al*. 2003), whereas Stuart (1999), who conducted his intervention with 5-year old ELLs, demonstrated more successful outcomes. Craig, Connor and Washington (2003:42) hold the premise that "early prevention may be the best weapon we have to combat reading failure". This supports the findings of Juel (1988:445) that prevention and early intervention of reading problems are more effective than attempting to remediate reading disabilities.

According to Rosin (2006:392), the design and implementation of programs aimed at developing and supporting emergent literacy require the translation of research to practice. As there is a lack of scientific evidence about emergent literacy intervention with ELLs, the integration of existing evidence with theoretical, practical and personal knowledge is recommended (Justice and Pence 2004:177). Two evidenced-based intervention approaches constituted the foundation of this study's stimulation program within an embedded-explicit framework: adult-child shared storybook reading and teacher-led structured phonological awareness intervention (Justice and Pullen 2003). Additionally the five key principles of The Linking Language and Literacy Project (Rosin 2006:398) were incorporated in the compilation of the stimulation program. These principles are:

(i) Language and literacy skills should be promoted together.
(ii) Children should participate actively in their learning.
(iii) Language and literacy activities should be meaningful.
(iv) Direct instruction should co-occur with embedded opportunities for learning.
(v) Prevention of language and literacy problems is the goal.

While the Linking Language and Literacy Project involved individual goal selection for participating children, the current program was a school-based intervention which targeted ELLs as a subgroup in large Grade R classrooms. In addition the program was based on the consultative model of intervention, where the researcher (a speech-language

therapist) fulfilled the role of developer and trainer while the classroom teachers delivered the program. The rationale for this model was dually motivated: Firstly, the education system in South Africa only requires mandatory schooling from the age of 6 years (Grade R), which results in several learners who are at risk for literacy difficulties only being identified at this relatively late stage. Secondly, while the role and importance of parents in developing emergent literacy skills is well-established and empirically supported in the literature, parents' proficiency in English is highly variable, which means that many learners with parents dedicatedly engaged in literacy preparation, are not sufficiently equipped for the demands of the system into which their children will enter. This necessitates making available of trained translators, skilled speech-language therapists and adequate training resources, all of which are currently not readily at hand in the South African context. As Justice and Pence (2004:177) suggest, practical and personal knowledge were integrated in the decision to deliver this stimulation program in the classroom setup rather than in participants' homes.

Based on the pilot-study results discussed above, the emergent literacy areas targeted by the stimulation program were those in which ELLs had shown significantly poorer performance than their L1 peers. These areas are listed in the first colomn of Table 4.9. Also depicted in this table are the corresponding areas listed by Sénéchal *et al*. (2001) and Whitehurst and Lonigan (1998).

Table 4.9 Areas of emergent literacy targeted by the stimulation program

Emergent Literacy Subskill	**Sénéchal *et al*. (2001)**	**Whitehurst and Lonigan (1998)**
Receptive and Expressive Vocabulary Narrative skills	Oral Language construct	Outside-In process
Basic concepts of print	Conceptual knowledge	Outside-In process
Sound-Letter knowledge	Procedural knowledge	Inside-Out process
Phonological Awareness	Meta-linguistic construct	Inside-Out process

The following strategies were incorporated in what Sénéchal *et al*. (2001) would term the oral language construct part of the program:

(i) Adult-child shared storybook reading took place with dialogic reading principles (Whitehurst and Lonigan 1998).

(ii) Adult-child interaction was enhanced with explicit use of repetitions, expansions and topic extension, open-ended questions, facilitation of comprehension and context-based vocabulary exploration (Weitzman and Greenberg 2002).

(iii) Careful selection took place of appropriate, high quality children's books that are distinguished by richness of vocabulary, compliance with story grammar, congruence with children's world knowledge and interplay of text and illustrations (McGee and Richgels 2003:88) Cultural appropriateness of the books was also taken into consideration in the selection process.

(iv) Literacy enriched play settings were facilitated by providing large books and literacy props.

(v) Development of narrative skills were targeted by incorporating specific scaffolding structures (Weitzman and Greenberg 2002).

The following strategies were incorporated in the conceptual knowledge part of the program: (i) fingerpoint reading (McGee and Richgels 2003:131), (ii) systematic and explicit print referencing during interactive shared reading (Justice and Pullen 2003:107) and (iii) scaffolding, the latter by making use of high-support and low-support techniques interchangeably (Justice 2006a:14).

Strategies incorporated in the procedural and meta-linguistic knowledge parts of the program were as follows:

(i) Teacher-directed structured phonological awareness activities were included. Activities were aimed at explicit, engaging and meaningful instruction in phonological awareness (Blachman, Ball, Black and Tangel 2000; Bodle 2006; Culatta and Hall 2006; Kamhi, Allen and Catts 2001; Roth and Baden 2001; Yopp and Yopp 2000).

(ii) The SEEL curriculum (Systematic and Engaging Early Literacy Instruction) was used as framework to develop phonological awareness and print skills in hierarchical order (Culatta and Hall 2006:180).

In addition to evidence-based principles and results from the pilot study with regards to critical elements that should be included in an emergent literacy stimulation program, three Grade R teachers completed a questionnaire in order to obtain personal and practical insight into teachers' needs and requirements (Appendix C). All three teachers confirmed the need for a supplemental program for ELLs in their classrooms despite their

current attempts to close the gap between L1 and L2 learners. Their requirements for such a program included: "easy to implement", "self-explanatory" and "practical ideas for sound-games".

Based on the above strategies and qualitative information, an eight-week Emergent Literacy program was compiled. The **BEARS** (**B**ridging program for **E**LLs to **A**ccelerate **R**eading development **S**kills) was developed around a shared theme (bears, as the name suggests) and the following books were used as basis for each week's vocabulary and related activities:

(i) *This is the Bear and the Scary Night* (Hayes 1991)
(ii) *Polar Bear, Polar Bear, what do you hear?* (Martin 1991)
(iii) *We're going on a Bear Hunt* (Rosen 1989)
(iv) *The Gruffalo* (Donaldson 1999)
(v) *Tikki Tikki Tembo* (Mosel 1968)
(vi) *Bear wants more* (Wilson 2004)
(vii) *Papa Bear's Holiday Adventure* (Wee-Ha 2003)

The complete program is included in Appendix D. An accompanying training manual and Power Point presentation was developed to be used as part of a two-hour training session for teachers (Appendix E). Furthermore, a feedback questionnaire was developed as part of the program, in order to obtain qualitative feedback from teachers (Appendix F).

4.5. CHAPTER CONCLUSION

The pilot study of this research project aimed at answering two exploratory questions: "Upon entering Grade 1, how do L2 English learners compare with their English L1 peers in performing tasks that assess different emergent literacy skills?" and "Based on these results, which critical components should be included in a stimulation program aimed at preparing the L2 English learner for acquiring literacy in an English-only classroom?" Thirty-two participants were assessed on ten subtests of the ELA battery, and their performance was analyzed by taking six independent variables into account. Participants' age, gender, school and mothers' level of education did not have any significant influence on their performance. However, participants with a higher SES

performed better on oral language-related subskills, and English L1 learners performed significantly better than their ELL peers on eight of the ten emergent literacy subskills. Based on these results as well as on evidence-based recommendations in the literature, a stimulation program was compiled to be implemented in the main study of this research project. The methodology followed in this main study is set out in the next chapter.

CHAPTER 5
METHODOLOGY OF MAIN STUDY

5.1. INTRODUCTION

This chapter will outline the aims, research design and data collection procedures for the main study. The four phases of the data collection process will be relayed and rationalized. As stated in chapter 4, an emergent literacy intervention program for ELLs was developed based on the results of the pilot study as they have been set out above. The development of this program, the reasons for doing so, as well as the content of the program have been explicated. I now turn to the main research question which the main study attempts to answer:

"What is the effect of a particular emergent literacy stimulation program in Grade R on the development of literacy of English Language learners in Grade 1?"

This research question drew on the hypothesis that a comprehensive intervention program, developed on evidence-based principles, will significantly accelerate the acquisition of critical emergent literacy skills in ELLs, and so assist in bridging the observed delays these learners otherwise exhibit in relation to their English L1 peers.

This main research question was approached by attempting to answer the following related questions:

1. What are the significant features that demonstrate emergent literacy skills of English L1 learners and ELLs in Grade R, four months before they enter Grade 1?
2. After administering the developed program to a selected group of ELLs, what measurable effects are registered upon their entrance into Grade 1?
3. Does the comprehensive emergent literacy stimulation program improve the selected group of ELLs' performance in comparison to the performance of those ELLs who received a language-focused stimulation program?

4. Do independent variables such as socio-economic status, home language and school environment have a marked effect on performance on the eight subtests of an Emergent Literacy Assessment battery administered in this study?

5.2. RESEARCH DESIGN

A quasi-experimental design was implemented to compare four groups of participants with repeated measures, assessing performance on eight different emergent literacy subskills. Two experimental groups and two control groups took part in this study. Two subtests of the ELA, namely: Emergent Writing and Spelling, and Environmental Print, were not included in the main study, as ELLs in the pilot study performed similarly to their English L1 peers on these subtests. These two subskills can thus be regarded as areas of strength for ELLs. The subskills assessed by the remaining eight ELA subtests are ones in which the pilot study indicated notable differences between ELLs and English L1s; these were therefore regarded as priority areas of development to be included in the intervention program. A pre- and post-measurement intervention design was implemented, and results were analyzed using both quantitative and qualitative methods.

5.3 PARTICIPATING SCHOOLS

Information letters that set out the aims of this study were sent to all English-medium and parallel-medium primary schools (using English and Afrikaans as languages of learning) in the Eden and Central Karoo Educational region of South Africa (Appendix G). Based on feedback from principals regarding the language profiles in Grade R classrooms as well as their agreement to allow their learners to participate in the study, four primary schools were selected for inclusion in the main study. Permission was then obtained from the Western Cape Education Department (WCED) to conduct the main study in these four schools (Appendix H). Table 5.1 outlines the profiles of the four participating schools:

Table 5.1 Profiles of participating schools

SCHOOL	MEDIUM OF INSTRUCTION	WCED POVERTY INDEX [a]	TOTAL NUMBER OF LEARNERS	NUMBER OF LEARNERS/ GRADE R CLASSROOM
School A	English-Afrikaans parallel medium	5	342	26
School B	English medium	5	598	27
School C	English-Afrikaans parallel medium	5	203	27
School D	English-Afrikaans parallel medium	5	409	23

[a]The WCED uses the Poverty Index to classify schools according to the economical status of the neighbourhood and as a guideline towards schools that need financial aid. Schools on the 1st ,2nd and 3rd quintiles in the Western Cape are exempt from school fees (also see 5.4.2.2).

5.4. PARTICIPANTS

5.4.1. Selection criteria

Participants all attended Grade R classes in the four participating schools. A total of two control classrooms (Teachers b and d) and three experimental classrooms (Teachers a, c and e) were selected within the four schools. Within these five classrooms, participants were randomly selected from alphabetical class lists and assigned to four groups (see Table 5.2) based on their home language. In order to control for teacher-specific qualities, the four groups were each made up of learners from at least two different classrooms (except for Group 2, one of the control groups, which had learners in School C only). Table 5.2 outlines the group allocation of participants across the four participating schools.

Table 5.2 Allocation of participants to groups

Group	Description	School	Teacher	N	Total N
1	English L1 learners No additional intervention	School B	b	13	
		School C	d	3	**16**
2	English L2 learners No additional intervention	School C	d	10	**10**
3	English L2 learners Language Focused Stimulation	School A	a	10	
		School B	c	6	**16**
4	English L2 learners Comprehensive Stimulation	School B	c	9	
		School D	e	15	**24**

As the stimulation program was developmental in nature and targeted ELLs who were considered at risk for literacy difficulties (RTI first tier), no formal attempt was made to distinguish and exclude learners with possible language disorders, in order to create a true representation of the general Grade R population. Learners were only excluded from this study if they met any of the following exclusionary criteria:

(i) Learners who, based on the teacher's feedback, would not be progressing to Grade 1 in the following academic year.
(ii) Learners whose parents or guardians reported any history of speech and/or language difficulties in their home language.
(iii) Learners who, according to their parents or guardians, experienced any visual or auditory difficulties.
(iv) Learners whose parents or guardians did not provide written consent for participation in the study.

5.4.2. Description of participants

In total, seventy-two participants were assigned to the four groups and were assessed pre-intervention. Six participants left the study, as their families moved out of the catchment area during the course of the study and they subsequently attended Grade 1 outside of the Eden and Central Karoo Educational region. Details of the sixty-six participants who remained in the study are outlined in Table 5.3 and discussed hereafter.

Table 5.3 Description of Participants in Main Study

Participant	First Language	Age in Years	Gender	SES[a]	Treatment Group	Participant	First Language	Age in years	Gender	SES[a]	Treatment Group
A[b]1-3[c]	L2A[d]	6.25	F[e]	High	3	B38-4	L2A	6.67	M	Low	4
A2-3	L2O[f]	6.67	F	Low	3	B39-3	L2X	6	F	Low	3
A3-3	L2X[g]	6.58	M[h]	Low	3	B40-3	L2X	6.42	F	High	3
A5-3	L2O	6.67	F	High	3	B41-4	L2A	6.5	M	High	4
A7-3	L2X	6.33	M	Low	3	B42-4	L2A	6.17	F	High	4
A8-3	L2O	6.42	F	Low	3	C43-2	L2A	6.33	M	High	2
A9-3	L2X	6.5	F	High	3	C44-2	L2A	6.58	M	High	2
A10-3	L2O	5.83	F	High	3	C45-2	L2A	6.5	F	High	2
A11-3	L2X	6.5	M	High	3	C46-2	L2A	5.83	F	High	2
A12-3	L2A	6	M	High	3	C47-2	L2A	6.08	F	High	2

Participant	First Language	Age in Years	Gender	SES[a]	Treatment Group	Participant	First Language	Age in years	Gender	SES[a]	Treatment Group
B13-1	L1[i]	6.08	F	High	1	C49-2	L2A	6.17	M	High	2
B14-1	L1	6	M	High	1	C50-1	L1	5.83	F	High	1
B15-1	L1	6.5	F	High	1	C51-1	L1	6.25	M	High	1
B16-1	L1	5.75	M	High	1	C52-1	L1	6.42	M	High	1
B17-1	L1	6.17	M	High	1	C53-2	L2A	6.5	M	High	2
B18-1	L1	5.92	M	High	1	C54-2	L2A	6.67	F	High	2
B19-1	L1	6.67	F	High	1	C55-2	L2A	6.25	F	High	2
B20-1	L1	6.42	M	High	1	D56-4	L2X	6.08	F	High	4
B21-1	L1	6.58	F	High	1	D57-4	L2A	6.5	M	Low	4
B22-1	L1	6.67	F	High	1	D58-4	L2X	5.67	F	High	4
B23-1	L1	6.17	M	High	1	D60-4	L2O	6.42	M	Low	4
B24-1	L1	5.33	F	High	1	D61-4	L2X	6.33	M	High	4
B25-1	L1	6.25	M	High	1	D62-4	L2X	6.58	F	High	4
B27-3	L2A	6.25	M	High	3	D63-4	L2X	7	F	Low	4
B28-4	L2A	6.5	F	High	4	D64-4	L2A	5.5	F	High	4
B29-3	L2X	6.58	M	High	3	D65-4	L2X	6.58	M	Low	4
B30-4	L2A	5.92	M	High	4	D66-4	L2X	5.5	M	Low	4
B31-4	L2A	6.5	F	High	4	D67-4	L2X	6.33	F	High	4
B32-3	L2O	6	F	High	3	D68-4	L2X	6.08	F	Low	4
B33-3	L2X	6.08	M	High	3	D69-4	L2X	6.5	F	Low	4
B34-4	L2A	6	F	High	4	D71-4	L2X	6.67	M	High	4
B35-4	L2A	6.58	M	Low	4	D72-4	L2A	6.25	M	High	4
B36-4	L2A	6.58	F	High	4						

[a]Socio-economic status. [b]A-D = School (see Table 5.1). [c]1-4 = Treatment Group. [d]ELL with Afrikaans as home language. [e]Female. [f]ELL with a language other than Afrikaans or isiXhosa as home language. [g]ELL with isiXhosa as home language. [h]Male. [i]English First Language.

5.4.2.1. Gender and age

Thirty-four girls and thirty-two boys participated in the main study. At the pre-intervention stage, participants ranged in age from 5 years 3 months (B24) to 7 years (D63), with a mean age of 6 years and 3 months (75 months). Thus overall there was an equal division between girls and boys, and the variation in age represents a normal distribution for these grades.

5.4.2.2. Socio-economic status

All participants attended schools classified on the fifth quintile of the Poverty Index used by the WCED, indicating relatively similar socio-economic environments. Schools on the first, second and third quintiles are generally regarded as "no-fee" schools and almost exclusively situated in disadvantaged areas. School A had the lowest school fees which amounted to R2900/year while School C had the highest school fees, amounting to R4500/year. In order to better discriminate between participants in terms of their SES, an adapted version of the Socio-Economic Deprivation Questionnaire (Du Plessis 2003) was used to determine the SES of each participant (Appendix A). Based on parental response to 6 questions, participants were assigned to one of two categories of SES: low and high SES (Low SES: n=14 and High SES: n=52). The small number of learners who fell in the Low SES category concurred with the fact that the four schools were all on the fifth quintile of the WCED's Poverty Index. Then, considering that all four schools were in relatively similar socio-economic environments, it was decided to only categorize participants into two categories as opposed to the three categories used in the pilot study. Participants who scored 0-4 on the questionnaire were assigned to the low-SES group and participants who scored 5-6 were assigned to the high-SES group.

5.4.2.3. Language

Sixteen participants with English as their home language were assigned to one control group (Group 1 - no additional stimulation program provided). Fifty learners who did not have English as their home language, but did have it as their language of education, were assigned to the three remaining groups: Group 2 (control group who did not receive any additional stimulation program); Group 3 (experimental group who received the first section of the BEARS program, focusing exclusively on the development of oral language and conceptual knowledge); and Group 4 (experimental group who received the full BEARS program). These fifty learners had mostly either isiXhosa (n=19) or Afrikaans (n=25) as their home language, which is representative of the demographics of the Western Cape Province. Six participants had alternative home languages very limitedly represented in this region, namely isiZulu (n=2), Sesotho (n=3) and Flemish (n=1).

5.5. ETHICAL CONSIDERATIONS

The study was approved by the WCED (Appendix H). Additionally written consent was obtained from parents or guardians of all participants (Appendix I). The parents were informed that they could terminate their child's participation in the study at any time, without having to provide reasons for their decision. Participants were given code names to ensure anonymity, and participating schools will not be identified in the dissertation.

All schools that participated in the main study did so with informed consent. Principals and teachers were contacted four times during the course of the study, to ensure understanding and to facilitate active participation. The four participating schools will be provided with a copy of the revised stimulation program, once the study has been completed. Results of this study will also be communicated to the participating schools and to the WCED.

5.6. DATA COLLECTION PROCEDURES

The data collection stage of the main study consisted of four phases which took place over a period of four months, although not consecutively: (i) teacher orientation and training, (ii) pre-intervention assessment of participants, (iii) implementation of the stimulation program, and (iv) post-intervention assessment of participants. Each of these stages is discussed below.

5.6.1. Teacher orientation and training

Three teachers (Teachers a, c and e) who were to implement the stimulation program were orientated and inducted during a two-hour workshop training session. The researcher conducted these training sessions on an individual, one-on-one basis in the respective experimental classrooms. Each teacher was provided with a Training Manual (Appendix E) and the workshop was structured and presented with a visual Microsoft Power Point Presentation (Appendix E). The training session was aimed at providing teachers with background regarding the rationale, principles and aims of the study. Procedures for the selection of participants, the content of the stimulation program, and

assessment procedures were explained, and individual queries or concerns were addressed. Teachers were contacted midway through the program implementation stage (Week 4) to discuss progress and to obtain qualitative feedback. Teachers were contacted again at the end of the program and then completed a feedback form in order for the researcher to collate quantitative as well as qualitative feedback regarding teachers' experiences of the intervention program (Appendix F).

The two teachers in the control classrooms (Teachers b and d) did not undergo any formal training, but were briefed by the researcher regarding the aims of the study and selection procedures for participants.

5.6.2. Pre-intervention assessment

5.6.2.1. Parental questionnaire

Parents or guardians of selected participants completed a questionnaire which also included a short overview of the aims and procedures of the study. This questionnaire was administered to collect biographical, medical and socio-economic information for each participant (Appendix J). Additionally, parents had to give written consent for their child's participation.

5.6.2.2. Emergent literacy skills assessment

Each participant was assessed on eight subtests of the adapted Emergent Literacy Assessment (ELA) (Willenberg 2004). However, as mentioned in Chapter 3 (3.2.3) certain limitations of the ELA were identified during the pilot study so that the following amendments were made accordingly. The following lists these amendments and refers to research that has informed the particular choices that were made:

(i) The small number of test items in the following subtests heightened the possibility of chance responses, and extra items were therefore added: Sounds-in-words Initial (5 original items+5 extra items), Sounds-in-words Final (5+5) and Rhyme Recognition (10+5).

(ii) While the Rhyme Production subtest did not allow for chance responses, five extra test items were added to this subtest as well, in order to correspond with the number of items in the above subtests. Further, children with speech and literacy difficulties are known to have persisting difficulty with rhyme production tasks and it was therefore deemed important to gather sufficient data in this particular subtest (Stackhouse and Wells 1997).

(iii) In the original five items in the Sound-in-word Final test, onset-rime combinations were utilized. These were as follows:

fan	**bat**	**cat**
car	**fish**	**star**
snake	**cake**	**rain**
keys	**trees**	**leaf**
wall	**ball**	**bat**

As phoneme segmentation proves to be a particularly consistent predictor of reading ability (Hulme *et al.* 2002:21), five additional items were selected, and these required learners to isolate only the final phoneme:

mop	**tap**	**pen**
jam	**book**	**gum**
hen	**pan**	**cup**
sun	**bike**	**duck**
soup	**cap**	**bear**

(iv) The inclusion of rhyming tasks in the assessment battery (and by implication also the predictive value in terms of later reading success) is a contentious issue in the literature. Bradley and Bryant (1983) argued that large phonological units (e.g. rhyming) have definite predictive value, while Goswami and Bryant (1990:86) confirmed that children normally progress from an awareness of syllables via onset-rime to phonemes, indicating a normal developmental pattern with prognostic value. Goswami and Bryant (ibid.) suggested that onset and rhyme sensitivity make a direct and specific contribution to word reading ability.

In a longitudinal study, Bryant, Bradley, Maclean and Crossland (1989) monitored the rhyme awareness and literacy progress of 65 children from ages 4 years 7 months to 6 years 7 months. Their data suggested that sensitivity to rhyme is a prerequisite for phoneme segmentation, which in turn plays an important role in learning to read.

Goswami (2002:54) concluded (i) that proficient rhyming skills may be a precursor of children's abilities to read by analogy with similar words and (ii) that by recognising the similarities in sound and appearance within rhyme families, children are more able to use efficient reading and spelling strategies.

Goswami (2000:49) acknowledges that the strong predictive relations between onset-rime awareness and reading development that have been shown for English (Bradley and Bryant 1983; Bowey 2002:37) are not necessarily replicated in other, orthographically more transparent languages like Norwegian, Swedish and German. In contrast, phoneme awareness seems to be a strong predictor in all alphabetic orthographies that have been measured thus far. Nation and Hulme (1997:155) and Muter, Hulme, Snowling and Taylor (1997:388) echoed this observation by arguing that awareness of small phonological units, particularly phonemes, is a better predictor of reading ability than is rhyming units.

While the jury is still out on this aspect, the two rhyming subtests of the ELA were retained for the purpose of this study, for the following reasons:

(i) A strong predictive relation between onset-rime awareness and reading development has been shown for English, the medium of assessment in the current study.
(ii) While Afrikaans has a transparent orthography (similar to Dutch), isiXhosa [8] has a less transparent orthography, and rhyming ability might have a stronger predictive relation in this language, although no research has been done to confirm this hypothesis.
(iii) In view of the small body of research in the area of emergent literacy in South Africa, and consequently the dearth of normative data, the Willenberg (2004) study provided valuable comparative data for the current study. Inclusion of these two subtests provided the researcher with more data regarding emergent literacy performance of South African pre-schoolers.

(v) The fifth limitation of the ELA battery is its exclusively linguistic perspective, one which is primarily concerned with the description of different language related behaviours. Although the subtests suffice in identifying and describing areas of difficulty,

[8] IsiXhosa is one of the three official languages of the Western Cape Province – the other two being English and Afrikaans – and the predominant home language of those ELLs in this study who did not have Afrikaans as home language.

no account is taken of underlying cognitive processes which might shed more light on the nature of the difficulties (Stackhouse and Wells 1997). As no theoretical model of speech processing underpinned the compilation of the ELA, no hypothesis can be generated about the level of breakdown that gives rise to specific literacy difficulties. A psycholinguistic approach in assessment of literacy development of ELLs might be particularly useful at the second and third tiers of assessment, when differential diagnosis of ELLs with literacy disorders becomes an important aim. A psycholinguistic approach to assessment will allow the speech-language therapist to differentiate between children in terms of their psycholinguistic profile of input, representation and output skills, so enabling the connections between spoken and written language to become more apparent (Stackhouse and Wells 1997).

A psycholinguistic approach to assessment of ELLs' literacy abilities might be particularly useful because of the possible influence of limited language proficiency on performance in phonological awareness tasks. Rhyming tasks, for example, can uncover speech processing problems that may be underlying a child's speech difficulties and can alert the speech-language therapist or teacher to potential literacy problems. A rhyme judgement task with real words (e.g. the Rhyme Recognition task in the ELA) involves lexical representations and consequently ELLs with a smaller lexicon might be at a disadvantage. Similarly, in a rhyme production task (e.g. the Rhyme Production task in the ELA) where mainly words with large rhyme pools were used (e.g. *cat, snake* and *wall*), the length of a child's rhyme production string will be restricted by the extent of his/her vocabulary development and how efficiently rhyming words have been linked together within the lexicon. Again, one could argue that ELLs might be at a disadvantage when (i) comparing their results with L1 learners or (ii) making judgements about their phonological awareness abilities in isolation based on these results only. The use of non-word stimuli might be one option to consider in order to tap into ELLs' phonological awareness abilities without discriminating against them based on their limited vocabulary. In order to allow for possible limited vocabulary, non-word responses were accepted in the Rhyme Production task of the ELA; however the potential limiting effect of ELLs' less extensive vocabulary should be kept in mind when drawing conclusions about the outcomes of the rhyming tasks in the ELA.

(vi) Finally, while it is the researcher's belief that ELLs should be assessed in all their respective languages before any diagnoses regarding language delays or language impairments are made, the aim of assessment in the current study was not differential diagnosis of reading difficulties, but a discrete-point comparison of pre-schoolers' emergent literacy abilities in order to monitor their progress during the first tier of literacy intervention (Hernandez 1994:4; Justice 2006b:287). While the research was furthermore conducted in submersion classrooms where the ELLs' L1 was not utilised in acquiring literacy skills, the ELA battery was only conducted in English and not translated into any of the home languages of the ELLs concerned. The adapted ELA as used in this study is provided in Appendix B.

Despite the abovementioned limitations of the ELA, use of this particular assessment instrument was motivated by the following:

(i) The ELA has a comprehensive battery which provides information on both conceptual and procedural emergent literacy skills.
(ii) The ELA is an instrument designed by a South African researcher who developed and adapted certain subtests specifically for use with a local population, making it possibly more appropriate for the purposes of this study than literacy assessment instruments exclusively developed abroad.
(iii) Considering the dearth of research published in the field of emergent literacy in the South African context, use of the ELA provides the opportunity to compare and contrast results with the comprehensive Willenberg (2004) study.
(iv) No formal standardized or criterion referenced assessment protocol was available for the South African ELL population at the time of data collection for the main study and none could be traced since completion of this part of the study.

Table 5.4 outlines the content and scoring procedures of the Emergent Literacy Assessment subtests (Willenberg 2004). As stated above, based on results of the pilot study, two subtests, viz. the Environmental Print subtest and the Emergent Writing and Spelling subtest, were not administered in the main study, as there was no significant difference in the performance of L1 and L2 learners on these subtests in the pilot study.

The researcher and three qualified and experienced speech-language therapists administered the ELA in the four participating schools before the intervention program was introduced to the experimental groups. Clear, written instructions were provided to the three therapists to ensure consistency (Appendix K). Participants were individually taken out of their respective classrooms, and the assessments were completed in quiet environments on the school premises, such as a staff room or an empty classroom.

The order of administration of the eight subtests was consistent, but short breaks were allowed according to each child's concentration ability. The time of administration varied between 50 and 60 minutes, depending on individual performance and co-operation.

Participant responses were recorded on individual test administration forms (Appendix B). Audio-recordings of the Word Definition and Fictional Narrative subtests were made to allow for verification of online transcriptions by the respective speech-language therapists upon completion of the data collection.

Raw data were captured on individual assessment forms and collated and analyzed by the researcher. As qualitative rubrics were utilized to assess the Word Definitions and Fictional Narrative subtests, inter-rater reliability was determined by having 10% of the data analyzed by two independent raters: one rater was an experienced speech-language therapist, whereas the second rater was a post-graduate student in Speech and Language Therapy. The intra-class correlation was calculated with a confidence interval for agreement and for consistency. High levels of agreement and consistency were present for both subtests. Spearman's correlation factors for inter-rater reliability were 0,98 for Word Definitions and 0.99 for Fictional Narratives.

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Table 5.4 Content and Scoring Procedures of the Emergent Literacy Assessment

Subtest	Description	Scoring Procedures
Sounds-in-Words	A phoneme matching task in which children were expected to match two (out of three) words that had either the same initial or the same final phonemes. Picture cues were provided in order to minimize the effect of auditory memory. Example: **cat – ball – bag**	Each correct response was credited with one point
Rhyme Recognition	Children were expected to identify two (out of three) words that rhymed. Picture cues were provided in order to minimize the effect of auditory memory. Example: **cat – hat – ring**	Each correct response was credited with one point
Rhyme Production	A rhyming pair was provided, and children were required to provide another rhyming word. No picture cues were provided.	Each correct response was credited with one point
Word Definitions	This subtest was based on the Word Definition Subtest of the Weschler Intelligence Scale for Children (WISC-R; Weschler 1974) and required children to define 13 (assumedly) familiar nouns: **alphabet**, **bicycle**, **bird**, **clock**, **diamond**, **donkey**, **flower**, **foot**, **hat**, **knife**, **nail**, **thief** and **umbrella**. No picture cues were provided.	Responses were directly transcribed and audio-recorded. Transcriptions were checked against the recordings and then coded according to the CHAT system (Codes for the Human Analysis of Transcripts; MacWhinney and Snow 1995). Definitions were coded for structure and content. A detailed example of the CHAT system and scoring guidelines is provided in Appendix L. Six points were awarded for super-ordinates ($SUPO), two or four points for Functional actions ($FUN) or Definitional features ($DFT) and one point each for Examples, Descriptions, Associations and Applications ($EDAA). Scores were summated to create a Total Word Definition Score.
Concepts about Print	This subtest was based on the original Concepts about Print test (Clay 1979) and utilized Clay (2000)'s book *Follow me, moon* as stimulus. Concepts such as the front and back of the book, print direction and orientation, and literacy-related terminology such as **word**, **letter** or **page** were assessed.	Each correct response was credited with one point

Letter Recognition	Children were provided with two alphabet charts with upper or lower case letters randomly displayed and they were expected to name all the letternames they knew.	Each correct response was credited with one point. Each letter of the alphabet was only credited once.
Fictional Narrative	*The Bear Story* (Snow, Tabors, Nicholson and Kurland 1995) made up of three colour pictures were presented, and children were expected to formulate a narrative based on these pictures.	Narratives were directly transcribed and audio-recorded so that the transcription could be verified later. After verification, coding was done according to the CHAT system. Story structure features, content, written discourse features and micro-linguistic features were analyzed. A detailed description of the coding process is provided in Appendix M. One point was assigned for each feature, and points were summated to create a Total Bear Story Score.
Emergent Writing and Spelling	This subtest involved an adaptation of the Primary Spelling Inventory (Bear, Templeton, Invernizzi and Johnston 2000). Children had to attempt to write their own name as well as the following words: **fat**, **pen**, **dig**, **mop**, **rope.**	Attempts were coded as follows: 1=approximate spelling of name; 2=name correctly spelled; 3=correct spelling of at least one sight word of the child's choice; 4=partial letter-sound correspondence of one or more phonetically regular words; 5=correct spelling of one or more phonetically regular words.
Environmental Print	Children were presented with several signs and logo's associated with food, shops or service providers in the South African context. They were expected to identify as many of the logo's as possible.	Two points were assigned for each correct response, whereas an incorrect response belonging to the same generic category was credited with one point, e.g. if the child responded to the MTN logo with **"Vodacom"** which, like MTN, is a mobile phone network.
Peabody Picture Vocabulary Test	The PPVTIII-B (Dunn and Dunn 1997) – a standardized, norm referenced assessment of receptive vocabulary – was administered.	Scoring was done according to the instructions of this formal assessment procedure.

5.6.3. Implementation of BEARS program

The BEARS emergent literacy stimulation program consisted of two distinct sections: the first focusing on conceptual literacy knowledge and oral language, and the second targeting procedural literacy knowledge, including sound-letter knowledge and phonological awareness skills. The complete BEARS program is outlined in Appendix D.

The program was entirely classroom-based and was implemented by the three teachers who completed the training workshop. Apart from telephonic contact with the researcher midway and at the end of the program, no additional support was provided to the participating teachers for the duration of the study, in order to resemble as closely as possible the conditions under which the program would be implemented outside of a research context.

Group 3 (n=16; Teachers a and c) received the first (blue) section of the BEARS program over a period of eight weeks during the last term of Grade R (October 2007 - December 2007). Specified activities were carried out for 20-30 minutes per day in addition to the regular class curriculum.

Group 4 (n=24; Teachers c and e) received the full BEARS program (blue and green sections) over the same eight week period. The program was implemented on a daily basis, lasting 30-40 minutes. In School B (Teacher c), nine participants completed the full program whereas, according to the design, six participants received only the first section of the program. The second section was introduced separately with the nine participants in a small-group format, while the remaining learners in the classroom continued with free play activities.

5.6.4. Post-intervention assessment

5.6.4.1. Emergent literacy skills

Sixty-six participants were followed up four months after the pre-assessment (i.e., during the last week of January 2008, at the beginning of their Grade 1 year) and were re-assessed on the eight subtests of the adapted ELA (Willenberg 2004). Four qualified

speech-language therapists completed the post-intervention assessment protocol, three of whom had not been involved in the pre-intervention assessment. Pre-assessment results were not available to these therapists, and results were collated independently and analyzed by the researcher. Procedures for post-intervention data collection were similar to the pre-intervention protocol (Appendix K), and all raw data were captured on individual assessment forms.

5.6.4.2. Teacher feedback

Upon completion of the BEARS program, participating teachers were requested to complete a feedback form (Appendix F) in order to obtain quantitative and qualitative feedback on their impressions of the content and practical usefulness of the program.

5.7. DATA ANALYSIS PROCEDURES

In accordance with Willenberg (2004), a binary scoring system (1=correct; 0=incorrect) was utilized for six of the eight subtests (refer to Table 5.4). Qualitative rubrics were used to analyze responses on the Word Definition and Fictional Narrative subtests (Appendix L and M). To limit researcher bias, these pre-designed rubrics were used and, in order to control for inter-rater reliability for these two subtests, an Agreement and Consistency Analysis was completed (StatSoft Inc. 2007). Specifically, an intra-class correlation (ICC) with a confidence interval was calculated to control for agreement and for consistency amongst raters. Reliability of the data collection procedures was established by using qualified speech-language therapists who were not involved in the intervention process and who were blind to inclusion of participants in the respective groups.

In order to answer the respective research questions, the following statistical analyses were done: (research questions are repeated here for ease of reference)

1. What are the significant features regarding emergent literacy skills, found among English L1 learners and ELLs in Grade R, four months before entering Grade 1?

Descriptive analyses were done, using the SPSS statistical software package (Version 15, Microsoft 2007). Participant characteristics, mean scores, standard deviations and

ANOVA were calculated and graphically represented using this software program (Pallant, 2007).

2. After implementation of the developed program, what measurable effects are registered upon entering Grade 1?

Pre- and post-treatment data were analyzed using repeated ANOVAS in order to determine any significant differences in scores for the main effects (namely Time and Intervention) as well as the Interaction between the two main effects (Time*Intervention). Where statistically significant differences were measured, appropriate post-hoc tests were performed. ANOVAS were calculated and graphically represented utilising both the StatSoft and SPSS software packages.

Eight participants from each treatment group were matched with those in the other three groups on their performance on the PPVT, and the scores of these twenty-four participants were analyzed with the ANOVA procedure to determine any significant differences in scores on the ELA battery.

3. Does a comprehensive emergent literacy stimulation program improve ELLs' performance in comparison to the performance of ELLs who received a language-focused stimulation program?

Repeated measures ANOVAS were done comparing pre- and post-intervention results for Group 3 (who received only the first section of the BEARS program) and Group 4 (who received the entire BEARS program). Mean scores were compared pre-intervention in order to determine any significant differences in the experimental groups pre-intervention, whereas performance post-intervention was compared statistically to determine if ELLs performed significantly better in any of the two treatment conditions.

4. Do independent variables such as socio-economic status, home language and school environment influence performance on the eight subtests of an Emergent Literacy Assessment?

Repeated measures ANOVAS were done to determine whether SES, home language or school environment had any significant effect on performance of participants in the eight subtests of the ELA. In addition qualitative feedback with regards to classroom

curriculums and teacher characteristics was analyzed to support quantitative findings, in an attempt to increase the validity of the study.

5.8. CHAPTER CONCLUSION

In an attempt to answer the main research question and four more specifically detailed questions, a quasi-experimental research design was employed by means of a pre-and post-intervention study. Sixty-six participants were assigned to two control groups and two experimental groups and were assessed pre- and post intervention on eight emergent literacy subskills: sound awareness, rhyming recognition and rhyming production skills, conceptual knowledge about print, alphabet knowledge, receptive vocabulary, oral language, and narrative construction abilities Results were analyzed statistically, and qualitative feedback was collated in addition to quantitative data in an attempt to validate experimental findings. These results will be reported and discussed in Chapter 6.

CHAPTER 6

RESULTS AND DISCUSSION

6.1. INTRODUCTION

Results of the main study are reported and graphically presented in this chapter. A discussion of the results will be integrated throughout the chapter in order to explain and critically reflect on the outcomes of the study. The presentation and discussion of the results will be structured around the four questions that lead from and jointly provide an answer to the main research question. Sections 6.2, 6.3, 6.4 and 6.5 will respectively attend to each of the four set questions listed in Section 5.1. Conclusions regarding the main research question, "What is the effect of an emergent literacy stimulation program in Grade R on the development of literacy of English Language learners in Grade 1?", will be drawn in the final chapter of this dissertation.

6.2. PERFORMANCE OF L1 AND L2 LEARNERS ON EMERGENT LITERACY MEASURES IN GRADE R

What are the significant features regarding emergent literacy skills, found among L1 English learners and L2 English learners in Grade R, four months before entering Grade 1?

In order to answer the first research question, Willenberg's (2004) ELA battery was adapted and then utilised to measure learners' performance on eight emergent literacy subskills. These particular skills were identified as being strongly related to later literacy achievement and covered three of the four general domains of emergent literacy: (i) Oral Language (covered by the subtests on receptive vocabulary (i.e. the PPVT III-B), and Narrative Ability and Word Definitions), (ii) Phonological Awareness (covered by Sounds-in-Words, Rhyme Recognition and Rhyme Production) and (iii) Print Knowledge (covered by Letter Recognition and Concepts of Print). Assessment of the fourth domain, Emergent writing, was eliminated during the main study as this domain was identified as an area of strength for ELLs during the pilot study. Table 6.1 presents data for the performance of the four intervention groups on the eight subtests of the ELA

during the last term of Grade R and prior to the implementation of the intervention program for the two experimental groups.

Table 6.1 Mean scores and Standard Deviations pre-intervention, four months prior to Grade 1

ELA Subtest	ALL PARTICIPANTS (N=66)		GROUP 1[a] (n=16)		GROUP 2[b] (n=10)		GROUP 3[c] (n=16)		GROUP 4[d] (n=24)	
	M	SD	M	SD	M	SD	M	SD	M	SD
Sounds-in-Words	9.6	4.2	10.7	3.9	10.7	5.8	8.4	2.6	8.5	4.5
Rhyme Recognition	8.7	3.6	9.2	2.3	9.6	4.4	8.1	3.1	7.8	4.2
Rhyme Production	2.6	3.3	1.3	2.9	6.2	3.5	1.0	1.9	1.9	3.1
Letter Recognition	8.3	7.4	11.1	7.0	9.1	8.5	8.3	7.5	6.1	7.0
Concepts of Print	5.4	1.9	6.0	1.7	5.5	1.8	5.4	2.1	4.6	1.7
Word Definitions	31.2	15.1	36.4	10.2	44.6	18.4	26.0	11.6	18.0	8.8
Narrative Ability	6.0	3.3	8.2	2.4	6.8	3.5	5.1	3.6	4.0	2.2
PPVT-IIIB	83.2	14.5	94.3	11.9	89.8	5.3	77.9	12.6	70.7	10.6

[a]English L1 learners - No additional intervention. [b]ELLs - No additional intervention. [c]ELLs – Language-focused stimulation; [d]ELLs - Comprehensive Literacy Stimulation (i.e. full BEARS program).

In order to compare performance of English L1 learners (Group 1) to that of ELLs (Groups 2 to 4) on the ELA four months prior to entering formal schooling, analysis of variance (ANOVA) was employed. Post-hoc analysis was done using the Bonferroni Multiple Comparison procedure. ANOVA indicated no significant difference in mean scores on the following subtests: Sounds-in-words, Rhyme Recognition, Letter Recognition and Concepts of Print, indicating that L1 learners did not perform significantly better than their L2 peers with regards to these emergent literacy subskills.

L1 learners (Group 1) did not perform better than Group 2, the ELL control group (to be discussed shortly). However, the L1 learners did have significantly better mean scores than the ELLs in Groups 3 and 4 on the following subtests: Word Definitions (Group 4; $p<.001$) Narrative ability (Group 3 $p<.05$; Group 4 $p<.001$) and the PPVT (Group 3 and

4 p<.001). As these three subtests are sensitive to receptive and expressive language proficiency, these group differences support the results of previous studies which concluded that ELLs might exhibit a language delay with regards to grammatical and especially vocabulary development (Catts *et al.* 2001; Genesee *et al*. 2004). The evidence for vocabulary delay is more compelling than is the case for grammatical delay; Genesee *et al.* (2004) highlights the heterogeneity of the ELL population and the impact of different degrees, contexts and quality of exposure on language development. It could thus be that vocabulary development correlates more closely with characteristics of the input to which ELLs are exposed than syntactic and morphological development does. Word learning, according to de Villiers (2004:74) is more than any other language domain, highly subject to the frequency of input and subsequently also contingent on the cultural environment of a child.

Rosin (2006:393) comments on the difficulty to control for variability in bilingualism (and thus, by implication, for variability in English language proficiency of ELLs) in research studies. The heterogeneity of the ELL population clearly became apparent in this research project and appears to support Rosin's comment. This is emphasized by the fact that ELLs in Group 2 (the ELL control group) performed significantly better than their ELL peers in Groups 3 and 4 (the two experimental groups) on two subtests namely Word Definitions (Group 3 p<.01; Group 4 p<.001) and the PPVT (Group 4 p<.001). Moreover, ELLs in Group 2 performed significantly better that their ELL peers (p<.01) as well as their English L1 peers (p<.001) on the subtest of Rhyme Production.

English L1 learners outperformed their ELL peers on eight subtests of the ELA in the pilot study (N=32); results of the main study confirm the significant difference between L1 and L2 speakers of English in terms of their performance on those subtests assessing oral language ability, before intervention. Further, the pre-intervention results of the main study highlight the considerable variation in performance of L2 learners, and the fact that it is indeed possible that L2 learners exhibit the same emergent literacy skills than their L1 peers, at times even outperforming them, without intervention and before entering Grade 1.

6.3. THE EFFECT OF AN INTERVENTION PROGRAM ON THE EMERGENT LITERACY SKILLS OF ENGLISH LANGUAGE LEARNERS

After implementation of the BEARS program, what measurable effects are registered upon entering Grade 1?

The second research question was particularly interested in the emergent literacy skills of the ELLs after the period of intervention. Table 6.2 shows the performance of all participants combined as well as separately according to the four groups (two control groups and two experimental groups), on the eight ELA subtests measured post-intervention, four months after the initial assessment.

Table 6.2 Mean scores and Standard Deviations upon entering Grade 1, post-intervention

ELA Subtest	ALL PARTICIPANTS (N=66)		GROUP 1[a] (n=16)		GROUP 2[b] (n=10)		GROUP 3[c] (n=16)		GROUP 4[d] (n=24)	
	M	SD	M	SD	M	SD	M	SD	M	SD
Sounds-in-Words	12.3	3.8	13.9	3.2	13.9	4.5	10.3	3.3	11.0	3.4
Rhyme Recognition	9.9	3.0	10.3	2.5	12.2	2.9	8.4	2.5	8.6	3.0
Rhyme Production	4.2	3.7	4.2	3.3	7.3	3.7	2.1	2.9	3.2	3.7
Letter Recognition	12.1	8.0	15.3	6.7	18.8	7.5	9.0	7.0	9.2	7.4
Concepts of Print	5.7	1.6	6.3	1.5	6.4	0.8	5.4	1.7	4.8	1.4
Word Definitions	35.8	15.1	44.3	9.8	44.2	15.6	30.8	13.8	24.0	11.4
Narrative Ability	7.5	3.4	8.9	4.0	8.4	2.7	7.1	3.1	5.6	2.7
PPVT-IIIB	83.5	17.0	96.3	11.6	93.2	8.1	76.4	13.1	68.1	13.4

[a]English L1 learners - No additional intervention; [b]ELLs - No additional intervention; [c]ELLs – Language-focused stimulation; [d]ELLs - Comprehensive Literacy Stimulation (i.e. full BEARS program).

Table 6.3 summarizes the differences in mean pre-intervention and post-intervention scores for all the participants combined as well as for the four individual groups separately. This table serves to visually demonstrate the improvement or deterioration in mean scores over the four month period.

Table 6.3 Differences in mean scores and standard scores (PPVT) pre-intervention and post-intervention ELA subtests over four months

ELA SUBTEST	ALL PARTICIPANTS	GROUP 1[a]	GROUP 2[b]	GROUP 3[c]	GROUP 4[d]
Sounds-in-Words	2.7	3.2	3.2	1.9	2.5
Rhyme Recognition	1.2	1.1	2.6	0.3	0.8
Rhyme Production	1.6	2.9	1.1	1.1	1.3
Letter Recognition	3.8	4.2	9.7	0.7	3.1
Concepts of Print	0.3	0.3	0.0	0	0.2
Word Definitions	4.6	7.9	-0.4	4.8	6
Narrative Ability	1.5	0.7	1.6	2	1.6
PPVT-IIIB	0.3	2	3.4	-1.5	-2.6

[a]English L1 learners - No additional intervention; [b]ELLs - No additional intervention; [c]ELLs – Language-focused stimulation; [d]ELLs - Comprehensive Literacy Stimulation (i.e. full BEARS program).

Analysis of variance was conducted post-intervention, and indicated significant differences between the four groups on all eight subtests. The ANOVA and post-hoc Bonferroni Multiple Comparison results are summarized in Table 6.4.

Table 6.4 Significant differences in performance on ELA subtests post-intervention (p<.05; p<.01**; p<.001***)*

ELA Subtest	F(3,65)	p	Post hoc results
Sounds-in-words	4.3	.008**	Group 1 performed better than Group 3
Rhyme Recognition	5.2	.003**	Group 2 performed better than Groups 3 and 4
Rhyme Production	5.2	.003**	Group 2 performed better than Groups 3 and 4
Letter Recognition	6.2	.001**	Group 2 performed better than Groups 3 and 4
Concepts about Print	5.1	.003**	Groups 1 and 2 performed better than Group 4
Word Definitions	11.5	.000***	Group 1 performed better than Groups 3 and 4, and Group 2 performed better than Group 4
Narratives	4.1	.010*	Group 1 performed better than Group 4
PPVT-IIIB	21.1	.000***	Groups 1 and 2 performed better than Groups 3 and 4

Whereas English L1 learners (Group 1) outperformed their ELL peers in the two experimental groups (Groups 3 and 4) pre-intervention only on measures of language ability, the results given above indicate that in addition to performance in the three language related subtests, Group 1 also performed significantly better post-intervention than did Groups 3 and 4 on the Sounds-in-Words and Concepts of Print subtests, respectively. Furthermore, in comparison with results from the initial assessment, Group 2 (the ELL control group) performed significantly better than their L2 peers in the

experimental groups on three additional subtests upon entering Grade 1, namely Rhyme Recognition, Concepts of Print and Letter Recognition.

In order to determine whether any of these observed differences in performance over the four months were actually brought about by the respective intervention programs in the experimental classrooms or curriculums followed in the control classrooms, repeated measures ANOVA was employed for the two main effects: Time and Intervention (Time*Intervention). A significant difference for the interaction between the two main effects was present on one subtest, the Letter Recognition Subtest, indicating that the observed difference in pre- and post-intervention scores for this subtest can be attributed to intervention effect as opposed to normal developmental changes. The differences between pre- and post-treatment results are discussed below, for each subtest separately.

6.3.1. Letter Recognition

Figure 6.1 illustrates the performance of the four groups pre- and post-intervention with regards to their alphabet knowledge (Time*Intervention: $F(3,62)=6.5299$; $p<.001$; Time: $F(1,62) = 45.09$; $p<.001$; Intervention: $F(3,62)=3.41$; $p<.05$).

The observed difference in performance between the groups, $F(3,62)=6.5299$, $p<.001$, was analyzed with the Bonferroni Multiple Comparisons Procedure. Intervention Groups 1 ($p<.05$) and 2 ($p<.001$) had significant differences in mean scores over the four month period, indicating that the L1 learners and L2 control group made significant progress with regards to alphabet letter knowledge over the four month period prior to entering Grade 1. In relation to their peers, the two experimental groups, on the other hand, did not make any significant progress on this emergent literacy skill, despite having received additional intervention. Recall that Group 3 received intervention with regards to conceptual and language based skills, with no direct reference to alphabet letter knowledge; one would therefore have expected their post-intervention results to be highly comparable to those of Group 2, who are also L2 speakers of English who, apart from the normal curriculum, also did not receive additional instruction on alphabet knowledge. Group 4 received the full BEARS program in which explicit reference to alphabet knowledge aimed at improving this particular skill; for this reason, one would

have expected Group 4 to have closed the performance gap with regards to this particular skill.

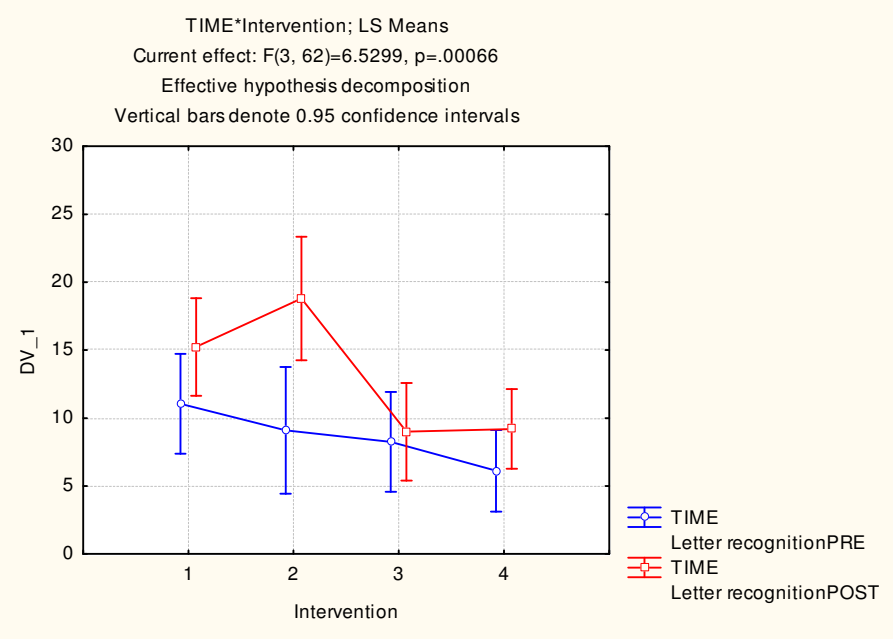

Figure 6.1 Means for Letter Recognition Subtest for four participant groups pre- and post-intervention

Possible explanations for the observations that Groups 1 and 2 had significantly improved their orthographic knowledge of the alphabet over the period of four months between the two testing occasions, but not Groups 3 and 4, are the following:

(i) The content of the curriculum followed and/or teacher-specific emphasis on this particular skill in the two control classrooms contributed to the observed improvement in alphabet knowledge of learners in Groups 1 and 2. Learners in both these control groups were exposed to the Letterland Program which makes explicit use of letter-sound associations. Some but not all learners in Groups 3 and 4 were also exposed to the Letterland Program as part of their normal class curriculum (refer Table 6.19).

(ii) The amount of time and depth dedicated to this particular subskill in the BEARS program was not sufficient to bring about significant improvement for ELLs in Group 4.

(iii) Where learners are also lagging behind in other areas of language development, a four-month period is not sufficient for ELLs to consolidate this particular subskill. This conclusion is supported by the fact that Group 2 already performed significantly better than their L2 peers on two language-related subtests pre-intervention (Word Definitions and the PPVT-IIIB), which might indicate that they were better equipped to integrate and consolidate skills pertaining to alphabet knowledge.

(iv) While Group 4, who received the comprehensive BEARS program, was expected to show progress in this subskill, this group of learners consistently scored lower than their peers on the language-related subtests, namely Word Definitions, Narrative Ability and the PPVT-IIIB. On the PPVT-IIIB, this group scored more than two standard deviations below the mean, indicating extremely delayed receptive vocabulary abilities. The group's ability to understand instructions and process procedural literacy knowledge might have been restricted by the observed language delay in relation to their ELL peers.

In the absence of norms to interpret the participants' performance, current results were compared with results from the large sample in the Willenberg (2004) study as well as with results from the pilot study. Table 6.5 contains these three sets of results with regards to the test on alphabet letter knowledge.

Table 6.5 Comparison of outcomes in the South African context: Mean scores for Alphabet Letter Knowledge

STUDY	Mean Letter Recognition score	SD	Mean %
Pilot Study (N=32) mean age = 81 months	13.41	8.9	51.6
Main Study (N=66) mean age = 79 months	12.1	8.0	46.5
Willenberg Study (N=101) mean age = 74 months	7.3	8.1	28.1

Participants in the Willenberg study scored on average only 28.1% on this subtest. These learners were all in Grade R classrooms in a historically disadvantaged coloured community in the Western Cape. In the present study, ELLs in the experimental groups as well as the ELLs in the pilot study scored 34.6% and 38.5%, respectively. L1 learners in both the pilot and main studies scored on average 61.5%, whereas the ELL control group (Group 2) in the main study obtained even higher scores: They were able to identify 73.1% of the letters of the alphabet correctly upon entering Grade 1. Possible

accounts for the observed differences in mean scores are the difference in sample sizes and the fact that learners in the current studies were all from socially more advantaged areas as opposed to participants in the Willenberg study.

Qualitative analysis of responses revealed that five participants in Group 2 (C44-2; C45-2;C48-2; C50-2 and C51-2- see Table 5.3) referred to an associative character from the Letterland-program (see Section 6.5.3) when naming the letternames of some of the letters e.g. "Oscar Orange" for the letter o or "Zebra" for z. When analysing the results of the 29 participants from Groups 3 and 4 who scored below the group mean of 12.1, it was evident that the letters **s**, **z** and **x** were the most easily and pervasively recognized letters, as 69%, 46% and 42% of these learners were able to identify these three letters correctly, respectively. Willenberg (2004) also found the letter **s** to be one of the most recognised letters in her study. Contrastively however, the letter **o** was recognized by more than 50% of the children in her study, whereas only 27% of the struggling ELLs in Groups 3 and 4 were able to recognise the letter **o** in the current main study. While the **s** letter-sound association is generally regarded as one of the first associations to develop (Culatta and Hall 2006:184), both the **z** and **x** are usually some of the last letters in the alphabet to be taught and consolidated in English, as they are less frequently encountered. These two letters do occur more frequently in the orthography of Nguni languages. In isiXhosa, the **x** is a unique lateral click sound, which is orthographically distinguished in five different combinations, each representing a different phoneme: **x** (lateral click e.g. in *ixela*)**, xh** (aspirated lateral click e.g. in *ixhonywe)***, gx** (voiced lateral click e.g. in *igxaki*)**, nx** (nasalized lateral click e.g in *inkonxa*) and **ngx** (nasalized lateral click with breathy quality e.g. in *unengxaki).* Similarly, the **z** can also be regarded as a high-frequency letter in isiXhosa as it represents a consonant used with high frequency in comparison to the frequency of occurrence of other consonants in this language (Olivier 2000:158). Based on this qualitative analysis of participants' responses on this subtest, two conclusions can thus be drawn: (i) It seems as if associative characters (as used in the Letterland program) support the acquisition of letter-sound associations and (ii) ELLs who struggle to consolidate letter-sound associations do not seem to follow the standard developmental pattern of letter recognition in English. This might relate to the result in the pilot study where ELL's performed well on the ELA subtests Environmental Print and Emergent Writing and Spelling, suggesting that letters which are more frequently

encountered in the environment (cf. television programs such as *Xihlovo* or *Zola 7* or *Shinzo*) and in childrens' own names (cf. *Lwazi*, *Sixabiso* or *Zesande*) might influence the pattern of development of letter-sound associations. This possibility might prompt teachers to consider the frequency of occurrence of sounds in learners' home language when introducing letter-sound associations, thus moving from the more familiar towards the less familiar; thus building on ELLs' recognized strengths. This hypothesis however needs further investigation to support the current finding with regards to isiXhosa ELLs.

With regards to knowledge of letter-sound associations – which according to Bowey (2002:38), Dodd and Carr (2003:134) Duncan and Seymour (2000:146) and Lonigan, Burgess and Anthony (2000:597) is a very important indicator of later literacy ability – there appears to be a considerable range of performance for both L1 and L2 learners upon entering formal schooling in the South African context. Average percentages for English L1 learners ranged from 28.10% in the Willenberg study[9] to 65.4% in the pilot study, whereas English L2 learners scored between 34.6% and 72.3% in the current main study. The observed improvement on the Letter Knowledge subtest for learners in Groups 1 and 2 (the control groups) however warrants further investigation, and will be considered in Section 6.5 below.

While no significant differences were measured for the Time*Intervention effect for any of the remaining seven subtests, indicating that neither the intervention program nor the control curriculums resulted in significant improvement over time in relation to the other participants, several subtests still yielded interesting results with regards to ELLs' performance on emergent literacy measures. Learners' performance on the remaining seven subtests will now be discussed, analyzed and compared to other appropriate research outcomes in the South African context.

[9] Note that while learners who did not have English as their home language, were excluded from the Willenberg study, learners from English-Afrikaans bilingual families were included, except where teachers considered the English proficiency of such learners to be limited.

6.3.2. Sounds-in-Words

On the Sounds-in-Words subtest, the mean score of participants for all four groups together improved significantly, from 9.6 to 12.3, over the four-month period. A significant difference in performance was observed between the four intervention groups; however, these differences could not be contributed to the individual treatment effects (i.e. to the classroom curriculums or to the two versions of the stimulation program): Time*Intervention: $F(3,62)=0.41210$; $p=.74488$; Time: $F(1,62) = 30.267$; $p<.001$; Intervention: $F(3,62)=3.3127$; $p<.05$.

When comparing the mean scores presented in Figure 6.2, there was a significant difference in the performance of the four groups. Group 1 (12.28) and Group 2 (12.3) displayed very similar mean scores, whereas Group 3 (9.38) and Group 4 (9.79) performed very similarly on this subtest over the four months.

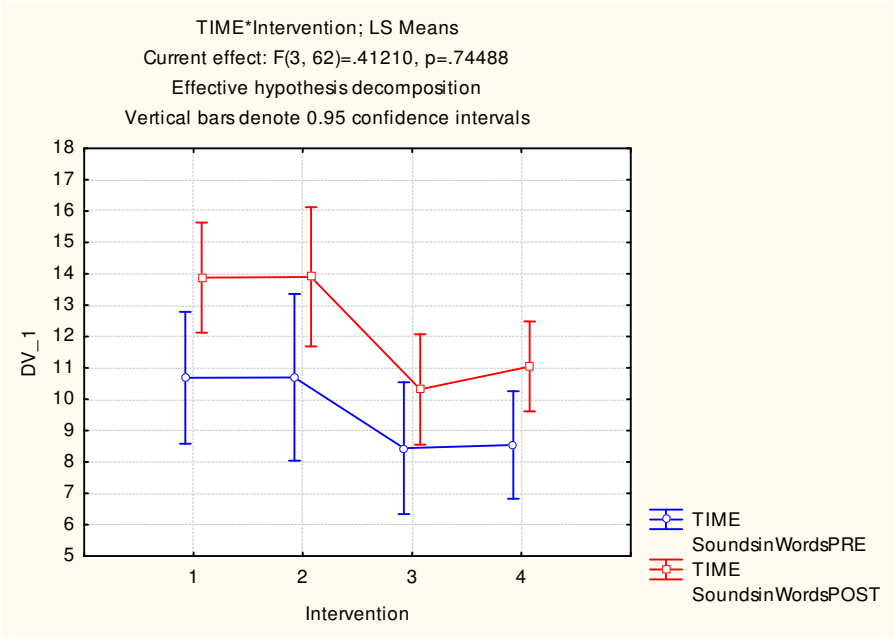

Figure 6.2 Means for Sounds-in-Words Subtest for four participant groups pre- and post-intervention

In the Willenberg (2004) study, subjects scored on average 7.5 out of 10 (75%). As explained in Section 5.6.2.2, the small number of test items for this subtest in the original ELA increased the possibility of chance, the ELA was therefore adapted so that 20 test

items were presented in the current study. Upon entering Grade 1, participants in the main study scored an average of 12.3 out of 20 (61.5%) on this subtest. L1 learners in Group 1 as well as ELLs in Group 2 identified on average 13.9 out of 20 (69.5%) initial and final phonemes correctly, whereas ELLs in Groups 3 and 4 were on average able to identify 10.65 out of a maximum of 20 phonemes (53.3%). Thus although participants in the Willenberg study had higher scores, the larger number of items utilized in this subtest of the ELA in the main study, is likely to have improved the reliability of results.

In her study, Willenberg (2004) found that initial sounds were more salient, as 57% of the participants (N=101) were able to identify all the initial phonemes correctly whereas only 23% were able to identify all the phonemes in word-final position. As mentioned previously, only 5 test items were presented in each condition (word-initial and word-final position) in the original ELA, which increased the possibility of chance considerably. With the adapted version of the ELA, which constituted 10 test items for each condition, 11% of the participants (N=66) in the present study were able to identify all 10 phonemes in initial word position as opposed to only 2 participants (3%) who were able to identify all word-final phonemes upon entering Grade 1. Of those who were able to identify all the phonemes in the word-initial position correctly, only one was an L1 learner, which indicates that this task also poses difficulty for learners who receive tuition in their home language.

6.3.3. Rhyme Recognition

Results on the Rhyme Recognition subtest indicated that most participants made significant progress over the four month period with regards to this literacy subskill; nevertheless, there were significant differences in performance amongst the four groups. None of these differences could however be contributed to the different treatment conditions, as indicated in Figure 6.3: Time*Intervention: $F(3,62)=1.1740$. $p= .32692$; Time: $F(1,62)=9.3638$; $p<.01$; Intervention: $F(3,62)=2.8530$; $p<.05$.

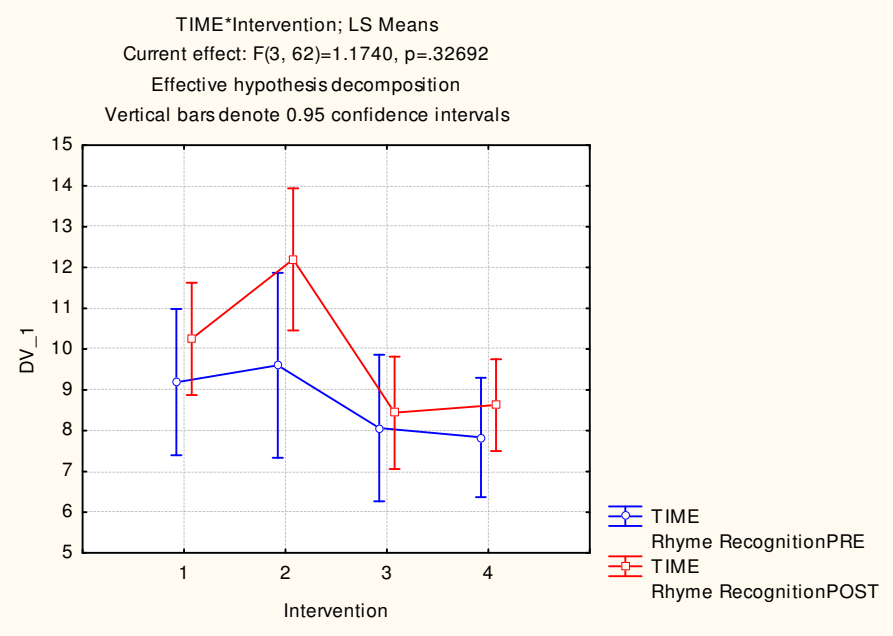

Figure 6.3 Means for Rhyme Recognition Subtest for four participant groups pre- and post-intervention

With regards to recognising two words that rhyme out of a possible three, a significant improvement in means was evident over the four month research period. Participants on average improved from a mean score of 8.7 out of 15 (58%) to 9.9 out of 15 (66%). As for the previous two subtests, the number of ELA test items was increased from 10 to15 for the purposes of this study. By the end of Grade R, subjects in the Willenberg (2004) study scored on average 6.7 out of 10 (67%), which was highly comparable to the 66% achieved by the participants in the current study.

When analysing the difference in performance amongst the four groups, Group 2 scored on average 81.3%, whereas Groups 3 and 4 (the two experimental groups), with a mean percentage of 56.7%, had similar scores on this subtest. The L1 learners in Group 1 scored on average 10.3 out of 15, i.e. 68.7%, which constitutes similar performance to L1 participants in the Willenberg study, but is a lower average score than that obtained by the ELLs in the control group of the current study.

While the current results indicate no statistically significant difference in performance between L1 and L2 learners with regards to Rhyme recognition ability, the ELLs in Group 2 scored above the average, and the following two questions emerged from this observation:

(i) Can the observed result be contributed to the content of the curriculum followed in this control classroom (School C) or did the teacher (Teacher d) adapt the curriculum to emphasise this particular skill?

(ii) To what extent will the mastering of this particular subskill benefit this group of ELLs with regards to their later reading ability? The controversy around the predictive value of rhyming skills with regards to literacy abilities, has been discussed at length in Section 3.2.3 (iv). As the level of phonological sensitivity required to comprehend and internalise reading instruction is still not entirely clear (Bowey 2002), Group 2's performance should be monitored in order to determine the relation between their current Rhyme Recognition skills, their phonemic awareness abilities and their later word reading abilities.

6.3.4. Rhyme Production

Repeated measures ANOVA for the Rhyme Production subtest indicated significant differences for the two main effects, Time and Intervention, indicating that the 66 participants in the main study performed significantly better on this task post-intervention than pre-intervention, and that there was a statistically significant difference in results amongst the four groups. As for the previous two subtests, these observed differences could not be contributed to the classroom curriculums or to the stimulation program, as $p>.05$ for the Time*Intervention analysis: Time*Intervention: $F(3,62)=1.6313$; $p=.19123$; Time: $F(1,62)=19.717$; $p<.001$; Intervention: $F(3,62)=7.5230$; $p<.001$.

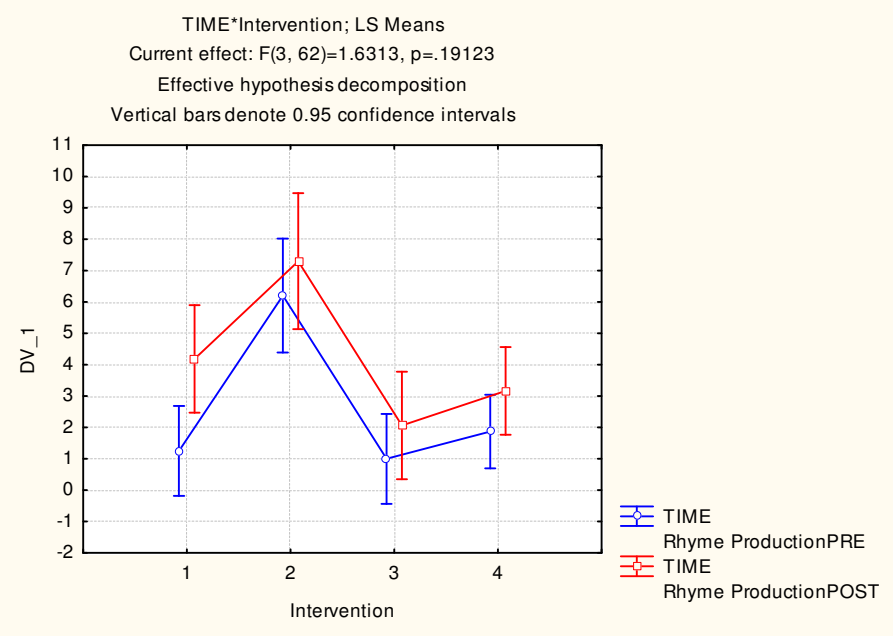

Figure 6.4 Means for Rhyme Production Subtest for four participant groups pre- and post intervention

With regards to Rhyme Production ability, participants overall significantly improved from a mean score of 2.6 pre-intervention to 4.2 out of a possible 10 post-intervention upon entering Grade 1 of formal schooling. With a mean score of 6.75, Group 2 (the ELL controls) performed significantly better than the other three groups on this subtest (as shown in Figure 6.4). Bonferroni results confirmed that Group 2 performed significantly better than the remaining subjects, both at the initial assessment and four months after the first assessment ($p<.05$). As was evident with the Rhyme Recognition subtest, the ELL control group's performance in relation to their L1 and L2 peers highlights the two questions raised in Section 6.3.3, namely:

(i) Did the curriculum in this particular classroom in School C contribute to this significant difference in performance on rhyme related tasks, and

(ii) Will this particular skill benefit this L2 group with regards to their reading ability?

It further highlights the variability in performance amongst ELLs, stressing that the educational needs of these learners might vary similarly.

In her study, Willenberg (2004) found that 50% of the participants scored zero on this particular subtest, with an average score of 3.1 out of 5 (62%). In the current main study, 25.8% of the participants scored zero upon entering Grade 1, with an average score of 41.8%. As the nature of this task negated the possibility of chance, the observed differences in scores could possibly be attributed to any of the following circumstances:

(i) The increased number of items (10 vs. the 5 in the original ELA) gave participants in the current study more opportunities, which resulted in the lower percentage of zero scores.

(ii) The higher average score that was achieved in the Willenberg study might be due to the fact that only L1 learners were included in her study. The L2 learners in Groups 3 and 4 in the current study scored 21% and 32%, respectively, on this particular subtest, which may account for the lower average score of the whole group. Willenberg (2004) mentions the possible detrimental influence of limited vocabulary on performance in this task which will have an even greater impact in the case of ELLs (Genesee et al. 2004:69). However, as was the case in the Willenberg study, participants were credited for producing nonsense words in order to minimise the possible influence of vocabulary limitations.

It was evident from the results of the main study that both L1 and L2 learners performed better on a Rhyme Recognition task as opposed to a Rhyme Production task where rhyming words had to be generated. This coincides with the suggested developmental pattern as described by Culatta and Hall (2006b:181) and Stackhouse and Wells (1997:28), but also serves to indicate that vocabulary development has a greater impact on a rhyming production task than on a rhyming recognition task, as production responses are partly the result of a lexical search (Stackhouse and Wells 1997). However, while rhyme production is facilitated by an intact and well-developed lexicon, some ELLs also used non-word rhyme responses. According to Stackhouse and Wells (1997), using non-word rhyme responses might be a positive prognostic factor for later literacy performance, as this indicates flexible utilisation of the phonological representational system without reliance on the semantic lexicon. Comparing two English L2 learners in Group 2 who did particularly well on the Rhyme production subtest (C53-2 and C55-2; see Table 5.3) to two other learners in the same group, who achieved a score of only 1

post-intervention (C47-2 and C51-2), it was found that the former learners were able to produce both words and non-words, whereas the latter learners could only produce a real word rhyming response, as illustrated below:

C53-2: "pet-wet-*tet*[10]"
"glad-mad-*tad*"

C55-2: "red-bed-*sled-ged-med*"
"wall-mall-*sall*"

C47-2: "glad-mad-*sad*"
C51-2: "wall-mall –*ball*"

The ability to produce non-word rhyming responses might thus be indicative of superior phonological manipulation abilities; however, analysing ELLs' ability to access and utilise both semantic and phonological representations in a rhyme production task as a prognostic indicator of literacy, warrants further investigation. Finally, L1 participants in the current study did not perform significantly better than their L2 peers on the two rhyming related subtests. Although a significant difference in performance was observed in the pilot study, the results of the main study might indicate this area to be less of a priority for ELL stimulation programs.

6.3.5. Concepts of Print

Repeated measures ANOVA results for the Concepts of Print Subtest indicated a statistically significant difference in mean scores amongst the four intervention groups: Time*Intervention $F(3,62)=.74794$; $p=.52767$; Time: $F(1,62)=2.1987$; $p=.14319$; Intervention: $F(3,62)=3.9601$;$p<.05$. As before not one of these could be attributed to the effect of the classroom curriculums or the two versions of the BEARS program.

[10] The first two words are those given by the researcher (the learners had to produce a word which rhymes with these two words), and the italicized words represent the learners' responses.

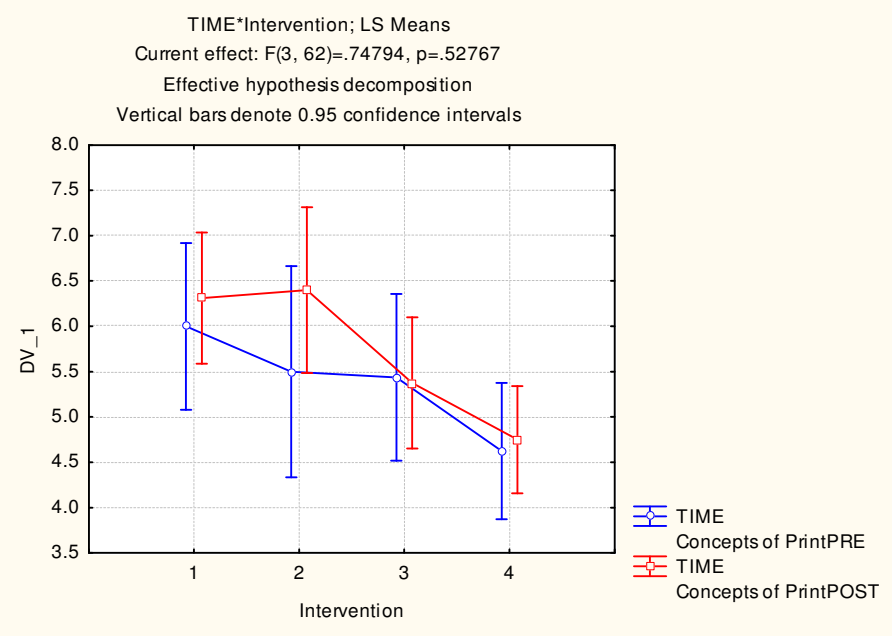

Figure 6.5 Means for Concepts of Print subtest for four participant groups pre- and post-intervention

However, there were no significant differences in mean scores of any one group after the four month period between the two assessment occasions. The significant difference in mean scores amongst the four intervention groups ($p<.05$) was analyzed with the Bonferroni Multiple Comparisons procedure. Results confirmed that the mean score of 6.2 of the L1 control group (Group 1) was significantly better than Group 4's mean score of 4.7 ($p<.05$) (see Figure 6.5). This result is in accordance with findings from two unpublished South African studies (Botha 2008; Kriel 2008) which found that children with normal language development performed better on a Print Awareness protocol than children with delayed vocabulary development from disadvantaged backgrounds. In the current study, the L1 learners in Group 1 performed significantly better than their ELL peers in Group 4 on the PPVT, indicating superior receptive vocabulary abilities for the former group; subsequently, the L1 group also outperformed their ELL peers on the Concepts of Print subtest.

On this subtest, which comprised ten selected items from Clay's Concepts about Print test, the 66 participants scored an average of 5.7 upon entering Grade 1. Participants in the Willenberg sample (101 English L1 learners, from deprived socio-economic backgrounds) scored an average of 5.8, which is very similar to the performance of the 66 participants in the current study.

By qualitatively analysing results of the ELLs in the two experimental groups (Groups 3 and 4), it was clear that most learners (92%) were able to identify the front of the book (Question 1), and more than 70% of learners were able to discriminate between words and pictures (Question 2), knew the direction of print (Question 4) and were able to identify two similar words (I or looked, Question 5). These results coincide with Willenberg's (2004) findings where more than 70% of participants in her study also responded correctly to Questions 1, 2 and 4. Also, ELLs in Groups 3 and 4 performed similarly to participants in the Willenberg study, as none of these English L2 learners was able to detect changes in word or letter order (Question 7) and only one learner was able to identify a punctuation mark (Question 8). According to Willenberg (2004), this is to be expected, as decoding skills are required to detect any word or letter order changes, and these, together with knowledge of punctuation marks, are typically only acquired during the first year of formal teaching.

When qualitatively comparing the knowledge on concepts about print of the ELLs in the experimental groups (Groups 3 and 4) with that of the ELLs in the control group (Group 2), the same tendencies were observed, i.e. all the learners in Group 2 (n=10) were able to identify the front of the book (Question 1) and were able to discriminate print from pictures (Question 2), while none of them were able to detect changes in word or letter order (Question 7). ELLs in the control group, however performed significantly better than their peers in the experimental groups on Question 9 where they were required to recognise letter names. All the learners in Group 2 were able to name either **p** or **m**, while only 50% of the learners in Groups 3 and 4 were able to do so. This concurs with results on the Letter Recognition subtest, confirming the ELL control group's superior ability regarding alphabetical knowledge.

Because the comprehensive Concepts about Print test (Clay 1979) was not included in the ELA battery, results of the present study cannot be compared to the norms available for this test. The results of this study serve as a guideline, however, indicating that an intervention program incorporating conceptual knowledge about books did not significantly enhance ELLs' awareness of print concepts. This raises the question as to whether more explicit intervention strategies pertaining to conceptual knowledge of this nature are needed.

6.3.6. Word Definitions

Analysis of variance results on the Word Definition subtest confirmed significant differences for the two main effects, but no significant difference that could be contributed to interventions or curriculums followed in the respective classrooms: Time*Intervention: F(3,62)=1.1038; p=.35441; Time: F(1,62)=9.2420; p<.01; Intervention: F(3,62)=17.236; p=<.001.

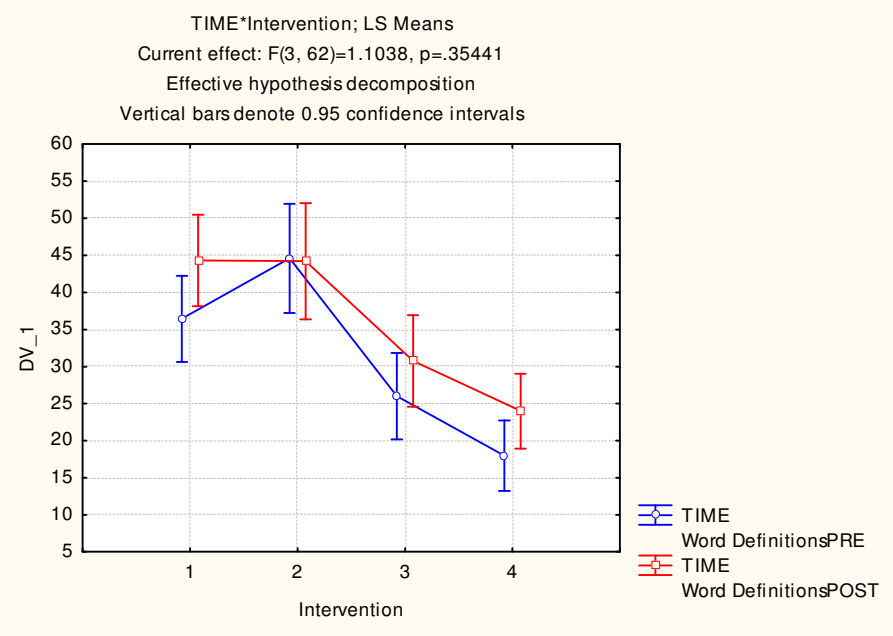

Figure 6.6 Means for Word Definition Subtest for four participant groups pre- and post-intervention

All 66 participants improved from a mean average score of 31.2 to 35.82 over the four month period, which was statistically significant (p<.01). When analysing the difference between the four treatment groups in more depth, Bonferroni Multiple Comparison results confirmed that the English L2 control group (Group 2) performed significantly better than the other ELLs, Group 3 (p<.01) and Group 4 (p<.001), pre-intervention, and still performed significantly better than Group 4 post-intervention (p<.001) (also see Figure 6.6). This L2 control group thus performed significantly better than an L2 peer group on a task that required decontextualized language skills, while they performed similarly to their English L1 peers on this task.

A comparison of results for Word Definitions obtained in the main study with participants' results in previous studies revealed the following (see Table 6.6):

Table 6.6 Comparison of outcomes in the South African context: Mean scores for Word Definition Subtest

STUDY	GROUP mean	SD
Pilot Study (N=32) mean age = 81 months	45.9	23.5
Main Study (N=66) mean age = 79 months	35.8	15.1
Willenberg 2004 (N=101) mean age = 74 months	33.6	11.1

The differences in sample sizes in the three studies, which are also reflected in the standard deviations, have to be born in mind when interpreting these observed discrepancies in performance. Upon entering Grade 1, participants in the main study performed markedly similar to those in the Willenberg study, when quantitative scores obtained for this subtest of expressive language ability were compared.

While quantitative scores indicated that L1 learners did not outperform their L2 peers on this expressive language task, responses were also analyzed qualitatively, by looking at learners' use of core definitional features, functional features, peripheral features and super-ordinates when defining (supposedly) familiar vocabulary items. (Appendix L provides a complete outline of the coding and scoring guidelines that were used to analyze participants' responses.) In defining the stimulus word bird, the following are examples of the features used by some of the participants (refer to Table 5.3 for description of participants):

Core Definitional Feature: "has wings" – C51-2

Functional Feature: "can fly"- C54-2

Peripheral Feature: "kind of parrot or eagle" – C51-2

Super-ordinate Feature: "an animal that flies"- B29-3

Table 6.7 displays a breakdown of the definitional content coding that was observed for the 66 participants in the main study:

Table 6.7 Breakdown of Word Definitional Content Coding in Main Study, for all four participant groups combined

Word Definition Content Coding	N	Min	Max	Mean
# Functions/Typical activities	66	0	12	7.09
#Definitional Features	66	0	11	2.59
#Examples/Descriptives/Associations/Applications	66	0	8	3.20
#Superordinates	66	0	1	.11

As was the case in the Willenberg study, participants in the main study used mainly informal and relatively personalised definitions; they also had difficulty producing generic definitions which captured the core features of the test items. This can be seen in the low frequency of Superordinates and Definitional Features that were generated (as shown in Table 6.7). Willenberg (2004) pointed out that the observed overuse of functional descriptors might be due to a lack of exposure to explicit teaching of the definitional genre in the formal school environment, as well as the developmental trend of a strong functional emphasis in the definitions of younger children (Wehren, DeLisi and Arnold 1981 as cited in Willenberg 2004). With regards to the current study, two possible additional rationales should be considered:

(i) The training item that was used to introduce this subtest of the ELA did not include use of a superordinate, but emphasized functions and definitional features: *"Do you know what a chair is? A chair has four legs, it's made of wood or plastic and we sit on a chair. Now tell me what a bird is."* Despite this training item, participants still struggled to isolate core definitional features and tended to use peripheral features, as indicated below.

Bicycle: **"**To ride. It's blue" (B38-4)

Flower: "It has a smell "(D62-4)

"Is a yellow flower" (D69-4)

(ii) As this subtest strongly reflects decontextualized language ability and requires children to organise vocabulary knowledge into an appropriate definitional form (Paul 2007:443), limited receptive vocabulary abilities, as reflected in PPVT scores of the two experimental groups, would most probably have impacted on results of this subtest. Indeed, Willenberg (2004) found a positive correlation of .42 between this subtest and the PPVT ($p<.01$).

6.3.7. Narrative Ability

Comparing ANOVA results for the four intervention groups on the fictional Narrative Subtest, statistically significant differences in means were observed for the two main effects:

Time*Intervention: F (3,62)=.64752. p=.58748; Time: F(1,62)=16.952; p<.001; Intervention: F(3,62)=7.2221; p<.001. Again, these observed differences could not be attributed to the classroom curriculums or the BEARS program.

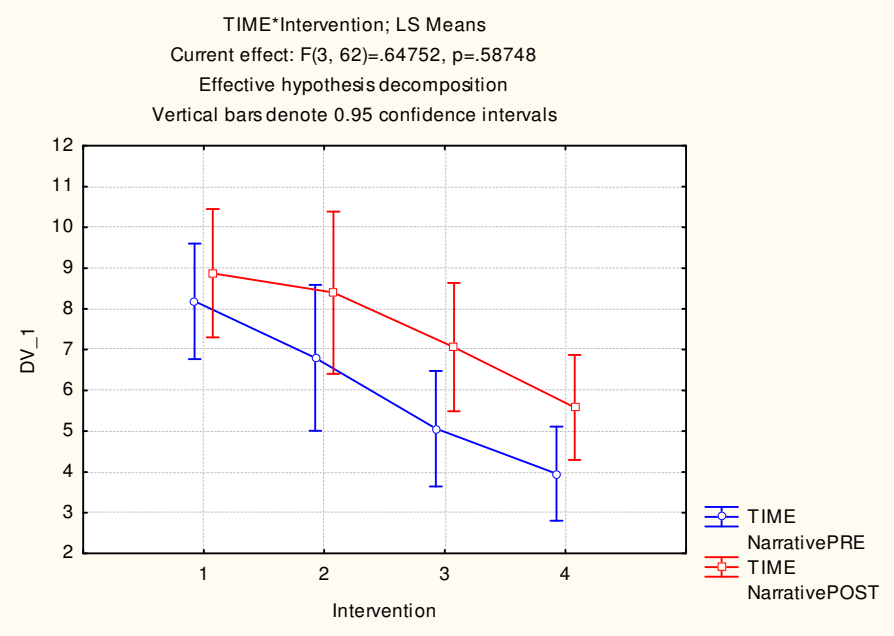

Figure 6.7 Means for Narrative Subtest for four participant groups pre- and post-intervention

Participants in the main study performed significantly better on a test of narrative ability post-intervention compared to pre-intervention, thus after the last four months of pre-school. The participants (N=66) improved from a mean score of 6.0 on the Bear Story pre-intervention to a mean score of 7.5 four months later.

The observed significant difference in performance amongst the four groups (p<.001) was analyzed with the Bonferroni Multiple Comparison procedure which confirmed that Group 1 performed significantly better than Group 4 both pre- (p<.001) and post- (p<.05) intervention. Thus, the ELL group receiving the comprehensive stimulation program still performed significantly poorer than the English L1 learners, whereas the ELLs who

received only the language stimulation part of the BEARS program, as well as the ELLs who received no additional intervention, did not perform significantly differently than the L1 control group on a test assessing the production of fictional narratives. Possible accounts for Group 4's performance here are the following:

(i) While direct instruction co-occurred with implicit-embedded exposure to narratives and narrative structure, bookreading in the BEARS program took place as part of a large group activity, with limited opportunities for individual interaction. Weitzman and Greenberg (2002) emphasise the importance of small groups to encourage interaction and to create more explicit opportunities for learners to participate and develop their expressive language abilities.

(ii) Group 4 performed poorly on several subtests, in particular the language-related subtests, indicating limited language proficiency in English. Their ability to comprehend, internalise and produce narratives could have been restricted by their limited English language proficiency in general.

(iii) With a mean score of 4.0, Group 4 performed significantly worse than the L1 control group, who had a mean score of 8.2, pre-intervention. While the former group improved to a mean score of 5.6 post-intervention, the four month period was not enough to close the significant gap between them and their L1 peers. Group 4 should be followed up in a longitudinal study to monitor their ability to integrate their linguistic competency with literacy skills, and to test Stanovich's (1986) Matthew effect which proposes that learners who start off poorly, might remain poor readers throughout their schooling years.

Table 6.8 compares participants' results on the Narrative Subtest in three relevant South African-based studies.

Table 6.8 Comparison of outcomes in the South African context: Mean scores for Fictional Narrative Subtest

STUDY	GROUP mean	SD
Pilot Study (N=32); mean age = 81 months	6.56	3.71
Main Study (N=66); mean age = 79months	7.48	3.4
Willenberg 2004 (N=101); mean age = 74.4 months	5.19	3.78

Narratives are an important part of language assessment and indeed an appropriate context to elicit representative and more complex utterances from a child (Southwood and Russell 2004). Narratives not only tap into a child's decontextualized language ability, approximate the challenges of everyday communication and show sensitivity to both pragmatic and structural aspects of learners' language abilities; narratives have also been found to discriminate between poor and good readers (Norris and Bruning 1988:416; Paul 2007:408). A comparison of the following two narratives, one from an English L1 learner in Group 1 and the other from an ELL in Group 4, highlights the effect of limited vocabulary and structural development (limited mean length of utterance, MLU), and at the same time also clearly illustrates the lack of both referential and evaluative elements which are important aspects in comprehending and producing narratives. While both learners scored above the group mean score of 7.5 (N=66) according to the CHAT analysis system, qualitative analysis of the ELL narrative (participant D71-4) post-intervention reveals exclusively simple sentence structures, a lack of evaluative elements, ambiguous use of pronouns and a general absence of "sparkle" or a "high point", the latter being indicative of a well developed narrative (Peterson and McCabe as cited in Paul 2007:497).

D71-4: **"**They are playing. They are going somewhere. And something go up in the tree and he go fetch it and he fall down. And now he's dead." *(MLU =4.3)*

This is in stark contrast to the English L1 narrative below, in which use of appropriate pronouns facilitates cohesion and a literate language style that uses indirect speech and evaluative elements is evident:

B15-1**: "**The five bears were hunting. The small one found a ball. All four of the bears says: "that's not a ball, that's a tree'. And the little one said: "oh". And then the bear let go of the kite. The little one was climb into the tree. He lay on his tummy to get the kite. The one bear was frightened that he will fall. "Doef", he fell. He called someone to help. The bear run very fast. The bear tried to get up, but he couldn't." *(MLU=8.2)*

6.3.8. Receptive Vocabulary

Repeated measures ANOVA results for the receptive vocabulary subtest using the Peabody Picture Vocabulary Test IIIB indicated a significant difference in performance amongst the four intervention groups, but again no significant effect for Time*Intervention: Time*Intervention: F(3,62)=1.3514. p=.26599; Time: F(1,62)=.06603; p=.79806; Intervention: F(3,62)=23.406; p<.001.

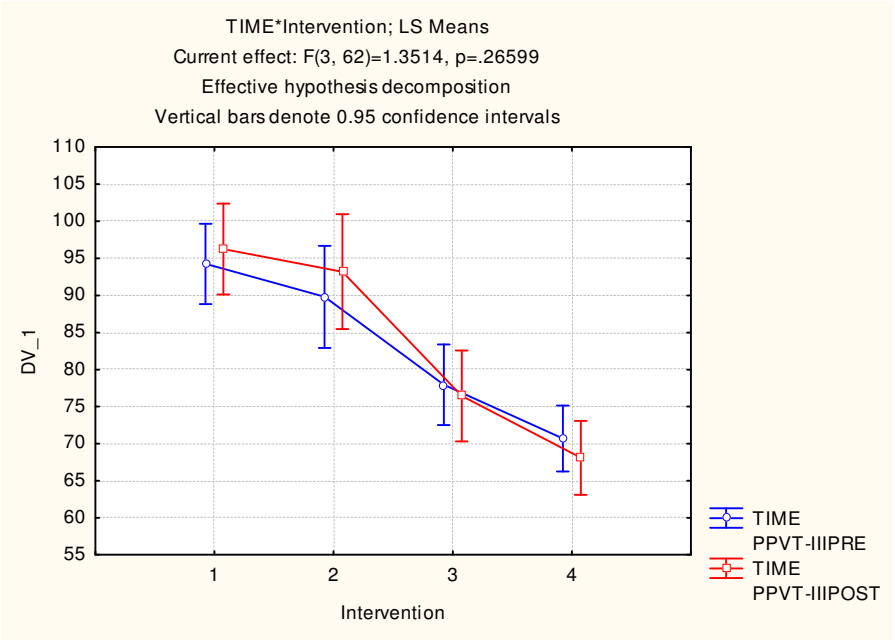

Figure 6.8 Standard scores for PPVT-IIIB for four participant groups pre- and post-intervention

None of the groups performed significantly better on this subtest at the end of the four months prior to entering Grade 1 (see Figure 6.8). The mean standard scores for the participants (N=66) improved from 83.17 pre-intervention to 83.49 post-intervention.

The Bonferroni Multiple Comparison Procedure compared the groups' performances on pre- and post-measurements. L1 learners (Group 1) performed significantly better than the two ELL experimental groups (Groups 3 and 4) on pre- and post-measures. Similarly, Group 2 performed significantly better than Group 4 in terms of pre-test scores, indicating a significantly better receptive vocabulary score for this control group. On the post-measurement test, i.e. upon entering Grade 1 of formal education, the ELL control group (Group 2) had a mean standard score of 93.2, which is within one standard

deviation (≤ -1 SD) of the mean for this standardized assessment instrument. Group 2 subsequently performed significantly better than their ELL peers in Group 3 ($p<.05$) and Group 4 ($p<.001$) on post-measurement standard scores. A comparison of the performance on the PPVT by participants in the pilot, main and Willenberg (2004) studies is summarized in Table 6.9.

Table 6.9 Comparison of outcomes in the South African context: Standard scores on Peabody Picture Vocabulary Test

STUDY	Standard Score	SD
Pilot Study (N=32); mean age = 81 months	86.0	19.63
Main Study (N=66); mean age = 79months	83.49	17.0
Willenberg 2004 (N=101); mean age = 74.4 months	85.3	10.89

As this standardized test has a mean standard score of 100 and standard deviation of 15, participants in all three studies performed approximately one standard deviation below the mean, with low average scores within the 10th percentile. As the PPVT was standardized on a US population, results should be interpreted with caution, but they do serve as some reference point in comparing results of the different studies. While mean standard scores across the three studies were very similar, ELLs in the experimental groups of the main study (Groups 3 and 4) as well as the ELL participants in the pilot study performed at least one standard deviation below the mean, as indicated in Table 6.10.

Table 6.10 ELLs' standard scores on the PPVT in the present study

STUDY	Standard Score	SD
Pilot Study ELL (n=16)	73.5	18.01
Main Study Group 3 (n=16)	76.4	13.1
Main Study Group 4 (n=24)	68.1	13.4

Upon entering Grade 1, these English L2 learners performed at least one standard deviation below the mean, indicating a moderately low score on the 5th percentile. As none of the treatment groups improved significantly over the four month period, this could lead to a widening of the gap between these ELLs and their English L1 peers. As a relation between oral vocabulary and the development of word recognition has been

demonstrated (Bowey 2001:186; Nation and Snowling 2004:354) and as Ricketts, Nation and Bishop (2007:256) found that oral vocabulary skills predict concurrent reading comprehension and exception word reading, the observed delay in receptive vocabulary, despite the additional exposure to a stimulation program, needs further investigation.

By considering performances on the PPVT in relation to performance on the remaining subtests, the following conclusion can be drawn: The ELL control group (Group 2) displayed receptive language skills which were within normal limits on a standardized test of receptive vocabulary. As PPVT scores show a correlation with cognitive ability test scores (Dunn and Dunn 1997), it seems as if this group was at an advantage with regards to their receptive language and/or cognitive abilities in comparison to their ELL peers in the experimental groups, both pre- and post intervention. To control for the inequalities in performance of the English L2 learners in the respective groups, eight participants from each of the four groups were matched based on their PPVT standard scores pre-intervention; the performance of these 32 participants on eight of the ELA subtests are given in Table 6.11 and discussed below.

6.3.9. The effect of an intervention program on the emergent literacy skills of PPVT-matched participants

Table 6.11 Mean scores and Standard Deviations for eight matched participants PRE-intervention

ELA Subtest	**GROUP 1 (n=8)**		**GROUP 2 (n=8)**		**GROUP 3 (n=8)**		**GROUP 4 (n=8)**	
	M	SD	M	SD	M	SD	M	SD
Sounds-in-Words	11.63	4.0	11.38	5.6	9.50	3.0	8.13	4.4
Rhyme Recognition	9.50	2.8	9.50	4.9	8.38	2.8	9.25	3.9
Rhyme Production	2.13	3.9	5.38	3.4	0.88	1.5	2.5	3.0
Letter Recognition	9.63	5.5	6.5	6.8	11.25	9.1	6.0	7.3
Concepts of Print	5.75	1.8	5.13	1.6	5.25	2.3	4.63	2.0
Word Definitions	36.0	11.6	42.0	16.1	30.5	12.9	22.63	5.2
Narrative Ability	8.75	2.3	6.88	3.9	6.88	3.7	5.25	1.6
PPVT-IIIB	89.13	5.2	87.75	2.3	86.38	11.1	81.50	4.8

While there was no significant difference in the PPVT standard scores amongst the 32 matched participants in the four groups, Group 2 performed significantly better than the eight participants from Group 3 in the Rhyme Production subtest: $F(3,28)=3.1$; $p<.05$

and significantly better than their eight matched peers in Group 4 on the Word Definition subtest: $F(3,28)=3.7$; $p<.05$.

A comparison of post-intervention results of these 32 participants, showed that there was no statistically significant difference in performance on any of the eight subtests, which confirmed that the 32 learners who had similar receptive vocabulary abilities by the end of Grade R, performed similarly on eight measures of emergent literacy upon entering Grade 1. These comparisons can be seen in Table 6.12.

Table 6.12 Mean scores and Standard Deviations for eight matched participants POST-intervention

ELA Subtest	**GROUP 1 ('n=8)**		**GROUP 2 (n=8)**		**GROUP 3 (n=8)**		**GROUP 4 (n=8)**	
	M	SD	M	SD	M	SD	M	SD
Sounds-in-Words	14.38	3.6	14.13	5.0	10.50	3.7	10.50	2.6
Rhyme Recognition	10.25	2.9	12.13	3.3	9.25	2.4	10.25	2.6
Rhyme Production	5.0	3.3	6.75	4.0	1.88	2.8	4.13	3.7
Letter Recognition	15.38	6.9	17.50	7.9	11.88	8.5	9.0	5.7
Concepts of Print	6.00	1.6	6.63	.7	5.50	2.3	5.0	1.5
Word Definitions	43.13	10.3	43.88	17.5	37.50	13.8	32.88	11.4
Narrative Ability	9.0	5.1	8.50	3.0	7.50	2.2	7.13	2.2
Receptive Vocabulary	92.13	12.0	91.75	8.5	84.63	12.5	78.75	13.3

In order to determine whether any of the groups performed significantly better over the four month period from pre- to post-testing, i.e. whether there was an intervention effect, repeated measures ANOVA was conducted. Similar to the results of all the participants (N=66), there was a substantial effect for Time and Intervention present on the Letter Recognition subtest, $F(3,28)=5.6$; $p<.01$, with post-hoc results confirming that the learners in Groups 1 and 2 performed significantly better over time than did their peers in the two experimental groups.

These 32 matched participants performed significantly better after the four month intervention period on all the subtests except the PPVT, as was evident from the substantial main effect of Time: Sounds-in-Words: $F(1,28)=12.2$; $p<.01$; Rhyme Recognition: $F(1,28)=6.9$; $p<.05$; Rhyme Production: $F(1,28)=8.7$; $p<.01$: Concepts about Print: $F(1,28)=4.5$; $p<.05$; Word Definitions: $F(1,28)=7.8$; $p<.01$ and Narratives: $F(1,28)=4.9$; $p<.05$.

Additionally, there was a significant main effect for Intervention on the Rhyme Production subtest, as the eight ELL participants in Group 2 performed significantly better than their ELL peers in Group 3 on this subtest: $F(3,28)=3.7$; $p<.05$. This observed difference was present pre-intervention, but not post-intervention.

Apart from a significant intervention effect with regards to Letter Recognition, indicating that learners in the two control classrooms outperformed their peers in the two experimental classrooms with regards to alphabetic letter knowledge, no substantial difference was noted on any of the other subtests of the ELA. When controlling for receptive vocabulary abilities, L1 learners did not perform significantly better than their L2 peers on any of the eight measures of emergent literacy. These results point towards a conclusion that, in isolation, education in an L2 cannot be regarded as a high risk criterion for developing language and literacy difficulties. In order to explain control Group 2's performance and similarly the dearth of intervention effect for the two experimental groups, alternative variables need to be considered. These variables could include socio-economic status, language aptitude, school curriculum, previous quantity and quality of exposure to the language of education, nature of the home language and its similarity to the language of education, and intervention-related issues. Some of these variables will be addressed in the answers given to the two remaining research questions, to be discussed in the next two sections.

6.4. RESULTS OF TWO EMERGENT LITERACY INTERVENTION APPROACHES

Does a comprehensive emergent literacy stimulation program improve ELLs' performance in comparison to ELLs who received a language-focused stimulation program?

In order to answer the third research question, mean scores pre- and post-intervention for the eight subtests were compared for the ELLs in Intervention Groups 3 and 4, and summarized in Table 6.13.

Table 6.13 Mean scores for ELL Experimental Groups 3 and 4 pre- and post-intervention

ELA Subtest	Group 3 PRE(n=16)		Group 3 POST(n=16)		Group 4 PRE (n=24)		Group 4 POST(n=24)		Differences in scores	
	M	SD	M	SD	M	SD	M	SD	GROUP 3	GROUP 4
Sounds-in-Words	8.4	2.6	10.3	3.3	8.5	4.5	11.0	3.4	1.9	2.5
Rhyme Recognition	8.1	3.1	8.4	2.5	7.8	4.2	8.6	3.0	0.3	0.8
Rhyme Production	1.0	1.9	2.1	2.9	1.9	3.1	3.2	3.7	1.1	1.3
Letter Recognition	8.3	7.5	9.0	7.0	6.1	7.0	9.2	7.4	0.7	3.1
Concepts of Print	5.4	2.1	5.4	1.7	4.6	1.7	4.8	1.4	0	0.2
Word Definitions	26.0	11.6	30.8	13.8	18.0	8.8	24.0	11.4	4.8	6
Narrative Ability	5.1	3.6	7.1	3.1	4.0	2.2	5.6	2.7	2	1.6
PPVT-IIIB	77.9	12.6	76.4	13.1	70.7	10.6	68.1	13.4	-1.5	-2.6

Group 3 received only the first section of the BEARS program, which focused on joint book reading and oral language stimulation, and which aimed to improve the learners' conceptual foundations for developing literacy. To the same intended effect, Group 4 received the entire BEARS program which included the oral language section as well as activities focusing on phonological awareness skills, or procedural knowledge.

Repeated measures ANOVA was conducted to determine if the two intervention programs impacted on participants' performance on the eight subtests of the adapted ELA battery over the eight week intervention period. Scores prior to intervention and those obtained post-intervention were compared. No significant interaction between Time and Intervention was found for any of the eight subtests, indicating that neither intervention condition brought about any significant change for ELL over the four month period in comparison to the other condition.

There was a substantial main effect for Time on the following subtests: Sounds-in-words: $F(1,38)=11.3$; $p<.01$, Rhyme Production: $F(1,38)=10.3$;$p<.01$; Letter Recognition: $F(1,38)=8$; $p<.01$, Word Definitions: $F(1,38)=19.1$; $p<.01$ and Narratives: $F(1,38)=18.5$; $p<.01$, indicating that both groups of participants improved significantly on these subtests over the four month period. There was also a significant main effect for Intervention on the following subtests: Word Definitions: $F(1,38)=4.7$; $p<.05$ and PPVT: $F(1,38)=4.4$; $p<.05$, which was further analyzed with the Bonferroni Multiple Comparison procedure. On the Word Definitions subtest, Group 3 performed significantly better than Group 4 ($p<.05$) pre-intervention, whereas Group 3 performed significantly better than Group 4 on the PPVT post-intervention ($p<.05$).

By looking at the difference in mean scores for the two experimental groups in Table 6.13, it can be seen that Group 4 made greater gains than Group 3 on the first four subtests, which assessed procedural knowledge and skills. Whereas these gains were not statistically significant and could not be attributed to the content of the respective versions of the BEARS program, this aspect requires further investigation.

Focused stimulation pertaining to concepts of print and oral language (i.e. to conceptual literacy skills), thus did not result in any statistically significant improvement for Group 3, while the additional stimulation of phonological awareness skills did not significantly enhance Group 4's performance on decoding tasks (i.e. Sounds-in-Words, rhyming related tasks or alphabet letter knowledge). While it has to be taken into account that both groups continued with their normal academic curriculum which includes daily attention to literacy skills, it has to be concluded from the current results that neither a language-focused intervention program nor a comprehensive emergent literacy intervention program run in the last term before entering Grade 1 significantly enhanced ELLs' skills on the eight measures of the Emergent Literacy Assessment battery in comparison to the skills of their ELL peers who were not exposed to any form of additional intervention,.

6.5. EFFECT OF INDEPENDENT VARIABLES ON EMERGENT LITERACY SKILLS OF ELLs

Do independent variables such as socio-economic status, home language and school environment influence performance on the eight subtests of an Emergent Literacy Assessment?

In order to further investigate the observed performance of the English L2 control group (Group 2) in relation to the two intervention groups' performance (and thus to answer research question 4), three possible confounding variables that could have resulted in the observed differences in performance were considered, namely (i) socio-economic status (SES), (ii) characteristics of the learners' L1 and (iii) characteristics of the control intervention/curriculum in School C. Each of these variables will be discussed below, after which qualitative teacher feedback pertaining to this research question will be discussed briefly.

6.5.1. Effect of socio-economic status

Based on a 6-point questionnaire (Appendix A) that was completed by each participant's parent or guardian, the socio-economic status (SES) of participants was established. For the purpose of determining the possible confounding effect of SES, L1 learners were not included in the analysis of data below, in order to eliminate the influence of home language on test results. Fourteen ELLs were categorized in the low SES group (L), while 36 learners were in the high SES group (H). Mean scores and standard deviations for the two SES groups are summarized in Table 6.14:

Table 6.14 Effect of ELLs' SES on performance on ELA (Low SES: n=14; High SES: n=36)

ELA Subtest	SES	M	SD	ELA Subtest	SES	M	SD
Sounds-in-Words PRE	L	8.07	3.496	Rhyme Recognition PRE	L	6.93	3.496
	H	9.28	4.589		H	8.78	3.958
	Total	8.94	4.311		Total	8.26	3.890
Sounds-in-Words POST	L	10.43	2.793	Rhyme Recognition POST	L	8.36	2.620
	H	11.75	4.066		H	9.64	3.279
	Total	11.38	3.774		Total	9.28	3.137

ELA Subtest	SES	M	SD	ELA Subtest	SES	M	SD
Rhyme Production PRE	L	1.21	2.259	Letter recognition PRE	L	6.93	7.539

1	H	2.94	3.672		H	7.58	7.469
	Total	2.46	3.406		Total	7.40	7.418
Rhyme Production POST				Letter Recognition POST			
	L	2.14	3.416		L	8.50	7.166
	H	4.22	3.950		H	12.06	8.404
	Total	3.64	3.890		Total	11.06	8.165

ELA Subtest	SES	M	SD	ELA Subtest	SES	M	SD
Word DefinitionsPRE	L	17.43	9.436	Concepts of PrintPRE	L	4.86	1.460
	H	29.14	16.329		H	5.14	2.058
	Total	25.86	15.566		Total	5.06	1.900
WordDefinitions POST				Concepts of Print POST			
	L	21.50	10.833		L	4.57	1.342
	H	33.58	15.061		H	5.56	1.520
	Total	30.20	14.939		Total	5.28	1.526

ELA Subtest	SES	M	SD	ELA Subtest	SES	M	SD
Narrative PRE	L	3.07	2.336	PPVT-III PRE	L	69.14	8.556
	H	5.58	3.102		H	79.83	12.769
	Total	4.88	3.101		Total	76.84	12.625
Narrative POST				PPVT-III POST			
	L	5.36	3.079		L	65.43	11.420
	H	7.11	2.816		H	79.81	15.114
	Total	6.62	2.968		Total	75.78	15.502

In line with previous studies on the effect of SES on literacy measures (Bowey 1995; Dodd and Carr 2003; Duncan and Seymour 2000), the ELLs performed as one would predict: participants in the Low SES group scored consistently lower than participants in the High SES group across the eight ELA subtests, both pre- and post-intervention.

Analysis of variance was conducted to assess the impact of SES on learners' performance on the ELA over the four month intervention period. There was no significant interaction between Time and SES for any of the eight subtests, confirming that while learners in the High SES group (n=36) had higher mean scores than their peers from more disadvantaged backgrounds (n=14) both pre- and post-intervention, this gap neither widened nor narrowed significantly over the four month period prior to entering Grade 1.

A substantial main effect for Time was measured on the following subtests: Sounds-in-Words: $F(1,48)=14,5$; $p<.001$; Rhyme Recognition: $F(1,48)=4.6$; $p<.05$; Rhyme

Production: $F(1,48)=7.6$; $p<.01$; Letter Recognition: $F(1,48)=9.8$; $p<.01$; Word Definitions: $F(1,48)=6.6$; $p<.05$ and Fictional Narratives: $F(1,48)=22.3$; $p<.001$. Learners from both higher and lower socio-economic backgrounds have thus made significant progress on these subtests after four months.

A substantial main effect for SES indicated that learners from the High SES performed significantly better than their peers from disadvantaged backgrounds on the three language-related subtests: Word Definitions: $F(1,48)=7.9$; $p<.01$; Narratives: $F(1,48)=6.8$; $p<.05$ and the PPVT: $F(1.48)=10.6$; $p<.01$. This result corroborates with studies which found that language skill varies systematically as a function of SES (Duncan and Seymour 2000:145; Hoff 2006:163; Huttenlocher, Haight, Bryk, Seltzer and Lyons 1991:236). In an attempt to explain this phenomenon, Hart and Risley (1995:39) found that mothers with higher SES talked more, used a richer vocabulary and provided more information about objects being labeled than did mothers from a more disadvantaged socio-economic background.

In the current study, SES did not have a significant influence on results for any of the subtests assessing decoding skills or procedural knowledge. This correlates with Dollaghan, Campbell, Paradise, Feldman, Janosky, and Pitcairn (1999:1442) who also found early phonological development to be least affected by SES; however, Bowey (1995) found children from low SES backgrounds to have delayed phonological awareness skills, whereas Dodd and Carr (2003) also found that SES significantly affected subjects' performance on a Letter-Sound Recall task, similar to the Letter Recognition task in the ELA. The following might explain the results of the current study in terms of the performance of ELLs from different socio-economic backgrounds:

(i) As phonological awareness skills typically are only addressed in school, the effect of the formal school environment might have accounted for the insignificant differences in performance for children from different SES groups in terms of these skills, meaning that the tuition received in Grade R levelled out any differences in skills prior to entering Grade 1. Oral language development, however, strongly relates to the home environment, and the detrimental effect of a disadvantaged background could take longer to be overcome and could for this reason still be reflected in the performance of these learners entering Grade 1.

(ii) The nature of the questionnaire and subsequently the grouping of participants into the two SES groups may not have been completely representative of the group nor have captured more subtle differences. While the questionnaire did take maternal level of education and home literacy environment into account, financial income was not specified, and there could have been a significant range in disposable income levels within the different SES groups. All the participating schools fell in the same poverty index quintile; it is possible that participants from more distinct SES groups could have resulted in more significant differences in performance.

(iii) While the current results do not confirm results from studies in the USA and Europe with regards to the influence of SES on children's phonological awareness skills, this might be a positive finding within the South African context, suggesting this area as a relative strength for children from disadvantaged backgrounds. Provided that their oral language skills and conceptual knowledge are addressed, children from lower SES might be better able here than learners from similar contexts elsewhere to cope with demands of decoding and procedural knowledge in the early school years. This is in accordance with Hoff's (2006) conclusion that, for many children with normal phonological processing skills who have problems with the acquisition of literacy, it may be a reflection of more general inadequacies in language skills resulting from inadequate language experience.

6.5.2. Effect of first language

In order to determine whether learners' L1 had an effect on ELL participants' performance on the eight subtests of the ELA, repeated measures ANOVA was conducted under the following three conditions:

(i) **All L2 learners**: L2A(n=25), L2X (n=19), L2O(n=6) (N=50)
(ii) L2A (n=3), L2X(n=8) and L2O (n=5) in **Group 3** (N=16)
(iii) L2A (n=12) and L2X (n=11) in **Group 4** (N=23)

The results for each condition are discussed below.

6.5.2.1. All L2 learners: L2A(n=25), L2X (n=19), L2O(n=6) (N=50)

Table 6.15 summarizes the descriptive statistics for ELL participants with regards to their L1: L2X (isiXhosa); L2A (Afrikaans); L2O (Other: Zulu, Sotho, Flemish).

Table 6.15 Effect of First Language on Performance of all ELLs combined

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Sounds-in-Words PRE	L2A	9.88	4.729	Rhyme Recognition PRE	L2A	9.00	4.397
	L2O	9.00	2.608		L2O	7.33	2.251
	L2X	7.68	4.001		L2X	7.58	3.533
	Total	8.94	4.311		Total	8.26	3.890
Sounds-in-Words POST	L2A	12.56	3.969	Rhyme Recognition POST	L2A	10.76	2.619
	L2O	9.50	3.782		L2O	7.67	2.251
	L2X	10.42	3.115		L2X	7.84	3.184
	Total	11.38	3.774		Total	9.28	3.137

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Rhyme Production PRE	L2A	3.96	3.780	Letter recognition PRE	L2A	8.20	7.416
	L2O	1.17	1.602		L2O	17.00	8.246
	L2X	.89	2.355		L2X	3.32	2.888
	Total	2.46	3.406		Total	7.40	7.418
Rhyme Production POST	L2A	5.68	3.955	Letter Recognition POST	L2A	13.52	8.362
	L2O	1.17	1.472		L2O	16.83	8.305
	L2X	1.74	2.845		L2X	6.00	4.749
	Total	3.64	3.890		Total	11.06	8.165

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Word Definitions PRE	L2A	33.64	16.002	Concepts of Print PRE	L2A	5.20	1.871
	L2O	26.17	10.534		L2O	5.00	2.000
	L2X	15.53	9.512		L2X	4.89	1.997
	Total	25.86	15.566		Total	5.06	1.900
Word Definitions POST	L2A	37.04	14.328	Concepts of Print POST	L2A	5.40	1.683
	L2O	33.67	13.589		L2O	5.83	1.472
	L2X	20.11	10.295		L2X	4.95	1.311
	Total	30.20	14.939		Total	5.28	1.526

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Narrative PRE	L2A	6.16	3.275	PPVT-III PRE	L2A	83.24	11.963
	L2O	4.83	1.722		L2O	78.33	6.439
	L2X	3.21	2.417		L2X	67.95	9.513
	Total	4.88	3.101		Total	76.84	12.625
Narrative POST	L2A	7.52	2.710	PPVT-III POST	L2A	84.04	14.429
	L2O	6.00	2.608		L2O	75.17	11.890
	L2X	5.63	3.166		L2X	65.11	11.050
	Total	6.62	2.968		Total	75.78	15.502

Repeated measures ANOVA was conducted to assess the possible influence of L1 on performance over the four months of intervention. The results of this analysis showed

that there was no significant interaction between language and time (Time*Language), indicating that no language group performed significantly different to any of the other groups over the four month period prior to entering Grade 1.

There was a significant main effect for Time for the following subtests: Sounds-in-Words: $F(1,47)=8.4$; $p<.01$; Letter Recognition: $F(1,47)=6.5$; $p<.05$; Word Definitions: $F(1,47)=8.3$; $p<.01$ and Narratives: $F(1,47)=14.4$; $p<.001$, indicating that all L2 learners performed significantly better post-intervention on these subtests. Furthermore, there was a substantial main effect for Language on six of the eight subtests. Analysis of Variance and Bonferroni Multiple Comparison post-hoc results for these six subtests are summarized in Table 6.16.

Table 6.16 Significant differences in performance of ELLs, per L1 *group: (p<.05*; p<.01**; p<.001***)*

ELA Subtest	F(2,47)	P	Post hoc results
Rhyme Recognition	3.5	.037*	L2A performed significantly better than L2O participants
Rhyme Production	8.8	.001**	L2A performed significantly better than L2O and L2X participants
Letter Recognition	11.4	.000***	L2A and L2O performed significantly better than L2X participants
Word Definitions	11.7	.000***	L2A performed significantly better than L2X participants
Narratives	4.9	.012*	L2A performed significantly better than L2X participants
PPVT-IIIB	13.2	.000***	L2A performed significantly better than L2X participants

At first glance, these results indicate that learners with Afrikaans as L1 performed significantly better than their ELL peers with other L1s on subtests of procedural as well as conceptual literacy. The following aspect, however, needs consideration when interpreting these results: All 10 participants in Group 2 had Afrikaans as their L1. This group as a whole performed very well, e.g. they performed significantly better than the other participating ELLs with regards to Letter Recognition over the four month period, indicated by a substantial interaction between Time and Intervention. Also, Group 2

performed significantly better than their ELL peers in Groups 3 and 4 on the PPVT, indicating that the ELL control group presented with superior receptive vocabulary abilities. While this accounts for 10 subjects out of the 25 L2A subjects (i.e. = 40%), it might have skewed the overall performance of L2A learners in relation to their ELL peers with alternative L1s.

Following on from this, participants in Groups 3 and Groups 4 were compared with regards to their L1 to establish if the above results were replicated within the two experimental groups.

6.5.2.2. Group 3: L2A (n=3), L2X (n=8) and L2O (n=5)

With regards to Groups 3 ELL participants' performance on the Fictional Narrative subtest, a significant interaction between Language and Time was present, indicating that learners from the three L1 groups did not show the same change in mean scores over the four month period: $F(2,13)=4.1$; $p<.05$. Learners with isiXhosa and Other L1s improved on their mean scores, while learners with Afrikaans as L1 showed a decrease in mean scores from 9.67 to 8.33. The very small number of learners with Afrikaans as L1 in Group 3 (n=3) has to be taken into consideration in the interpretation of this result; however, a partial eta squared effect size of .389 indicated a large effect size for this observation (Pallant 2007:236).

No significant interaction between Language and Time was present on any of the remaining subtests. Similarly, no significant main effect for Time was observed for any of the subtests, indicating that none of the language groups within Group 3 performed significantly better on post-intervention scores on the remaining seven subtests of the ELA.

A substantial main effect for Language was present on two of the subtests: Letter Recognition: $F(2,13)=5.8$; $p<.05$ and PPVT; $F(2,13)=8.4$; $p<.01$. The Bonferroni Multiple Comparison Procedure was completed post-hoc to analyze the observed main effect and indicated that the L2O learners performed significantly better than their L2X peers on the test of Letter Recognition, while the L2A learners performed significantly better than their L2X peers on the PPVT. Table 6.17 summarizes test scores of L2A (n=3), L2O (n=5) and L2X (n=8) learners in Group 3.

Table 6.17 Performance of ELL participants in Group 3 on eight subtests of ELA

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Sounds-in-Words PRE	L2A	9.00	4.583	Rhyme Recognition PRE	L2A	7.33	4.163
	L2O	9.40	2.702		L2O	7.80	2.168
	L2X	7.63	1.685		L2X	8.50	3.505
	Total	8.44	2.607		Total	8.06	3.087
Sounds-in-Words POST	L2A	10.33	4.163	Rhyme Recognition POST	L2A	10.00	3.606
	L2O	9.20	4.147		L2O	7.60	2.510
	L2X	11.00	2.619		L2X	8.38	2.134
	Total	10.31	3.281		Total	8.44	2.502

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Rhyme Production PRE	L2A	.33	.577	Letter recognition PRE	L2A	8.33	8.021
	L2O	1.20	1.789		L2O	15.20	7.791
	L2X	1.13	2.416		L2X	3.88	3.314
	Total	1.00	1.932		Total	8.25	7.497
Rhyme Production POST	L2A	2.67	4.619	Letter recognition POST	L2A	9.33	7.095
	L2O	1.20	1.643		L2O	15.00	7.810
	L2X	2.38	3.159		L2X	5.13	3.643
	Total	2.06	2.932		Total	9.00	7.014

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Word Definitions PRE	L2A	39.00	10.149	Concepts of Print PRE	L2A	6.33	2.082
	L2O	27.60	11.104		L2O	5.20	2.168
	L2X	20.13	8.560		L2X	5.25	2.315
	Total	26.00	11.570		Total	5.44	2.128
Word Definitions POST	L2A	38.67	15.044	Concepts of Print POST	L2A	5.33	2.887
	L2O	35.20	14.601		L2O	6.20	1.304
	L2X	25.00	12.024		L2X	4.88	1.458
	Total	30.75	13.830		Total	5.38	1.708

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Narrative PRE	L2A	9.67	4.726	PPVT-III PRE	L2A	95.00	15.133
	L2O	5.00	1.871		L2O	79.40	6.580
	L2X	3.38	2.774		L2X	70.62	7.855
	Total	5.06	3.642		Total	77.94	12.583
Narrative POST	L2A	8.33	2.309	PPVT-III POST	L2A	93.00	15.524
	L2O	6.60	2.408		L2O	78.80	8.815
	L2X	6.88	3.834		L2X	68.75	8.155
	Total	7.06	3.087		Total	76.44	13.120

6.5.2.3. Group 4: L2A (n=12) and L2X (n=11)

Repeated measures ANOVA were conducted to determine any difference in performance for learners with isiXhosa and Afrikaans as L1 in experimental Group 4 pre- and post-intervention. As there was only one learner with isiZulu as L1 in this group, this participant was not included in this analysis.

There was no significant interaction between Language and Time for any of the eight subtests, indicating that participants' L1 did not impact on their performance over the four month intervention period. A significant effect for Time was observed on five subtests: Sounds-in-words: $F(1,21)=6.2$; $p<.05$; Rhyme Production: $F(1,21)=7.7$; $p<.05$, Letter Recognition: $F(1,21)=11.6$; $p<.01$, Word Definitions: $F(1,21)=14.1$; $p<.01$ as well as Narratives: $F(1,21)=12.3$; $p<.01$, with both language groups showing a significant improvement in mean scores on these subtests.

A substantial main effect for Language was evident on four subtests: L2A performed significantly better than their L2X peers with regards to Rhyme Production: $F(1,21)=6.1$; $p<.05$, Word Definitions: $F(1,21)=16.2$; $p<.01$, Narratives: $F(1,21)=4.5$, $p<.05$ and on the PPVT: $F(1,21)=6.2$; $p<.05$. Table 6.18 summarizes mean scores and standard deviations pre- and post-intervention for L2X (n=11) and L2A (n=12) learners in Group 4:

Table 6.18 Performance of L2A and L2X participants in Group 4 on eight subtests of ELA

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Sounds-in-Words PRE	L2A	9.42	4.010	Rhyme Recognition PRE	L2A	8.92	4.738
	L2X	7.73	5.179		L2X	6.91	3.562
	Total	8.61	4.580		Total	7.96	4.248
Sounds-in-Words POST	L2A	12.00	3.330	Rhyme Recognition POST	L2A	9.75	1.545
	L2X	10.00	3.493		L2X	7.45	3.830
	Total	11.04	3.483		Total	8.65	3.039

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Rhyme Production PRE	L2A	3.00	3.490	Letter recognition PRE	L2A	7.42	6.908
	L2X	.73	2.412		L2X	2.91	2.625
	Total	1.91	3.175		Total	5.26	5.683
Rhyme Production POST	L2A	5.08	3.728	Letter recognition POST	L2A	10.17	7.396
	L2X	1.27	2.649		L2X	6.64	5.500
	Total	3.26	3.732		Total	8.48	6.660

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
WordDefinitions PRE	L2A	23.17	4.988	Concepts of Print PRE	L2A	4.67	1.826
	L2X	12.18	9.075		L2X	4.64	1.804
	Total	17.91	9.020		Total	4.65	1.774
WordDefinitions POST	L2A	30.67	10.782	Concepts of Print POST	L2A	4.58	1.564
	L2X	16.55	7.515		L2X	5.00	1.265
	Total	23.91	11.654		Total	4.78	1.413

ELA Subtest	Language	M	SD	ELA Subtest	Language	M	SD
Narrative PRE	L2A	4.75	1.913	PPVT-III PRE	L2A	74.83	9.675
	L2X	3.09	2.256		L2X	66.00	10.479
	Total	3.96	2.205		Total	70.61	10.820
Narrative POST	L2A	6.58	2.678	PPVT-III POST	L2A	74.17	12.350
	L2X	4.73	2.370		L2X	62.45	12.445
	Total	5.70	2.653		Total	68.57	13.507

6.5.2.4. Summary: Effect of L1 on ELA scores

A synthesis of results from the three conditions supports the following observations with regards to ELL participants' L1:

(i) In experimental Group 3, ELLs with isiXhosa (L2X) and other home languages (other than Afrikaans) improved with regards to their Narrative abilities, whereas L2A participants showed a decrease in mean scores on this subtest. There was no substantial effect for Time and Language on any of the remaining subtests under

the three conditions, indicating that participants' L1 did not have a significant effect on performance on the ELA over the four month intervention period.

(ii) While L2X participants performed significantly worse than their L2A peers with regards to Rhyme production ability, there was no significant difference in performance on the Sounds-in-Words subtest which could have been related to the distinct phonological characteristics of isiXhosa, an indigenous Nguni language, whose highly marked consonantal system with ejectives, implosives and clicks is very different to the English phonological system. Further investigation of L2A and L2X learners' phonological recognition and representation abilities is needed in order to draw more specific conclusions regarding any language effect on emergent decoding abilities.

(iii) Both in the large group (N=50) as well as within Group 4, L2X participants performed significantly worse than L2A participants on three language-related subtests: Word Definitions, Narratives and the PPVT**.** L2X learners in Group 3 also performed significantly worse on the PPVT, indicating that these learners enter formal schooling with a significant delay in relation to other ELLs with regards to receptive language abilities. While there was no significant interaction between Language and Time over this four month period, these results might indicate that L2X learners need to be monitored with a more longitudinal approach in order to track their language growth trajectory in relation to their ELL and L1 peers, and subsequently to prevent Stanovich's (1986) Matthew effect which, as stated above, proposes that learners who start off poorly, might remain poor readers throughout their schooling years.

6.5.3. Effect of curriculum and teacher characteristics

The third confounding variable that was taken into consideration in the interpretation of the results for the four participant groups was the possible effect of the curriculum followed in the different classrooms or specific teacher characteristics. Table 6.19 summarizes the characteristics of the school-based literacy programs that were followed in each of the five classrooms.

Table 6.19 Summary of school-based literacy programs followed in the five classrooms

School	Teacher	Literacy Program	Description of program-based and informal literacy activities
A	a	No specific program	Incorporate theme-related vocabulary, rhyming, songs and sound awareness into daily classroom activities
B	b and c	Letterland (Wendon 2003)	Include auditory games, computer-based activities and small group activities with worksheets
C	d	Letterland (Wendon 2003)	Supplement Letterland with Reading Cards (Koch, unpublished), additional vocabulary and picture discussions
D	e	No specific program	Incorporate reading corner, worksheets and sound discrimination into daily classroom activities

The Letterland (Wendon 2003) program is a phonics-based literacy program designed for 3- to 8-year old learners through media such as music, actions, art and social interaction. While this program includes a special Teacher's Guide and Workbook for ELLs, none of the teachers used these guides, but rather implemented the general Pre-Primary program. Characteristics of the teachers and classroom compositions in the study are summarized in Table 6.20:

Table 6.20 Characteristics of teachers in experimental and control classrooms

Teacher	School	Group	Teacher's First Language	Teacher's Additional Language	Teacher's Years of Teaching Experience	Class-room size	% ELL learners
a	A	3	English	Afrikaans	16	26	92.3
b	B	1	English	Afrikaans	20	26	46.2
c	B	3 & 4	Afrikaans	English	11	27	77.8
d	C	1 & 2	English	Afrikaans	22	27	22.2
e	D	4	Afrikaans	English	2	23	78.3

In order to determine whether teacher characteristics influenced learners' performance in the three experimental classrooms, performance of learners was compared pre-intervention to identify any inequalities that may have existed prior to the intervention program, and ANOVA was conducted on mean scores of ELLs to determine any significant effect between Time and Teacher in the classrooms containing the experimental groups (Groups 3 and 4): School A (Teacher a) n=10; School B (Teacher c) n=15 and School D (Teacher e) n=15. Table 6.21 summarizes results of ELL in the three experimental classrooms pre-intervention.

Table 6.21 Performance of ELLs in three experimental classrooms (thus excluding ELL control group) PRE-intervention

Classroom		SoundsinWords	Rhyme Recognition	Rhyme Production	Letter recognition
Teacher a	Mean	8.60	8.10	1.60	8.60
n=10	SD	2.951	2.514	2.271	7.575
Teacher c	Mean	8.80	9.13	2.13	7.73
n=15	SD	3.668	4.274	3.357	7.411
Teacher e	Mean	8.13	6.60	.87	5.13
n=15	SD	4.596	3.661	2.232	6.749
Total	Mean	8.50	7.93	1.53	6.98
N=40	SD	3.810	3.751	2.708	7.177
Classroom		**Word Definitions**	**Concepts of Print**	**Narratives**	**PPVT-III**
Teacher a	Mean	25.60	5.50	5.70	75.30
n=10	SD	13.640	1.716	4.165	12.597
Teacher c	Mean	25.40	4.87	4.60	78.93
n=15	SD	6.185	2.264	2.165	10.229
Teacher e	Mean	14.00	4.67	3.33	67.13
n=15	SD	8.341	1.718	2.093	10.288
Total	Mean	21.17	4.95	4.40	73.60
N=40	SD	10.646	1.921	2.854	11.830

ANOVA results indicated a significant difference in pre-intervention performance on two subtests: Word Definitions**:** $F(2,37)=7.2$; $p<.01$ and the PPVT: $F(2,37)=4.6$; $p<.05$. The Bonferroni Multiple comparison procedure post-hoc indicated that ELLs in the classrooms of Teachers a and c performed significantly better than their peers in the classroom of Teacher e on the Word Definitions subtest, while ELLs in Teacher c's classroom also performed significantly better on the PPVT than did their peers in Teacher e's classroom. ELLs in Teacher e's classroom thus performed significantly worse than their peers in the other two experimental classrooms on subtests of receptive vocabulary ability as well as expressive use of language prior to implementation of the intervention program during the last term of Grade R. Post-intervention results for the learners in the three experimental classrooms are presented in Table 6.22.

Table 6.22 Performance of ELLs in three experimental classrooms POST-intervention

Classroom		SoundsinWords	Rhyme Recognition	Rhyme Production	Letter recognition
Teacher a	Mean	9.40	7.90	2.40	9.20
n=10	SD	3.471	2.998	3.438	7.757
Teacher c	Mean	12.33	9.73	4.00	10.60
n=15	SD	2.870	1.438	3.338	6.717
Teacher e	Mean	10.07	7.80	1.67	7.60
n=15	SD	3.240	3.321	3.244	7.405
Total	Mean	10.75	8.55	2.73	9.13
N=40	SD	3.334	2.764	3.404	7.176
Classroom		**Word Definitions**	**Concepts of Print**	**Narratives**	**PPVT-III**
Teacher a	Mean	28.80	5.60	7.30	73.60
n=10	SD	17.100	1.713	3.653	10.885
Teacher c	Mean	34.13	4.80	7.13	78.60
n=15	SD	7.846	1.373	2.295	13.695
Teacher e	Mean	17.87	4.80	4.47	62.80
n=15	SD	7.376	1.568	2.100	11.233
Total	Mean	26.70	5.00	6.18	71.42
N=40	SD	12.708	1.536	2.890	13.769

There was no significant interaction between Time and Teacher (Time*Teacher) on any of the eight subtests, indicating that teacher-specific characteristics or the specific curriculum followed in addition to the BEARS intervention program did not influence these learners' performance on the ELA over the four month intervention period.

A significant effect for Time was observed on five subtests: Sounds-in-words: $F(1,37)=10.8$; $p<.01$; Rhyme Production: $F(1,37)=10.3$; $p<.01$; Letter Recognition: $F(1,37)=8.1$; $p<.01$; Word Definitions: $F(1,37)=19.9$; $p<.001$ as well as Narratives**:** $F(1,37)=17.9$; $p<.001$, showing that learners in all three experimental classrooms significantly improved on their mean scores over the four months. A substantial effect for Teacher was furthermore present on three subtests of the ELA. ANOVA and Bonerroni Multiple Comparison analysis results for these three subtests are summarized in Table 6.23.

Table 6.23 Significant differences in performance of ELLs in three experimental classrooms: (p<.05; p<.01**)*

ELA Subtest	F(2,37)	p	Post hoc results
Word Definitions	9.1	.001**	ELLs in classrooms of Teachers a and c performed significantly better than ELLs in classroom of Teacher e.
Narratives	4.3	.020*	ELLs in classroom of Teacher a performed significantly better than ELLs in classroom of Teacher e.
PPVT-IIIB	6.7	.003**	ELLs in classroom of Teacher c performed significantly better than ELLs in classroom of Teacher e.

While there was no substantial interaction between Teacher characteristics over time, the following observations were made with regards to performance in the three experimental classrooms and subsequently the possible effect of teacher characteristics and the school-curriculum followed in each individual classroom:

(i) Prior to implementation of the intervention program, ELLs in the classroom of Teacher e performed significantly worse than their ELL peers in the other experimental classrooms on measures of receptive and expressive language ability. While the classroom of Teacher e had the least number of learners (23), Teacher e had only 2 years of teaching experience (compared to the 16 and 11 years of Teachers a and c, respectively) and had Afrikaans as her L1 (as did Teacher a but not Teacher c). Teacher e also did not follow the Letterland program (as Teachers b, c and d did). It thus seems as if the combination of the teacher's L1, comparatively limited teaching experience and the lack of a structured literacy program could have influenced her learners' performance prior to the implementation of the BEARS program.

(ii) These differences were mirrored in the repeated measures ANOVA results, as could be seen in Table 6.23. When comparing mean scores over the four month intervention period, the class of Teacher e also performed poorer than their peers in the classroom of Teacher a on a third measure of oral language ability, namely Fictional Narratives. While Teacher a also did not follow the Letterland program, she had English as her L1 and 14 years more teaching experience than Teacher e. While an in-depth assessment of the language input provided by teachers fell outside the scope of this study, it might point towards an area that warrants further investigation, i.e. the influence of teachers' L1 on their ability to provide learners in their English–medium classrooms with an appropriate, rich language environment that is conducive to the development of emergent literacy skills.

Vukelich and Christie (2006:16) stress the importance of engaging children in rich conversations and exposing them to rare words that are not encountered in everyday speech. This however presupposes teachers' proficiency in the language of education and the ability to provide a context of reciprocal social interaction and to scaffold children's engagement in these interactions to facilitate linguistic responsiveness (Weitzman, Girolametto and Greenberg 2006:131). Although Teacher c also had English as her L2, she had more teaching experience and followed a structured phonics program to support her teaching, in contrast to Teacher e. Following on from this observation was the fact that none of the teachers in the experimental classrooms were proficient in languages other than English or Afrikaans. While all these classrooms followed submersion programs where English is the primary language of instruction, the teacher's ability to check and expand vocabulary and to encourage code-switching (Paul 2007:194) would have been largely affected by her (in)ability to converse in a child's L1.

(iii) Upon investigating the amount of time spent on literacy-related activities during an average school day, Teacher e spent on average 90 minutes, whereas Teachers a and c reported spending 30 minutes and 60 minutes, respectively. Teacher a, whose class was made of 92.3% ELLs, reported the availability of additional learner support[11] for ELLs three times a week, which might have accounted for the limited time spent on literacy-related activities during the daily curriculum. Teacher e, who had 78.3% ELLs in her classroom, reported that, apart from the 90 minutes per day dedicated to literacy work, she attempted to integrate literacy and language into her daily routines. Teacher e also reported that library books were typically sent home to parents to promote generalization of literacy skills. As mentioned previously, assessing the nature of teacher interaction was not within the scope of this study; however, in other studies quality of teacher interaction as opposed to quantity of exposure to English has been shown to be crucial in ELL outcomes (Jordaan 2008:98; Weitzman and Greenberg 2002:5), and therefore an analysis of teacher style of interaction could shed more light on the observed performance of learners in the classroom of Teacher e.

[11] This additional ELL support in School A involved three hours of additional small group work on the existing curriculum. This support was arranged and implemented by the school in response to the high percentage ELLs; however, it did not involve any alternative stimulation program

6.5.4. Qualitative teacher feedback

In addition to quantitative measures, qualitative feedback was requested from the three teachers in the experimental classrooms to inform any necessary changes to the BEARS program. The questionnaire and feedback form (Appendix F) were completed anonymously and consisted of both closed and open-ended questions.

Feedback was overwhelmingly positive, with responses such as Books were well chosen and easy to read. Children enjoyed being part of the activities. Activities were on their experience level. These remarks highlighted the positive aspects of the program but did not indicate how the program could have been improved. Two critical comments were made: Two teachers commented that time was a critical factor and recommended that two weeks should be spent on one book, while one teacher felt that this program should be introduced in the third term of Grade R, rather than the fourth term, to allow for consolidation of the acquired skills.

6.5. CHAPTER CONCLUSION

Results of the main study were reported in this chapter. These results were compared to those of other relevant studies and were discussed with regards to possible reasons and explanations for the observed outcomes. These results will be summarized and synthesized in Chapter 7, in order to answer the main research question: "What is the effect of an emergent literacy stimulation program in Grade R on the development of literacy of English Language learners in Grade 1?"

CHAPTER 7

CONCLUSIONS, CLINICAL IMPLICATIONS AND CRITICAL REFLECTIONS

7.1. INTRODUCTION

The main research question of this study was "What is the effect of an emergent literacy stimulation program in Grade R on the development of literacy of English Language learners in Grade 1". In order to answer this question, the results of the main study will be summarized in Table 7.1 (per secondary research question), and conclusions will be drawn on the clinical implications of these findings. The study will then be critically evaluated, and recommendations with regards to further research will be made.

Table 7.1 Summary and synthesis of the results for each of the research questions

What are the significant features regarding emergent literacy skills, found among English L1 learners and L2 English learners in Grade R, four months before entering Grade 1?
An assessment instrument was developed and used to test learners' performance in eight recognized emergent literacy skills. The performance of 66 participants, divided into two experimental groups and two control groups, is taken as indicative of the significant features of their emergent literacy skills. English L1 learners and ELLs in the control and intervention groups performed similarly on the following subtests of the Emergent Literacy Assessment (ELA) battery: Sounds-in-words, Rhyme Recognition, Letter Recognition and Concepts of Print. English L1 learners performed significantly better than their ELL peers in the experimental groups (Groups 3 and 4) on three language related subtests of the ELA: Word Definitions, Narrative Ability and the PPVT, confirming better receptive and expressive language skills. ELLs in the control group performed significantly better than their ELL peers in the two experimental groups on three subtests: Word Definitions, PPVT and Rhyme Production. This ELL control group even outperformed their L1 peers on the Rhyme Production subtest, highlighting the variability in emergent literacy abilities amongst ELLs in Grade R.

After implementation of the developed program, what measurable effects are registered upon entering Grade 1?
The only significant Time*Intervention effect was present for the measure of alphabetical knowledge where the two control groups (the English L1 learners in Group 1 and the ELLs in Group 2) performed significantly better on the Letter Recognition subtest over the four month period than did their ELL peers in the experimental groups. The developed BEARS program thus did not result in any significant intervention effect for the two experimental groups over the four month period. All participants significantly improved their performance on all the subtests over the four month period, except on two measures, namely Concepts about Print and the PPVT, indicating that both L1 and L2 learners had improved on six important emergent literacy measures regardless of their language proficiency or the characteristics of the respective intervention programs. Despite the dearth of intervention effect that was shown in the main study, the performance of learners in the control and experimental groups did differ significantly on all subtests post-intervention. The L1 control group performed significantly better than their ELL peers in the experimental groups on the Word Definitions and PPVT subtests, both measures of language ability. They also performed better than the ELLs in Group 3 with regards to Sounds-in-Words and they outperformed ELLs in Group 4 on Concepts about Print and Fictional Narrative subtests. The L1 learners thus performed significantly better than the L2 learners in the control groups on all the language-related subtests as well as on a subtest of phoneme awareness. However, L2 learners in the control group (Group 2) also outperformed their L2 peers in the intervention groups on several subtests upon entering Grade 1, namely Rhyme Recognition, Rhyme Production, Letter Recognition and the PPVT. ELLs in Group 2 also performed significantly better than ELLs in group 4 on the Concepts about Print and Word Definitions subtests upon entering Grade 1. This ELL control group performed similarly to their English L1 peers on seven subtests of the ELA and in fact even outperformed the L1 control group on a subtest of Rhyme production. When matching learners in the four groups according to their receptive language ability (PPVT) pre-intervention, there was still a significant intervention effect for the Letter

Recognition subtest, indicating that English L1 learners in Group 1 and ELLs in Group 2 performed better than the two experimental groups over the four month period. When controlling for receptive language abilities, English L1 learners did not perform any better than their L2 peers on any of the eight measures of emergent literacy, and upon entering Grade 1 there was no statistical significant difference between these groups in performance on any of the eight subtests (i.e. on post-intervention measures).

Does a comprehensive emergent literacy stimulation program improve ELLs' performance in comparison to ELLs who received a language-focused stimulation program?

No significant effect for Time*Intervention was found for experimental Groups 3 and 4 on any of the eight ELA subtests, indicating that focused stimulation regarding print awareness and oral language (conceptual literacy skills) did not result in any observed benefit for Group 3, whereas the additional stimulation of phonological awareness skills did not significantly enhance Group 4's performance on decoding tasks (i.e. Sounds-in-Words, rhyming-related tasks or alphabetic knowledge). While both groups have shown significant improvement in their performance on five subtests (Sounds-in-words, Rhyme Production, Letter Recognition, Word Definitions and Narratives), these improvements could probably not have been attributed to the different intervention programs that were followed in the respective classrooms, but rather to normal development over the four-month period.

Qualitative analysis of post-intervention results revealed that Group 3 performed better than Group 4 on subtests evaluating conceptual knowledge and oral language proficiency (Word Definitions, Concepts of Print, Narrative Ability and the PPVT), while Group 4 had higher means on the remaining subtests, which evaluated procedural literacy knowledge and decoding skills (Sounds-in-Words, Rhyme Recognition, Rhyme Production and Letter Recognition). These observed differences were not statistically significant, but might point towards a tendency that warrants further investigation.

Which independent variables influenced performance on the eight subtests?

All participants were from schools rated on the 5th quintile of the WCED, suggesting relatively similar school fees and socio-economic status (SES). As SES has however been shown to have a significant influence on children's development of both language and literacy skills (Bowey 1995; Duncan and Seymour 2000), the possible confounding effect of SES was

investigated in more detail and ELLs in Groups 2, 3, and 4 were divided into a Low and High SES group. While learners in the High SES group performed consistently better than their peers in the Low SES group, there was no significant interaction between Time and SES on any of the eight ELA subtests. There was however a substantial main effect for SES on three language-related subtests, namely Word Definitions, Fictional Narratives and the PPVT, confirming that language skills varied systematically as a function of SES, but SES did not have a significant influence on any of the subtests evaluating emerging decoding abilities.

In order to determine whether ELLs' L1 had any influence on their emergent literacy performance on the ELA, English L2 participants were divided into three groups according to their home language: isiXhosa (L2X), Afrikaans (L2A) and Other (L2O). There was no significant interaction between Time and Language on any of the eight ELA subtests, indicating that no language group performed significantly better than the other groups over the four-month period prior to entering Grade 1. When comparing L2X and L2A learners' abilities within one experimental group (Group 4), all participants improved significantly on five subtests: Sounds-in-words, Rhyme Production, Letter Recognition, Word Definitions and Fictional Narratives. L2A learners performed significantly better than their L2X peers with regards to Rhyme Production, Word Definitions, Fictional Narratives and the PPVT, which indicate the need to monitor L2X learners' language growth trajectory over the first years of formal education. There was however no significant difference in performance on the subtest assessing phoneme awareness, i.e. the Sound-in-words subtest, suggesting that learners' L1 did not have a substantial influence on their developmental awareness of the English phonological system.

Finally, learners' performance in the three experimental classrooms was analyzed to determine whether the characteristics of the three teachers who delivered the BEARS program (Teachers a, c and e) may have had any influence on emergent literacy outcomes as measured by the ELA battery. There was no significant interaction between Time*Teacher on any of the eight subtests, indicating that teacher-specific characteristics did not have a significant influence on learners' performance over the four month intervention period. There was however a significant Teacher effect on three language related subtests, namely Word Definitions, Fictional Narratives and the PPVT, with ELLs in the classroom of Teacher e performing significantly poorer than their ELL peers in the other experimental classrooms.

While several variables could have contributed to the performance of Teacher e's learners, the combination of this teacher's L1, her considerably shorter teaching experience and the high percentage of ELLs in her classroom (impacting on peer learning opportunities) needs further consideration.

7.2. CONCLUSIONS and CLINICAL IMPLICATIONS

The BEARS developmental literacy program was developed with a view to enhancing ELLs' emergent literacy skills. By employing evidence-based principles and focusing on particular skills where ELLs in the pilot study lagged behind their English L1 peers, the school-based program was thought to be comprehensive and well-researched. While ELLs in the two experimental groups did improve on several critical emergent literacy subskills over the four month period prior to entering Grade 1, these improvements could not be attributed to the supplemental BEARS program that was introduced in the respective classrooms. At first glance, these results may seem disappointing; however they serve to highlight several important issues with regards to service delivery and have significant implications for speech-language therapists and teachers working in the field of emergent literacy development in a multilingual classroom environment. These will be discussed below.

7.2.1. Serving the ELL population

As stated in previous chapters, the performance of the ELL control group (Group 2) highlighted the heterogeneity of the ELL population with regards to their emergent literacy abilities. While the purpose of the BEARS program was developmental in nature, aiming at providing a high-risk population with critical subskills to close the gap between them and their English L1 peers, it is clear that the growth trajectory of ELLs should be monitored very carefully over an extended period by means of culturally and linguistically valid assessment measures. It is also clear that second and third tier intervention (see Justice 2006b) should be provided in a timely and appropriate manner as soon as it becomes apparent that learners are not making sufficient progress. Hus (2001) stated that a vast number of research findings confirmed that in the population of

children with significant reading problems, there is a disproportionate representation of children who come from poor, racial or cultural minority[12] groups and are L1 speakers of languages other than English. While the present study indicated that ELL status in isolation does not necessarily result in delayed emergent literacy skills, the combination of being an ELL, coming from a disadvantaged background, being in a classroom with a high percentage of ELLs and having a teacher with limited experience with this population might have a compounded impact on these learners' emergent literacy skills, in particular their oral language skills.

While teacher experience is a variable that cannot necessarily be controlled in classrooms with high percentages of ELLs, purposeful training and support of teachers regarding emergent literacy skills in general and the particular problems faced by the English L2 in an English-medium classroom in particular is of critical importance. Limited training time with the BEARS program as well as a lack of monitoring of teacher motivation and implementation of the program could be brought as definite criticisms of the current study. Teachers' current knowledge and classroom experience with emergent literacy activities were taken into account in the development of the BEARS program (refer to Appendix C and Figure 4.15), not only to familiarize the researcher with the status quo in Grade R classrooms, but to establish common ground with teachers. In their Learning Language and Loving It program, Weitzman and Greenberg (2002) recommend a minimum of 15 hours of intense teacher training, but also regular and systematic feedback on teachers' abilities to stimulate language at appropriate levels in order to ensure optimal growth within each learner's zone of proximal development. While such intense training might not always be practical in view of time and financial constraints, extended time spent with teachers will be especially important in the continuous pursuit of marrying research and practice and ensuring that teachers remain informed and motivated regarding best practice.[13]

[12] Hus (2001) refers to racial minorities in the US and Canadian context, whereas the situation in the current study in South African English classrooms involves children from a racial majority who voluntarily choose to receive their education in English, their L2 or additional language.

[13] Factors like tight budgets, low wages, high staff turnover and poor staff morale have been shown to negatively affect the quality of early childhood settings (Weitzman and Greenberg, 2002). The researcher therefore acknowledges that any classroom-based program should be teacher-centered and take their unique teaching styles, experience and cultural and language backgrounds into account.

For ELLs with their observed variability in receptive and expressive language abilities, teachers' language use is even more important and thus warrants definite attention and focus as part of an emergent literacy intervention program. Dickenson and Sprague (2002) conclude that providing high-quality further professional development opportunities to teachers is an important avenue that deserves further exploration. They have found two aspects of teachers' conversations to be associated with end of Kindergarten (Grade R) assessment results, namely their use of rare and unfamiliar words and their ability to limit how much they said and hence to listen to what children were saying. Weitzman and Greenberg (2002) concurred with the importance of these two aspects which often warrant intensive training and specific guidance to teachers on how to adapt their language use to facilitate ELLs' receptive and expressive language development. The consultative role of the speech-language therapist in this regard needs to be more active and also pro-active with regards to early appropriate assessment and intervention for learners who lag behind their peers.

The cost-effectiveness of school-based and individual intervention also needs careful consideration, and therapists and teachers need to be more accountable for measuring outcomes and making changes to their intervention protocols when results are not time and cost-effective. Results of this study clearly indicate that a proportion of ELLs needs additional intervention to close the gap between themselves and their L1 peers, and that the literacy progress of these ELLs should be monitored on more than one dimension – i.e. on a conceptual as well as a decoding level.

7.2.2. Clinical implications for assessment and intervention

A comprehensive assessment battery, including relevant emergent literacy skills, but focusing on subskills with predictive value with regards to later reading abilities, is an imperative component of any intervention program. While the ELA was deemed appropriate for use in this study, based on the comprehensiveness and previous use of this instrument with South African participants, it is recommended that the phoneme awareness subtest be revised to provide more detail about this highly predictive aspect of early literacy (Nation and Hulme 1997) and that non-word stimuli be included to allow for the possible influence of ELLs' limited vocabulary on performance on this subtest.

In order to differentiate between ELLs with underlying reading disorders and those who merely experience difficulty with English as medium of instruction, assessment in learners' L1 is also essential, and development of new materials or appropriate translations of existing assessment material should thus be employed in future research. In this regard, see Van Dulm and Southwood (2008) and Southwood and Van Dulm (forthcoming), for the Afrikaans translation of the Diagnostic Evaluation of Language Variation, an existing American-developed culturally fair and dialect neutral assessment instrument (Seymour, Roeper and De Villiers 2005). Longitudinal monitoring of ELLs' developmental trajectories is also important and is a further critique of the current study. The effect of intervention needs to be measured with regards to reading skills, and it is therefore recommended that ELLs in both the control group and the experimental groups are followed-up at the end of Grade 1 to determine how well their emergent literacy abilities translated into decoding and comprehension of reading material. Furthermore, the effect of limited language skills (that were apparent in the two experimental groups) on reading comprehension needs to be determined while their decoding abilities (a relative strength when compared to those of their L1 peers) need to be evaluated at more complex and functional levels.

With regards to the development and implementation of emergent literacy intervention programs, the content, timing and predictive value of skills needs careful consideration. Although the BEARS program was based on evidence-based principles and incorporated oral language, print awareness and phonological awareness components, learners did not show any significant improvement in relation to two control groups who followed a commercially available phonics program. While ELL participants in the experimental groups showed significant improvement in several subskills over the four-month period, they did not close the gap between themselves and their L1 peers, nor between themselves and an ELL control group with age appropriate language skills. However, when matching participants with regards to receptive language pre-intervention, there was no significant difference in performance upon entering Grade 1, suggesting that the area of oral language needs to be re-considered in the development of emergent literacy programs.

While results that compare outcomes of the language-focused program and the comprehensive BEARS program were not conclusive and thus do not suggest that one

component should take preference over the other, it highlights the reciprocal relationship between oral language skills and decoding skills and raises the question whether oral language development should take preference in ELL emergent literacy programs? Learners in the experimental groups who were matched according to their receptive language abilities pre-intervention, compared well to their peers in the control groups upon entering Grade 1. While it is almost inevitable that ELLs will have a smaller English vocabulary than their English L1 peers, vocabulary is a very good predictor of later reading skills, and thus the limited vocabulary skills of ELLs, along with their limited syntactic and morphological skills, may well have implications for later literacy outcomes (Tabors 1997:60; Tabors and Snow 2002:175). The results of this study suggest that closing the gap in receptive vocabulary between ELLs and their English L1 peers might provide ELLs with a better platform to develop and consolidate other emergent literacy skills. The content of such a stimulation program however needs careful consideration, as the embedded approach that was employed in the BEARS program did not have any significant effect on the oral language skills of ELLs in Group 3. A more explicit approach towards semantic and syntactic language development within the literacy curriculum for ELLs should thus be explored and evaluated (Fey, Cleave, Long and Hughes 1993; Justice, Mashburn, Pence and Wiggins 2008).[14] In other words, what is often referred to as "general language stimulation" (which usually involves reading stories and teaching vocabulary based on certain semantic themes) might not suffice for ELLs. Rather, ELLs should be exposed to more specific scenarios (these could take the form of stories or act-out sequences) which will give them the opportunity to acquire certain syntactic structures and also vocabulary items other than nouns, verbs, adjectives and adverbs (i.e. to also acquire, for example, quantifiers and conjunctions).

7.3. CRITICAL REFLECTIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

The expanding body of research and literature on emergent literacy development continues to emphasize the critical importance of early literacy skills and encourages professionals to reflect on their current practices in order to translate current research

[14] A focused language development program which is classroom-based will be beneficial, not only to ELLs, but also other learners who are at risk for reading difficulties, e.g. learners from disadvantaged backgrounds or learners with physical impairments such as hearing impairment.

findings into effective classroom practice (Dickinson and Neuman 2006). While generalization of results in this study is limited by the specific geographical area and by the fact that only three of the eleven official languages in South Africa were truly accounted for (i.e. English, isiXhosa and Afrikaans), a sample that attempted to reflect the cultural and linguistic diversity of the ELL population could have compromised the depth of coverage. Thus, while external validity may be limited on grounds of geographical area and languages involved, the clearly defined methodology used in the study, as well as the construction of the assessment and evaluation materials, facilitate replication of this study in alternative contexts and with different language groups.

Retrospectively, a major shortcoming of the current study appears to be the lack of matched participants in the control and experimental groups. Intervening variables, e.g. teacher characteristics, duration of ELLs' exposure to English, the nature of classroom curricula and the percentage ELLs in the participating classrooms, were furthermore difficult to control. This probably contributed to the disparities in performance of participating groups pre-intervention. However, Clay (2001) aptly states that in order to initiate change at grassroots level where teachers have limited control over learners' prior experiences, research needs to take real-life variables into account. While better matching of participants in the control and experimental groups could have served to clarify the lack of intervention effects, the results did succeed in highlighting two important issues which should be useful in future research endeavors: Firstly, ELLs constitute a heterogeneous population with considerable variability in the language proficiency of individuals. Secondly, while it is not possible in a single research project to control for all independent variables, SES, teacher characteristics (such as his/her L1 and experience with teaching ELLs) and the percentage of ELLs in a classroom are important variables to consider when selecting participants in a school-based research study.

Within the South African context, it is imperative that teachers and speech-language therapists make a concerted effort to continuously evaluate and adapt their approaches to the facilitation of emergent literacy development for learners who are educated in their L2. While the BEARS program was an attempt to close the developmental gap between L1 and L2 learners, the dearth of significant impact measured after four months of intervention highlighted the following questions that warrant further investigation:

1. Which specific classroom or teacher characteristics facilitated literacy growth in the ELL control group and contributed to their age appropriate (compared to their L1 peers) literacy performance? While outside of the scope of the present study, this is an important question to answer in future research: If there are characteristics of the classroom or practices of the teacher in question that assisted the learners to develop better literacy-related skills than learners in the other classes, then such characteristics and practices need careful consideration in order to determine how one could incorporate them into a comprehensive literacy development program.

2. How should a teacher training program be adapted to ensure optimal facilitation of literacy-related skills in the classroom? How much time should be spent in pre-training, in-service training, monitoring of and feedback to teachers to ensure optimal results of such a program? While the collaboration between speech-language therapists and teachers is complicated by constraints such as organizational work structures, time tables and professional boundaries (Paul 2007: 413), this should not deter them from continuing to share research findings, knowledge and expertise in an attempt to improve the quality of the service rendered to the ELL population.

3. Will more specific and explicit language stimulation be more successful in developing ELLs' language skills than the embedded approach that was employed in the current study? What should such stimulation goals entail and how should results be measured to objectively estimate curriculum effects and provide conclusive evidence for the Department of Education with regards to effective intervention (Justice *et al*. 2008)? While support is found in the literature for a balanced approach to literacy intervention (Kaderavek and Justice 2004; Weaver 1998:11), the current results do suggest that a more focused approach with regards to language stimulation should be considered, albeit within a meaningful and enriching learning environment.

4. How well did the ELL control group's emergent literacy skills translate into successful decoding and comprehension of reading material one year post-intervention?

5. How did the observed delays in the oral language skills of ELLs in the two experimental groups (Groups 3 and 4) impact on their reading abilities one year post-intervention?

6. Which clinical markers should pre-empt teachers to refer ELLs for early literacy intervention? Although the current study focused on classroom-based preventative intervention measures, results also suggested that a one-size-fits-all approach should not be adopted with this heterogeneous population. While the BEARS program, as an early intervention program, aimed at minimizing the risk of future reading problems, speech-language therapists and teachers should also be sensitive to learners' individual needs and provide appropriate individual support and intervention when indicated. In this regard, the use of observational records to document individual progress and construct teacher support within a literacy processing approach should be further investigated (cf. Clay 2001).

7.4. CONCLUDING REMARKS

Poor literacy skills have been associated with poverty, unemployment and high learner drop-out rates (Chandler 2000 as cited in McGee and Richgels 2003:2). Furthermore, language ability at pre-school level continues to be related to later success in reading achievement (Snow, Burns and Griffin 1998:4), and apart from intrinsic factors such as language- or sensory impairments, additional variables (such as socio-economic status, teacher characteristics and the quality of language models in the school environment) all contribute to a child's risk profile regarding reading difficulties. As a large body of research shows that the prevalence of reading difficulties is more likely to be addressed and improved by prevention rather than remediation (Catts *et al.* 2001:38; Clay 1987:6; Justice 2006b:285) and that experiential and instructional deficits frequently contribute to the high incidence of reading disabilities, it is clear that pre-school emergent literacy programs need careful consideration.

In view of these findings of other researchers, a program was designed to improve the emergent literacy skills of learners for whom English is their language of education but not their home language. This program was implemented in three experimental English classrooms who fell into two groups, receiving a language-focused and comprehensive literacy program respectively. Results were compared with two control groups: English L1 learners and ELLs from a second classroom. While the BEARS program attempted to provide pre-school teachers with a balanced and comprehensive yet manageable way of bridging the emergent literacy gap between L1 learners and those for whom the medium

of instruction is their L2, participants in the experimental groups did not benefit significantly from this program and consequently entered Grade 1 with persisting delays in relation to their L1 peers. Even though the outcomes of the BEARS program were not favourable in terms of their specific aims, this study has made a contribution to the field of emergent literacy development, in that it has raised several questions regarding the content and effect of such stimulation programs. Some of these include:

i) How cost- and time efficient are classroom-based stimulation programs in the South African context,
ii) how effective is the consultation-based approach for speech-language therapists when introducing emergent literacy intervention,
iii) how should we monitor learner outcomes to ensure that the time and effort invested in intervention programs translate well into skilled readers and
iv) are Grade R programs a case of "too little, too late" i.e. should we rather invest our efforts in home-based parental support programs?

The results of this study call for researchers, therapists and educators to be more rigorous in their approach to early literacy assessment and intervention, more accountable in their objective measuring of outcomes and more flexible in making the necessary paradigm shifts when it becomes apparent that a particular approach is not providing optimal results. While there is still a paucity of scientific evidence for effective emergent literacy intervention programs for learners educated in their L2, Justice and Pence (2004:177) recommend that practitioners integrate existing evidence with theoretical, practical and personal knowledge and continue to do so in the best interest of the ELL population we serve. An early investment in the gift of literacy is not only the key to a country's future; it is the master-key to unlock a world of joy, knowledge and unlimited potential.

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APPENDIX A:

ADAPTED SOCIO-ECONOMIC QUESTIONNAIRE

DO YOU HAVE A TV/RADIO IN YOUR HOME?	**YES/NO**
DOES YOUR CHILD HAVE HIS/HER OWN BED TO SLEEP ON?	**YES/NO**
DOES YOUR FAMILY OWN A CAR?	**YES/NO**
ARE THERE MORE THAN 20 HARDCOVER BOOKS IN YOUR HOME?	**YES/NO**
HAS ONE OF THE CHILD'S PARENTS PASSED STANDARD 8/GRADE 10	**YES/NO**
IS ONE OF THE CHILD'S PARENTS EMPLOYED FULL TIME?	**YES/NO**

APPENDIX B-1:

EMERGENT LITERACY ASSESSMENT BATTERY – ORIGINAL USED IN PILOT STUDY

Sounds-in-Words

cat	ball	bag
bath	tie	boy
man	cow	milk
sheep	road	ring
fish	dog	foot

fan	bat	cat
car	fish	star
snake	cake	rain
keys	trees	leaf
wall	ball	bat

Rhyme Recognition

cat	hat	ring
moon	spoon	dog
cot	cap	tap
cone	cake	bone
sun	bib	gun
train	rain	rake
bat	coat	boat
clock	sun	sock
wall	ball	bird
duck	truck	cup

Rhyme Production

cat	hat
pet	wet
sun	gun
glad	mad
map	gap

Word definitions

Bird
Foot
Umbrella
Flower
Bicycle
Clock
Alphabet
Donkey
Diamond
Hat
Knife
Nail
Thief

Concepts about Print

1. Where is the front of the book?
2. Show me where there is something to read.
3. Show me where to start
4. Which way to go.
5. Return sweep to left.
6. Word by word matching.
7. First and last concept.
8. Bottom of the picture
9. Begin with I or turn book.
10. Line order altered.
11. Left page before right
12. One change in word order
13. One change in letter order
14. One change in letter order
15. Meaning of question mark
16. Meaning of full stop
17. Meaning of comma
18. Meaning of quotation marks
19. Locate p P, m M
20. Reversible words was, no
21. One letter: two letters
22. One word: two words
23. First and last letter of a word
24. Capital letter

APPENDIX B-2:
EMERGENT LITERACY ASSESSMENT BATTERY – ADAPTED USED IN MAIN STUDY

Sounds-in-Words

cat	ball	bag
bath	tie	boy
man	cow	milk
sheep	road	ring
fish	dog	foot
tie	bee	ten
sheep	shoe	door
dog	boat	duck
pan	sun	sock
cat	cake	chair

fan	bat	cat
car	fish	star
snake	cake	rain
keys	trees	leaf
wall	ball	bat
mop	tap	pen
jam	book	gum
hen	pan	cup
sun	bike	duck
soup	cap	bear

Rhyme Recognition

cat	hat	ring
moon	spoon	dog
cot	cap	tap
cone	door	bone
sun	bib	gun
train	rain	rake
bat	coat	boat
clock	sun	sock
wall	ball	bird
duck	truck	cup
pen	sun	hen
blue	shoe	clock
hat	bag	flag
sea	tree	spoon
bread	clown	crown

Rhyme Production

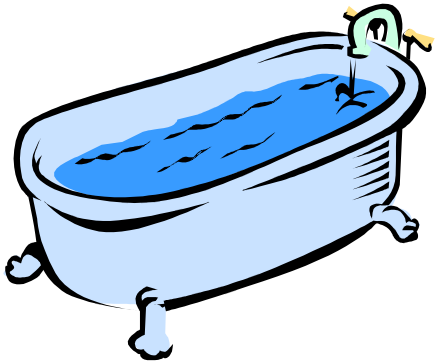
cat	hat
pet	wet
sun	gun
glad	mad
map	gap
man	can
red	bed
snake	rake
car	star
wall	mall

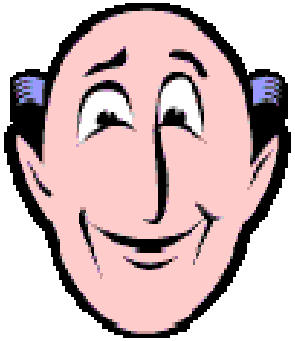
Word definitions

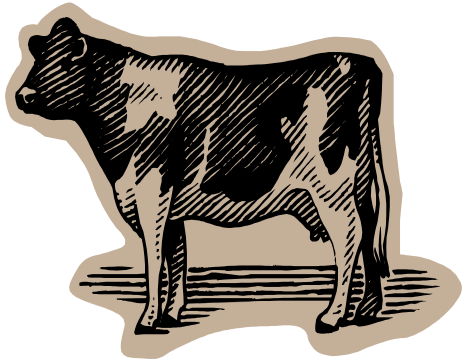
Bird
Foot
Umbrella
Flower
Bicycle
Clock
Alphabet
Donkey
Diamond
Hat
Knife
Nail
Thief

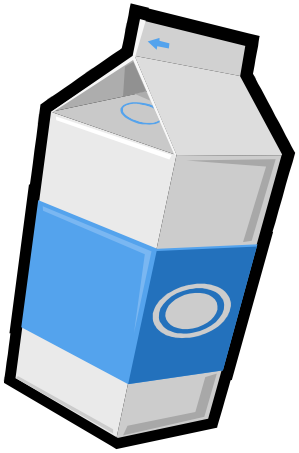
Concepts about Print

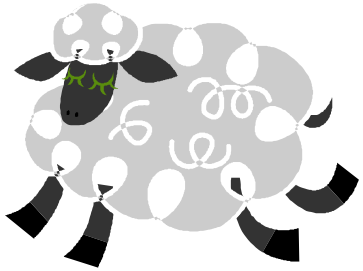
Where is the front of the book?
Show me where there is something to read.
Show me where to start
Show me which way to go.
(p 4) Show me two words that look the same
(p 8) What is wrong?
(p 14) Do any of these words look wrong?
(p 14) Do you know what this is? (question mark)
(p 16) Show me a /p/ /P/ or a /m/ /M/
(p 18) Can you read any of these words?

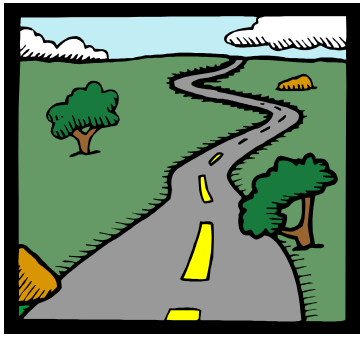


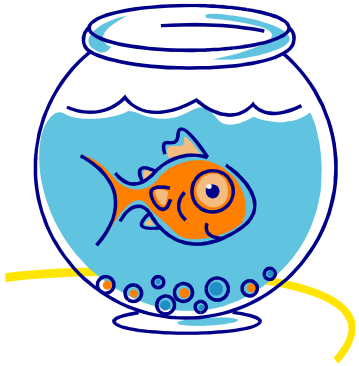


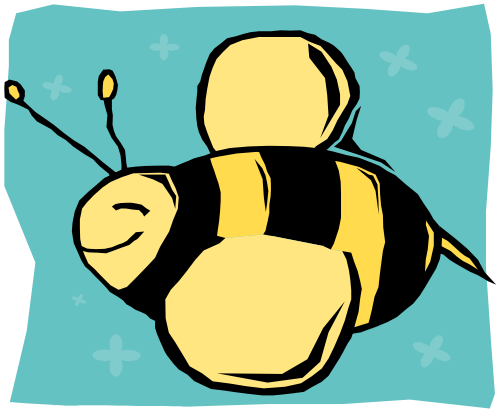












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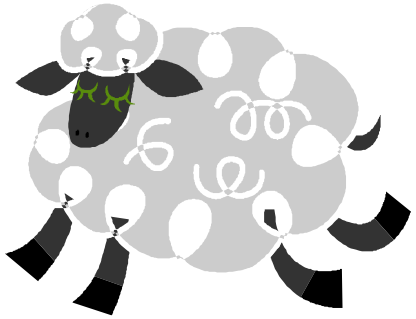

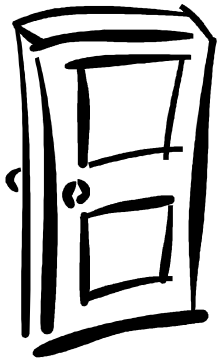

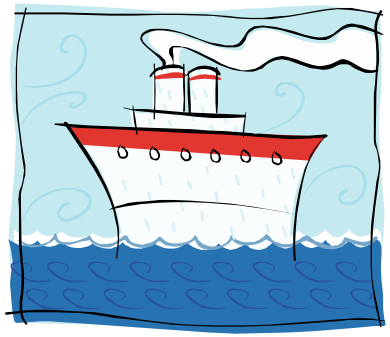

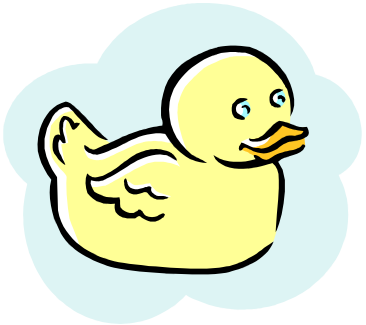

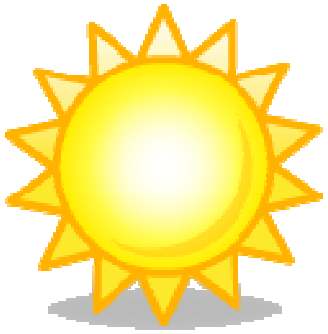

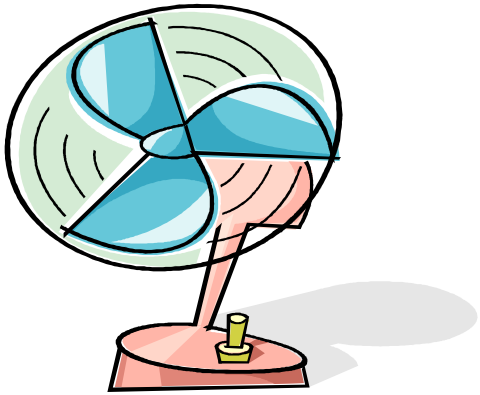

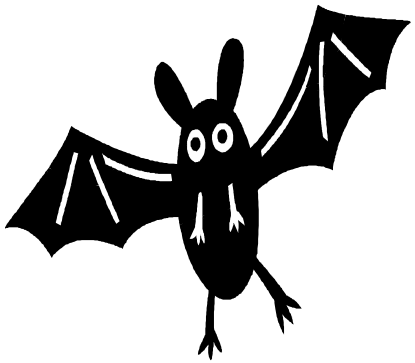

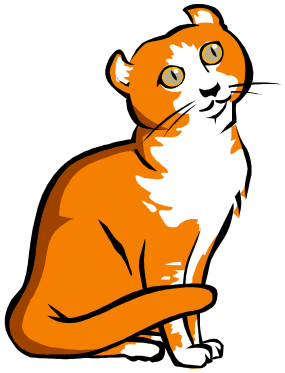

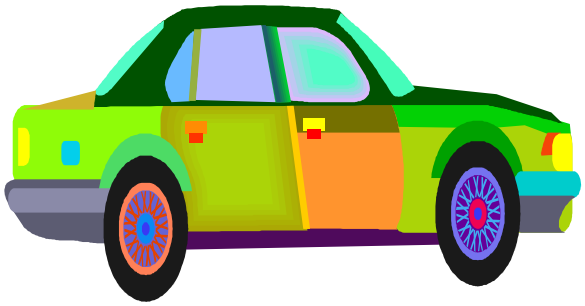

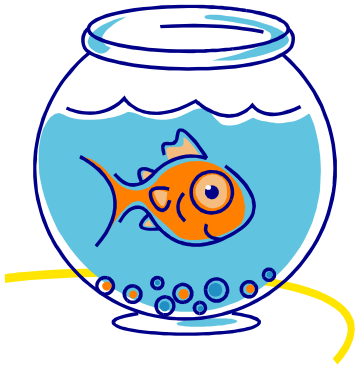

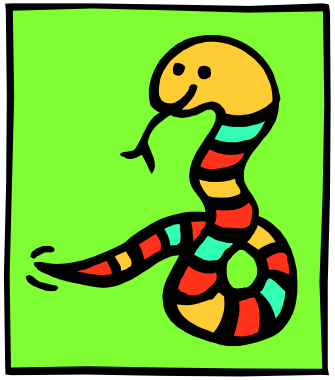

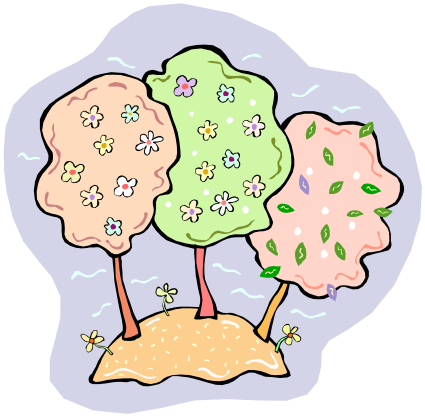

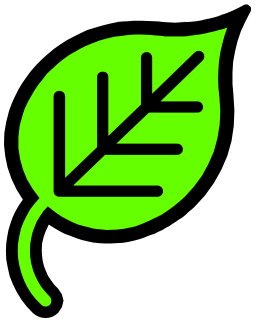

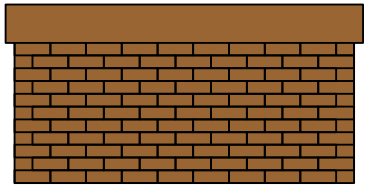

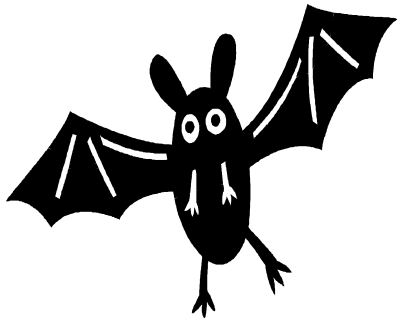

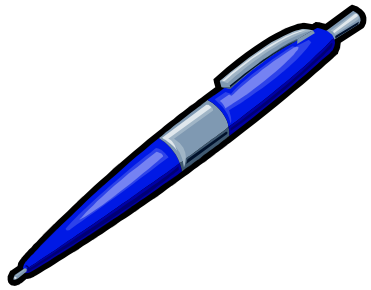

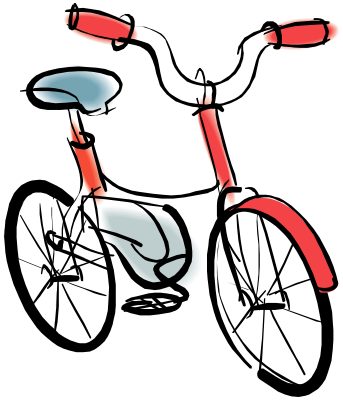

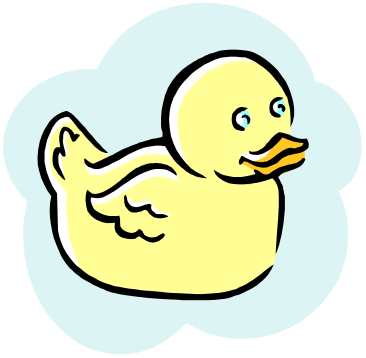

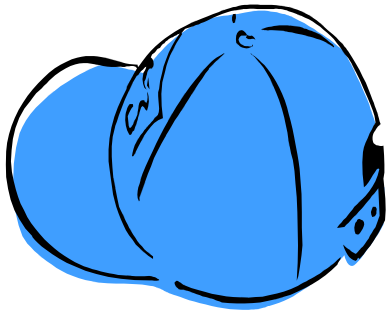

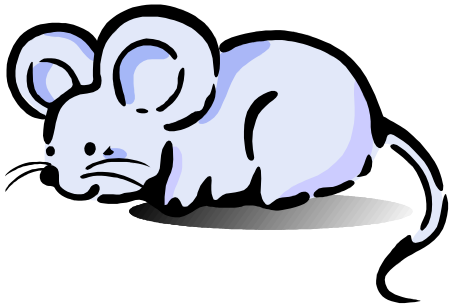

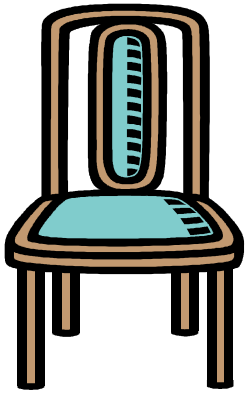

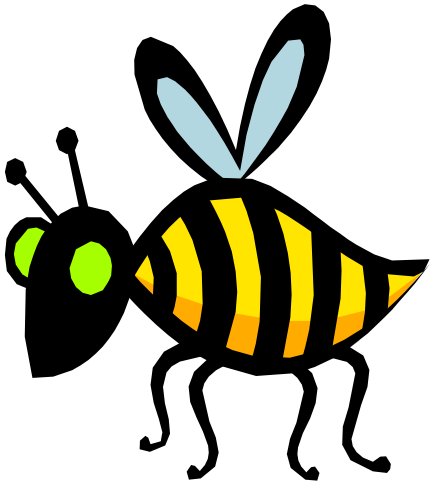

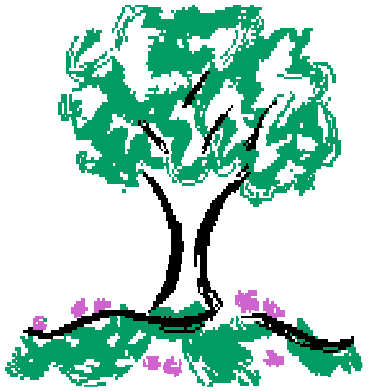

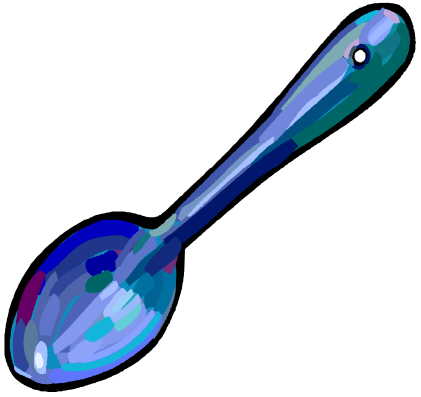

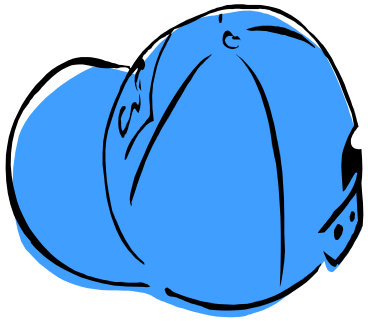

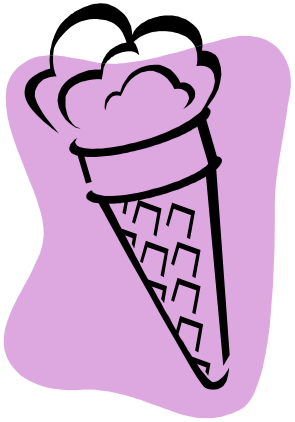

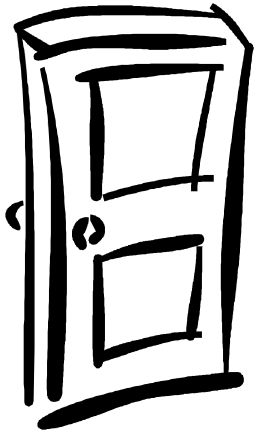

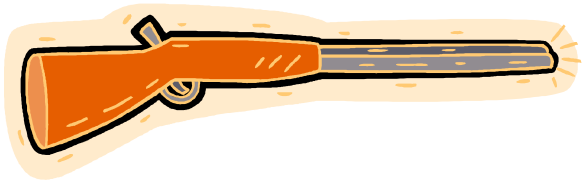

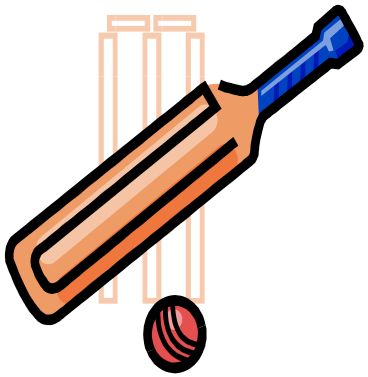

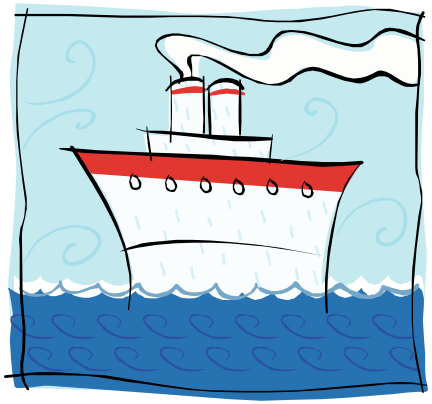

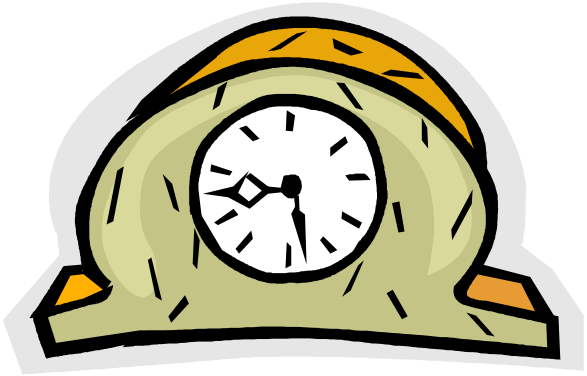

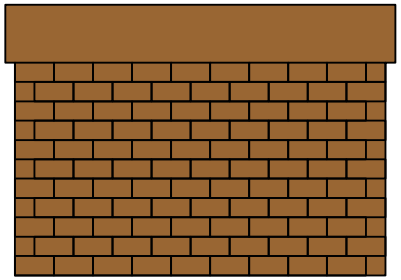

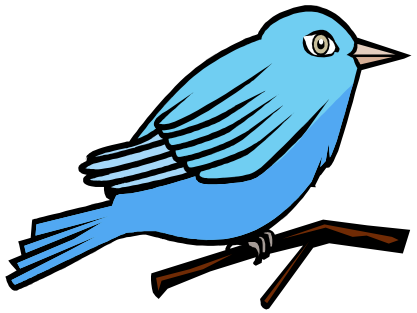

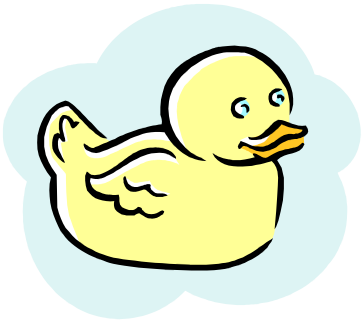

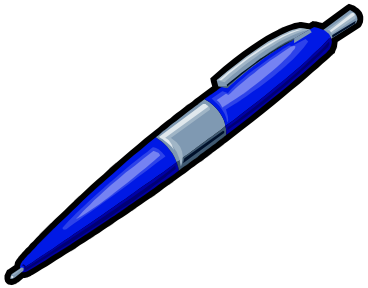

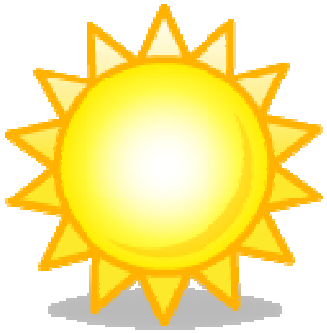

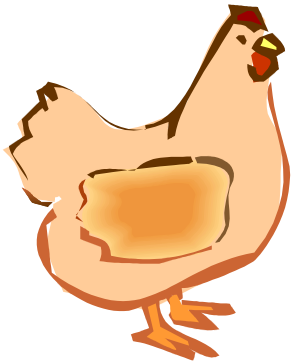

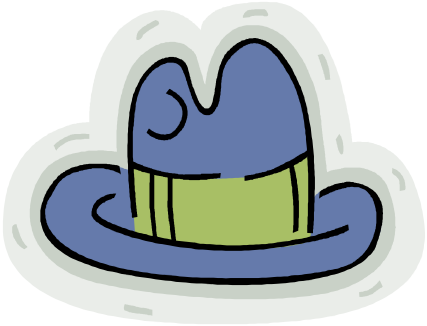

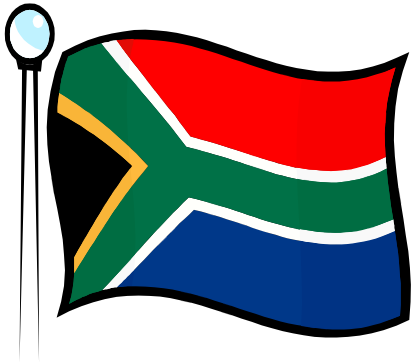

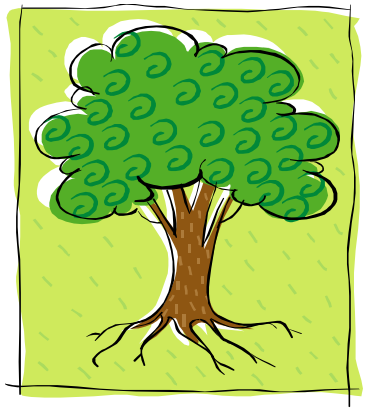

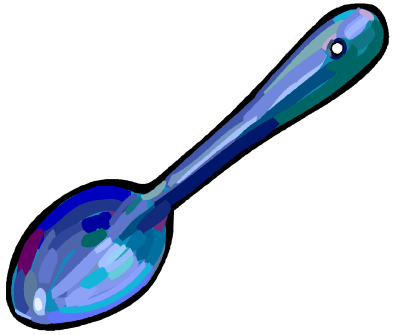

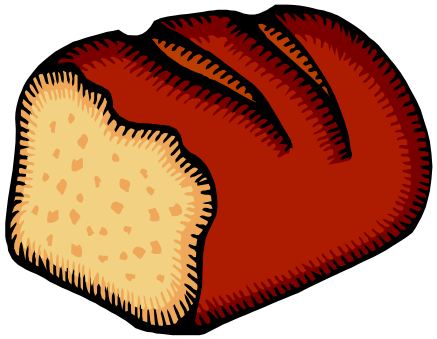

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APPENDIX C:

GRADE R TEACHER'S QUESTIONNAIRE

Teacher:_____
School:_____
Date: _____

1. Do you think there is a need for an additional stimulation program for English Additional Language learners (EAL) with regards to preparing them for literacy. Yes____ No____
2. How many children in your class do not have English as a first language?
   _____%_____
3. Do you give them any special attention/time with regards to literacy activities? Yes_____ No_____
4. Can you give me some examples of literacy activities that you include in your daily program?

_____
_____
_____
_____
_____

5. Do you use any special programs in your curriculum?

_____
_____

6. If a literacy program is developed for use in the classroom with EAL learners, what will motivate you to use it? What must the program involve?

_____
_____
_____

APPENDIX D:

BEARS STIMULATION PROGRAM

THE BEARS PROGRAM

Bridging Program for
ELLs to
Accelerate
Reading Development
Skills

PROGRAM FOR THE ACCELERATION OF EMERGENT LITERACY SKILLS OF ENGLISH LANGUAGE LEARNERS (ELLs)

Oral Language & Concepts about Print Component

Phonological Awareness Component

Teaching Tips for ELLs

WEEK 1

Goals:

1. **The learner will understand the following concepts about print:**
   a) **We read words, while we look at pictures.**
   b) **We read from left to right and top to bottom on the page.**
   c) **A story has a beginning, a middle and an end**
2. **The learner will be introduced to the structure of narratives by means of a scaffolding technique**
3. **The learner will have an opportunity to engage in story re-telling**
4. **New vocabulary items will be introduced**

5. **The learner will be exposed to rhyme in a deliberate and purposeful way. Rhyme detection and matching tasks will be introduced as with emphasis on onset-rime structures.**

DAY 1

Reading the first book:
This is the Bear and the Scary Night (Hayes, S).

Instructions:
Refer to the SSCAN – approach to ensure participation and interaction in the small group.
Small groups
Set up the appropriate activity (make sure you are familiar with the book)
Carefully observe each child's level of participation and interaction
Adapt your response to each child's needs
Now keep it going
(Weitzman & Greenberg 2002)

Show the learners the cover of the book. Follow with your finger as you read the title of the book. Say: "The name of the book is "This is the Bear and the Scary Night"
Introduce the author: Say:" Sarah Hayes is the author of this book. She wrote the story."

Introduce the illustrator: Say: "Helen Craig is the illustrator of this book. She drew the pictures."
As you turn to the first page, direct the learners' attention to the written words. Follow with your finger as you read the story.
Point out interesting aspects of the illustrations as you go along. Discuss the pictures if indicated.

CROWD refers to dialogic reading strategies which aim at expanding children's contributions and discussions about a book (van Kleeck, 2006).
Completion prompts
Recall prompts
Open-ended prompts
Wh-prompts
Distancing prompts

Use any two CROWD prompts:

Wh- question ("What is _____?" unfamiliar vocabulary)
Owl
Pond
Trombone
Sweater
Brave

Open ended question ("What is happening on this page?")
Distancing question to link to learner's experience ("Does your family have a _____?")
Prompt question to stimulate prediction ("What do you think will happen next?")

DAY 2

Bear-story (picture of a Bear with head, body and tail)

Show the learners the picture of the Big Bear. Explain: a story has a beginning, middle and an end.
Revise yesterday's story by asking: "What happened to the bear?" (Attach the head of the bear on the poster). "What happened then?" (Attach the body on the poster). "What happened in the end?" (Complete the picture by putting the hind legs on the bear).

Ask any two CROWD prompts about the story. Give two other learners in the group an opportunity to respond.

Recall prompts: ("Who gave the bear a terrible fright?")
("Who rescued the bear and took him home?")
Distancing prompts: ("Who of you have been alone before?")
Open-ended prompt: ("Who wants to tell me about his teddy bear?")

Rhyme detection:

Use pictures provided from book:

1. GROUP A
2. GROUP B
3. BEAR
4. CHAIR
5. PARK
6. DARK
7. NIGHT
8. LIGHT
9. MOON
10. SPOON

Teacher keeps all the pictures from Group A while giving each child in the group a picture from Group B.
Show the first picture "BEAR".
Say: "I have a BEAR. Who has something that sounds like BEAR?"
Say: "I have a PARK. Who has something that rhymes with PARK?"
Vary your instructions by using "sounds like" and "rhymes with" continuously.
Attach the rhyming pairs on a felt board/white board. Repeat the rhyming pairs by saying: "These words rhyme. They sound nearly the same: bear and chair. Park and dark etc.

DAY 3

Revision of new vocabulary items
Show picture of owl, pond and trombone and sweater (jersey). Ask: "Who can remember what this is?"
Expand on any response by:

- **Giving more information** ("Yes a trombone is a music instrument. It is similar to a trumpet…") or
- **Explaining** ("An owl has big eyes, because it needs to see well in the dark...") or
- **Talk about feelings and opinions** ("Sometimes we don't feel brave at all. Sometimes we feel scared.") or
- **Project into situations never experienced** ("If you are really cold, you need to put on a sweater or a jersey. Some children don't have any jerseys to wear…") or
- **Talk about the future**: ("Who would like to play a music instrument one day? I would like to play the…")

When communicating with ELL, it is important to:
SAY LESS – by using grammatically simple sentences

Ten cats have hats (Marzollo)

Read the following rhyme to the children:
A hat may be used as a prop to gain the children's attention. Put a funny hat on while reading the rhyme:

One mouse has a house, but I have a hat
Two bears have two chairs, but I have a hat
Three pigs have three wigs, but I have a hat
Four whales have four tails, but I have a hat
Five storks have five forks, but I have a hat
Six parrots have six carrots, but I have a hat
Seven bees have seven trees, but I have a hat
Eight dogs have eight frogs, but I have a hat
Nine foxes have nine boxes, but I have a hat
Ten cats have ten hats, and so do I!

Use the pictures provided:

11.	GROUP A	12.	GROUP B
13.	MOUSE	14.	HOUSE
15.	BEAR	16.	CHAIR
17.	PIG	18.	WIG
19.	WHALE	20.	TAIL
21.	STORK	22.	FORK
23.	PARROT	24.	CARROT
25.	BEE	26.	TREE
27.	DOG	28.	FROG
29.	FOX	30.	BOX
31.	CAT	32.	HAT

Teacher keeps all the pictures from Group A while giving each child in the group a picture from Group B.
Show the first picture "MOUSE".
Say: "I have a MOUSE. Who has a picture of something that sounds like MOUSE?"
Say: "I have a BEAR. Who has a picture of something that rhymes with BEAR?"
Vary your instructions by using "sounds like" and "rhymes with" continuously

Elimination activity (odd one out)

Place the rhyming cards in the "gift-bag" provided. Children must draw one card each.
Instruction: "Find someone with a picture that rhymes with your picture"
Now each child in the pair must hold up his/her card and say the word. Add another picture that doesn't rhyme with the pair. Ask the children to identify the one that doesn't rhyme.
Teacher: "Mouse – House – Tree"
Child: "Tree is the odd one out."
Teacher can reinforce by saying: "Mouse and house rhyme, but tree doesn't rhyme."

DAY 4

Take out the Book of the Week and the Big Bear poster once again. Ask three children to tell the story by referring to the "beginning", "middle" and "end" of the story. Leading questions like "What happened then?" and "What happened in the end" should be used. Complete the Big Bear poster as the children progress with the storyline.
The use of props to aid re-telling is appropriate at this stage. A teddy bear, picture of an owl and a blue jersey may be helpful.

Read "This is the Bear and the Scary Night" once more.
Instructions: Follow with your finger while you read in order to indicate the different words to the children. Whenever you come to a rhyming word (e.g. CHAIR), stop and wait for the children to provide the rhyming word:
"This is the boy who forgot his bear and left him behind in the park on a _____."
If they struggle to find the right answer, segment the word by providing the first letter and the rime:
ch / air.
s / oon
d / ark
fr / ight
fl / y
p / ond
l / ight
b /etter
th /ere
f / ell
b / ed

DAY 5

By using the strategy of Pretend- and Memorized reading, ask who is prepared to retell what they remember about the book. The child should look at the book's illustrations and pretend to read the story. ***"At this stage of the program, a more confident child may take the***

lead and he/she might only describe events in the pictures. Gradually as children acquire practice in pretend reading their attempts will sound more like written language."

Ask any two children in the group to come forward and recite any rhyme.

Repeat the rhyme: Ten cats have hats (Day 3) in the following way:
Teacher: "One mouse has a…(pause)"
Children: "…house"
Teacher: "…but I have a hat. Two bears have two…(pause)"
Children: "…chairs"
Teacher: "…but I have a hat. Three pigs have three…(pause)"
etc.

If they struggle to find the right answer, segment the word by providing the first letter and the rime:
h / ouse
ch / air
w /igs

Ask:
"Who can think of a word that sounds like chair?"
"Who can think of a word that rhymes with pig?"
"Who can think of a word that sounds like bee?"
"Who can think of a word that rhymes with hat?"

Prompt by segmenting the target word: /b/ ear or /w/ig. Reinforce the correct answer by taking the correct picture out of the bag.

WEEK 2

Goals:

1. **The following concepts about print will be reinforced:**
    a. **We read words, while we look at pictures.**
    b. **We read from left to right and top to bottom on the page.**
2. **The learner will have an opportunity to engage in story re-telling**
3. **New vocabulary items from the story will be introduced and reinforced**
4. **The learner will have an opportunity to define unfamiliar vocabulary items by using word definitions**

5. **The learner will be exposed to rhyme in a deliberate and purposeful way. Rhyme matching, elimination, judgment and production will be reinforced.**
6. **The learner will be further exposed to the first next levels of phonemic awareness: onset-rhyme level**
7. **The learner will be introduced to initial phonemes to facilitate awareness.**

DAY 1

Reading the second book: **Polar Bear Polar Bear What do you hear?** (Martin, B)

Instructions:
Refer to the SSCAN – approach i.e. observe each child's level of participation and interaction in the small group.
Show the learners the cover of the book. Follow with your finger as you read the title of the book. Say: "The name of the book is Polar Bear Polar Bear what do you hear?"
Introduce the author: Say:" Bill Martin is the author of this book. He wrote the story."
Introduce the illustrator: Say: "Eric Carle is the illustrator of this book. He drew the pictures."
As you turn to the first page, direct the learners' attention to the written words. Follow with your finger as you read the story.
Point out interesting aspects of the illustrations as you go along. Discuss the pictures if indicated. This book has particularly clear and simple pictures. The distinguishing colours of the animals may be pointed out.

Use any two CROWD prompts:
Wh- question
("What is _____?" unfamiliar vocabulary)
Flamingo
Walrus
Boa Constrictor
Peacock
Trumpeting
Whistling

Distancing prompt to link to learner's experience ("Who has seen a lion before?")
Completion prompts: After three pages you might wait for the children to complete the part "...in my ear".

DAY 2

By referring to Book 2, play the following game to stimulate expressive vocabulary:

Teacher: ***"I think of an animal. It lives in the zoo, but prefers very cold weather. It has a furry, white coat."*** When guessed correctly, open the picture of the polar bear and reinforce the distinguishing characteristics of this animal.

Teacher: ***"I think of an animal. It lives in the zoo. It has two big ears and a trunk."*** Make sure to engage different children in this activity. Repeat the process of disclosing the picture after the correct animal has been identified.

Teacher: ***"I think of an animal. It lives in the zoo. It is a bird with long legs and pink feathers."***

Teacher: ***"I think of an animal. It lives in the zoo. It is a big sea-creature with tusks."***

Teacher: ***"I think of an animal. It reminds me of a horse. It is white with black stripes."***

Teacher: ***"I think of an animal. It is a bird with beautiful and colourful feathers."***

When conversing with ELL, remember to STRESS important vocabulary to facilitate comprehension.

Use the gift bag provided. Place pictures of zoo-animals in the bag. Give three children the opportunity to draw a picture and describe the animal in a similar way by referring to its distinguished features.

Revise the previous activity, adding the rhyming concept. Generic examples will now be used to facilitate carry-over of the rhyming production skill:

Teacher: "I think of an animal. It lives in the house and has a soft fur coat and rhymes with hat"

Teacher: "I think of an animal. It lives in the sea and rhymes with dish."

Teacher: "I think of an animal. It's yellow and it quacks. It rhymes with truck."

Teacher: "I think of an animal. It lives on a farm, gives us milk and rhymes with now."

Teacher: "I think of an animal. It's green and it croaks. It rhymes with log."

Rhyming judgment: Listen to the names of these animals. Do they rhyme?

Cow – Sheep
Mouse – Louse
Duck – Fish
Cat – Bat
Frog – Dog
Frog – Fish

If a child judges Frog and Fish to rhyme (because of identifying the initial phonemes), you may explain that they don't rhyme, but their first sounds are the same: /f/ - like in Firefighter Fred.

DAY 3

Revision of new vocabulary items
Show pictures of polar bear, elephant, flamingo, walrus, zebra and peacock. Ask: "Who can remember what these animals are called?"
Expand on any response by:

- **Giving more information** ("Yes, a polar bear is a special kind of bear with a white fur.") or
- **Explaining** ("An elephant uses his trunk to pick leaves from the tall trees.") or
- **Talk about feelings and opinions** ("Do you think an elephant is dangerous? Why?") or
- **Project into situations never experienced** ("Why do you think we don't get polar bears in our game parks?" Where would we have to go to find polar bears?") or
- **Talk about the future** ("Who would like to go to the zoo?")

When discussing new vocabulary items with ELL, remember to speak a little SLOWER, to facilitate comprehension.

Read the following rhyme to the children:

We were going to the supermarket to see what we can buy,
There were peas, peas walking on their knees,
I promise that's no lie!
We were going to the supermarket to see what we can buy,
There were bananas, bananas, sleeping in pajamas
I promise that's no lie!
We were going to the supermarket to see what we can buy
There was bread, bread, jumping on my head
I promise that's no lie!
We were going to the supermarket to see what we can buy
There was corn, corn, blowing on a horn
I promise that's no lie
We were going to the supermarket to see what we can buy
There was tea, tea, playing with a bee
I promise that's no lie!
We were going to the supermarket to see what we can
There was soap, soap, hanging on a rope
I promise that's no lie!

Based on this rhyme, encourage them to make 'Rhyming chains" by producing more words that rhyme with "____". Nonsense words are also acceptable as the aim of this activity is rhyme production.

Teacher: "Let's think of more words that rhyme with peas.
Knees – keys – fleas – seize – breeze."
If they struggle to find the right answer, segment the word by providing the first letter and the rime:
kn/ ees
k / eys
fl/eas
s/ eize
br/ eeze

More words that rhyme with:

Bread – lead – fed – red – shed – wed
Corn – torn – worn – mourn – born
Tea – me – she – key – sea – fee
Soap – cope – mope – nope - grope

Rhyme judgment

Ask: "Which of these words does not rhyme with the other two? Which one is the odd one out?"
Peas-bees-flies
Bread-head-foot
Corn-flute- horn
Tea-bee-cow
Car-soap-rope

DAY 4

Read Book 2 one more time. Leave out more predictable phrases this time in order to encourage interaction.

Polar Bear, Polar Bear_____?
I hear a lion
roaring _____.

_____?
I hear a hippopotamus
snorting _____.

_____?
I hear a flamingo
fluting _____.

etc.

Give out pictures of objects from three different rhyming categories provided
man-pan-fan-can
Pig-big-wig-dig
Ten-pen-den-men
Mat-cat-bat-rat
Let each child name his or her picture. Now, hold up a picture from one of the categories asking: "Who has a word that rhymes with man?" repeat the process until you have four piles of rhyming words. Now, give four children in the group the opportunity to name the words in each pile.

DAY 5

By using the Guided Book Acting Technique, guide the group to improvise their own story (based on the week's vocabulary). Pictures of the wild animals may be used as props:

Teacher: "Today we are going to make up our own story. All of you must help me to write our story. One day I went to the zoo…"

How did you get there?
Who went with you?
Which animal did you see first?
What did the animal look like?
What did you feed the animal?
What did you see next?
Where did you have lunch?
What did you have in your picnic basket?
What time did you get home?
Were you tired when you got home?

Guide the children with these questions. In the end, use the pictures to re-tell the invented story. Involve individual children by asking them to elaborate or correct any information.

Use the pictures of the six animals in this week's book. Hold up the picture of the polar bear. Say: "*Its name starts with a /p/ for Peter Puppy. It is a_____*"
Here's another animal whose name starts with a /p/ (Hold up the picture of the peacock).
Polar bear and Peacock both begin with a /p/. Make sure to pronounce the /p/ short and with an audible puff of air. Write the target letter on the board or A4paper to encourage letter-sound recognition.

Now, repeat this procedure with the following animals:
Its name starts with an /ĕ/for Eddy.
Its name starts with a /f/ for Firefighter Fred.
His name is Walter the /w/
(with reference to characters from Letterland Phonics Program)

WEEK 3

Goals:

1. **The learner will understand the following concepts about print:**
   - **a. We read words, while we look at pictures.**
   - **b. We read from left to right and top to bottom on the page.**
   - **c. A story has a beginning, a middle and an end**
2. **The learner will have an opportunity to engage in story re-telling**
3. **New vocabulary items from the story will be introduced and reinforced**
4. **The learner will have an opportunity to define unfamiliar vocabulary items by using word definitions**

5. **The learner will be exposed to rhyme in a deliberate and purposeful way. Rhyme judgment and Rhyme production will be reinforced.**
6. **The learner will deliberately be introduced to the first two target phonemes: /s/and /m/ in initial word position. Phoneme detection, categorization and matching tasks will be used.**
7. **Letter-sound association of the target phonemes will be introduced**

DAY 1

Reading the third book: **We're Going on a Bear Hunt (Rosen, M)**

Instructions:
Refer to the SSCAN Approach i.e. observe each child's level of participation and interaction in the small group.

Show the learners the cover of the book. Follow with your finger as you read the title of the book. Say: "The name of the book is: We're going on a Bear Hunt."
Introduce the author: Say:" Michael Rosen is the author of this book. He wrote the story."
Introduce the illustrator: Say: "Helen Oxenbury is the illustrator of this book. She drew the pictures."
As you turn to the first page, direct the learners' attention to the written words. Follow with your finger as you read the story.

This book was selected for its potential with regards to sound awareness. By emphasizing the initial phonemes of the onomatopoeic phrases, you will draw attention to the different sounds eg. "**Sssswishy Sssswashy" "Ssssplash Ssssplosh"** and **"Sssquelch Ssssquerch".**
By using your voice in an animated way, you will add to the enjoyable tension of this storyline.

After completion of the story, ask any two CROWD questions:

Wh- question
("What is _____?" unfamiliar vocabulary)
Mud
Forest
Snowstorm
Cave
Narrow

Open-ended prompt to encourage learners to respond in their own words ("How would you feel inside a dark cave?')
Distancing prompt to link to learner's experience ("Who has been in any kind of storm before?")

DAY 2

Read Book 3 once again. This time make use of **Completion Prompts** while reading the story to ensure interaction from the group.
The predictable part: *"We can't go over it. We can't go under it. Oh no! We've got to go through it!"* can be used to engage the children. At first, only leave out the prepositions, but after three repetitions, you may expect the group to recite the entire paragraph. **Using gestures to support *over, under and through*, will aid comprehension of these prepositions.**

Revision of new vocabulary items
Ask: "Who can remember what (mud/forest/snowstorm/cave/narrow) is?"
Expand on any response by:

- **Giving more information** ("Yes, a forest is a place with lots of trees. We have a forest close by in Knysna") or
- **Explaining** ("If something is not narrow, it is wide. A road can be wide or narrow.") or

- **Talk about feelings and opinions** ("Why do you think the road to Cape Town must be wide and not narrow?") or
- **Project into situations never experienced** ("What would you need if you are going out into a snowstorm?") or
- **Talk about the future**: ("Who would like to visit the Knysna Forest?")

Read the following rhyme to the group:

We had two rabbits that were happy as can be (Vivlia Great Start p176)

We had two rabbits that were happy as can be
One day when we counted them, they added up to three
We had three rabbits that just ate more and more,
One day when we counted them, they added up to four
We had four rabbits that were all alive
One day when we counted them, they added up to five.
So dad made a cage of wire tied to sticks
And the next time that we counted them, they added up to six!

Use the cards with the numbers 2-6 printed on. You may give each child in the group a number.
Teacher: "I'm going to say a word, and we must decide if the word sounds like the number? Do they rhyme?"
The first child with number 2 stands up.
Say: "BLUE. Does blue sound like two?"
"BEE. Does bee rhyme with three?"
"MORE. Does more sound like four?"
"LIVE. Does live rhyme with five?"
"STICKS. Does sticks sound like six?"

After completing one set with rhyming words, you may introduce words that don't rhyme to emphasize the concept e.g.
"BAT. Does bat rhyme with three?"
"CAR. Does car sound like five?"

Collect the five numbers and reinforce this task by playing the following game:

"I have a number that sounds like ME." If they guess 3 correctly, you may turn the card around.
"I have a number that rhymes with HIVE."
"I have a number that rhymes with CLUE."
"I have a number that rhymes with DOOR."
"I have a number that rhymes with FIX."

DAY 3

By using the Big Bear puzzle and using Recall prompts as scaffolding, ask the children to participate in re-telling the story e.g.
"Who can remember where the family went?
"Where did they come to first?"
"And then?"
"Who did they find in the cave?"
"What did they do in the end?"

By completing the Big Bear puzzle as the story progresses, you reinforce the concept of a story-structure.

Onset-rhyming skills:

Teacher: "Guess which word I am saying."
No pictures are provided at this stage in order to remove some of the "visual scaffolding" and encourage carry-over of skills. Ensure that you make an audible pause between the first phoneme and the rest of the word (rime).

/s/ un
/s/ aw
/l/ aw
/m/ at
/c/ at
/s/ at
/f/ at
/m/ op
/p/ op
/c/ op

Now, give each child in the group a "Sound Segmentation puzzle". By segmenting the onset and rhyme, give each child the opportunity to build his/her own word. By pointing to the grapheme, you will enhance the sound-letter association.
/s/ aw
/t/ ie
/b/ ow
/b/ ee
/a/ xe
/e/ gg

DAY 4

By using the strategy of Guided Book Acting, the vocabulary in the story will be reinforced.
Teacher: "Remember our story about the Bear Hunt? Today we are going to pretend to go on a bear hunt."

"First we go through the long, wavy grass" (by using animated arm movements, pretend to walk through the grassland)
"Now we have to go through a deep cold river" (you may ask the children to remove their shoes and socks and "splash" through the water)
"Now we have to go through thick oozy mud" etc.

By dramatizing a story, you help the learners recall the major events in sequence and furthermore serve to reiterate vocabulary items.

Phoneme Detection and Categorization

Teacher: "Remember the sounds we've made when we went on the Bear Hunt?"
"Ssswish"
"Sswash"
"Sssplash"
"Sssquelch"

Do you hear the sound at the beginning? It's a /S/. (At this stage you may draw an analogy with the character from your classroom-based phonics program e.g. "Sammy Snake" (Letterland))

Let's think of more words that start with a /S/
(When a sound is presented between slanted lines / /, you should use the letter sound and not the letter name.)

Sun
Six
Soup
Snake
Sock

Give each child a picture of the above target words to colour in.
Teacher: "Now let's put all the /s/-pictures in the bag" Each child needs to say his/her word before putting the picture in the gift-bag.

DAY 5

By using an adapted version of the Story Playing Technique, guide the group to improvise their own story. One or more children are invited to invent their own story, based on the Bear Hunt plot. The teacher writes the story down as it progresses. You may guide the story line by asking questions, making comments or suggesting elaborations. Finally re-read the invented story in a sequenced and logical way.

One day I went on a lion hunt with my dad…

Guiding questions may include:
"Who went along?"
"Where did you go?"

"Did you have to climb up a tree?"
"Did you have to swim through a river?"
"Did you have to hide in the long grass?"

Phoneme Detection and Categorization

Teacher: "Remember our special sound of yesterday? Today we are going to listen to the "yummy" sound /m/ (You may also refer to the character in your classroom-based phonics program e.g. "Munching Mike".
Let's think of some words that start with a /M/

As you take out the pictures, say the word by prolonging the /m/ at the beginning:
Mat
Milk
Mouse
Moon
Man

Give each child a picture of the above target words to colour in.
Teacher: "Now let's put all the /m/-pictures in the bag" Each child needs to say the word before putting the picture in the gift bag.

WEEK 4

Goals:

1. **The learner will understand the following concepts about print:**
   a. **We read words, while we look at pictures.**
   b. **We read from left to right and top to bottom on the page.**
   c. **A story has a beginning, middle and an end**
2. **The learner will have an opportunity to engage in story re-telling**
3. **New vocabulary items from the story will be introduced and reinforced**
4. **The learner will have an opportunity to define unfamiliar vocabulary items by using word definitions**

5. **The learner will explore rhyme in novel contexts and have the opportunity to produce new rhyming words.**
6. **The learner will recognize and categorize words according to the initial phoneme /s/ or /m/.**
7. **The learner will be introduced to the following two target phonemes: /æ / and /t/.**
8. **Letter-sound association of the target phonemes will be introduced**

DAY 1

Reading the fourth book: **The Gruffalo (Donaldson, J).**
Instructions:
Refer to the SSCAN Approach i.e. observe each child's level of participation and interaction in the small group.
Show the learners the cover of the book. Follow with your finger as you read the title of the book. Say: "The name of this weeks' book is: "The Gruffalo"
Introduce the author: Say:" Julia Donaldson the author of this book. She wrote the story."
Introduce the illustrator: Say: "Axel Scheffler is the illustrator of this book. He drew the pictures."
As you turn to the first page, direct the learners' attention to the written words. Follow with your finger as you read the story.

This book was selected for its beautiful illustrations, clever storyline and rich language.
By using your voice in an animated way, you will add to the enjoyable tension of this storyline. As the book involves several unfamiliar vocabulary items, please ensure to speak slowly, emphasizing the important words.

After completion of the story, ask any two CROWD questions:

Wh- question
("What is _____?" unfamiliar vocabulary)

Wood
Tusks
Knobbly
Jaw
Poisonous
Rumble

Open-ended prompt to encourage learners to respond in their own words ("Why do you think the mouse was scared of the Gruffalo?")
Distancing prompt to link to learner's experience ("Why would you be scared of a gruffalo?")

DAY 2

Read Book 4 once again. This time make use of **Completion-** and **Recall Prompts** while reading the story to ensure interaction and participation from the group.
Pause before getting to the predictable part: *"Where are you going to, little brown mouse?"* to give the group the opportunity to respond. Before turning the page ask: "Who did the mouse meet next?" Before turning the page to see the gruffalo, remind them of his features by pointing to all the relevant body parts: "Remember his terrible claws? And his terrible jaws! What colour were his eyes? Yes! Orange. And his tongue?" etc.
Revision of new vocabulary items

Ask: "Who can remember what (a wood, tusks, knobbly, a jaw, poisonous and rumble) is?

Expand on any response by:

- **Giving more information** ("Yes, a wood is another word for a forest. A place with lots of trees.")
- **Explaining** ("Something that is poisonous is very dangerous. We have to be careful of poisonous snakes or spiders."
- **Talk about feelings and opinions** ("Have you ever been so hungry that you've heard your tummy rumble?")
- **Project into situations never experienced** ("What would you do if you saw a gruffalo in a wood?")
- **Talk about the future**: ("My tummy is rumbling. I am hungry. I would like to eat…")

Rhyme Production:

For the following activity, use the pictures in this week's book "The Gruffalo": **fox, mouse, snake and nut**
Teacher: "Guess what I am saying…"
F / ox
M / ouse
Sn / ake
N / ut

Make sure to say the initial phoneme and leave a pause before saying the rime. If you get a correct response, turn to the picture in the book to reinforce the correct response saying "It's a **fox.**"

Teacher: "Now let's play some rhyme-tennis. I am going to say a word and you have to think of another word that rhymes with:
Nut – cut – rut – but – shut
Fox – box – socks – rocks – locks
Mouse – house – louse – grouse – spouse
Snake – lake – rake – fake – take – shake – make

You may facilitate rhyme production by prompting the children with an initial phoneme and waiting for them to produce the rime and segment the word. If you find the children to be confident in producing rhyming words, this game may be played with a real tennis ball. While saying a word you throw/roll the ball towards a child. The child who catches the ball has to produce a rhyming word and then throw the ball to the next child. This should be a fun activity and not create any tension or anxiety.

DAY 3

In the following activity, the teacher will use **recall prompts** to guide the children in preparing a prop for a **book acting** activity. The aim is to reinforce the vocabulary in the book within a scaffolded social-interactive context.
Start with an open-ended question:
Teacher: "Who can remember what the Gruffalo looked like?"
Progress with more direct questions if you don't get the desired responses:
Teacher: "What did his knees look like?" "What did he have at the end of his nose?" "Which colour were his eyes?"

After discussing the Gruffalo's appearance, provide each child in the group with a copy of the "Gruffalo Mask" to colour in and complete.

Phoneme Categorisation
For the next activity, use the envelopes provided with the /s/ and /m/ letters depicted on them. Shuffle the /s/ and /m/ picture cards and hold the first one up:
Sun
Teacher: "I have two envelopes- one for the words beginning with /s/ and the other one for words beginning with /m/. Where do you think we should put **sun?**
If the children struggle with this instruction, provide the phoneme and the rime separately and emphasize the phoneme by prolonging it slightly:
Let's say /sss/un.
Repeat this by randomly taking from the remaining 9 picture cards:
Six
Soup
Snake
Sock
Mat
Milk
Mouse
Moon
Man

Whose name starts with a /s/ or a/m/?
If no one's name starts with these target phonemes, you may give the group a few examples and give them the opportunity to think about a family member or friend whose name starts with any of these letters:
Sarah, Sally, Sam or Simon
Mary, Maria, Mike or Mohammed

DAY 4

Retell the story of The Gruffalo today while the children will use their masks pretending to be the gruffalo by chiming in at appropriate times.
"My favourite food!"

"I hear a hiss in the leaves ahead"
"Amazing!"
"I hear a hoot in the trees ahead"
"Astounding!"
"I can hear feet on the path ahead"
"Gruffalo crumble!"

Talk about different children's favourite food. By using **a distancing prompt** speculate about what "Gruffalo crumble" might be. Tell the children that you have the special recipe for "Gruffalo crumble" and that you will tell them all about that tomorrow.

Phoneme Detection and Categorization
Teacher: "I have two new sounds today. Let's see if you can find out which sounds these words begin with?"
Take out the target pictures for the /a/ and /t/ phonemes and shuffle the pictures.

Apple
Ant
Ambulance
Axe
Toe
Two
Tap
Tiger
Telephone

Use the two envelopes with the letter names depicted on them. Show the learners: "This letter says /a/ and this one is /t/. Now let's see in which envelope are we going to put **apple?**"

DAY 5

Give each learner a sheet with the "Gruffalo Crumble Recipe" as well as the pictures of the ingredients.
Teacher: "Gruffalo Crumble is very healthy. Who knows what healthy means?"
"Gruffalo Crumble is healthy because it has lots of vegetables in. Who can name some of the vegetables on your recipe?"

Spend time talking about the ingredients especially **leeks, walnuts and parsley** which may be unfamiliar. Then read the recipe while the learners need to find the ingredients on their list of pictures. Make sure to follow with your finger as you read the recipe.

Take out the envelopes with the /a/ and /t/ picture cards.
Teacher: "Yesterday, we've put pictures in here of words beginning with /a/. Let's see which ones we've put in." Take out the four pictures saying each word as you take them out.
Now let's see which words begin with the /t/ sound.

Reminder: The /t/ sound has to be audible, but do not use your voice when saying the sound as this may cause confusion with the voiced /d/. Listen to the sound as it occurs at the end of a word e.g. /s/ /i/ /t/ and do not add an /uh/ sound or 'schwah' to the end of the /t/.

Take out the /s/ and /m/ picture cards of last week and add them to this week's cards. You should have 19 picture cards. Divide the picture cards amongst the children making sure that each child has pictures of at least two different phonemes.
Hold up the /s/ envelope pointing to the grapheme on the outside:
Teacher: "Who has words beginning with /s/ to put in this envelope?"
Each child has to name his/her picture before putting it in the envelope.
Repeat this with each target sound, making sure the children hear the sound and see the grapheme on the outside of the envelope.

WEEK 5

Goals:

1. **The learner will understand the following concepts about print:**
   - **We read words, while we look at pictures.**
   - **We read from left to right and top to bottom on the page.**
   - **A story has a beginning, middle and an end**
2. **The learner will have an opportunity to engage in story re-telling**
3. **New vocabulary items from the story will be introduced and reinforced**
4. **The learner will have an opportunity to define unfamiliar vocabulary items by using word definitions**

5. **The learner will have the opportunity to experiment with rhyming and alliteration in a playful way to consolidate these skills.**
6. **Matching and Isolation of familiar phonemes will be targeted**
7. **The learner will be introduced to two new target phonemes: /p/ and /e/ in initial word position.**

DAY 1

Reading the fifth book: **Tikki Tikki Tembo (Mosel, A)**

Instructions:
Refer to the SSCAN Approach i.e. observe each child's level of participation and interaction in the small group.
Show the learners the cover of the book. Follow with your finger as you read the title of the book. Say: "The name of this weeks' book is: "Tikki Tikki Tembo"
Introduce the author: Say: "Arlene Mosel the author of this book. She wrote the story."
Introduce the illustrator: Say: "Blair Lent is the illustrator of this book. He drew the pictures."

As you turn to the first page, direct the learners' attention to the written words. Follow with your finger as you read the story.

This book was selected for its potential for phonological awareness activities.

DAY 2

As this weeks' book is lengthy, it may be impractical to re-read the whole book. You may make use of **Recall prompts** to facilitate memory of the storyline e.g.
"Can you remember the boy's name?"
"Can you remember what happened to Tikki Tikki Tembo?"
"Who rescued Tikki Tikki Tembo?"
By using **Wh-prompts,** define unfamiliar vocabulary to the children:

"What is _____?

Well
Ladder
Bottom
Float
Precious Pearl

By using **Distancing prompts** ask children about their names. How many names do they have? Who were they named after? Does anyone else in their family have the same name? You may also explain that children from different countries have different names – e.g. Chinese (**Lin, Wang**) Italian (**Rinaldo, Isabella)**, German (**Gretchen, Dieter)** and French (**Pierre, Michelle)**.
Ask the children to each bring a photograph of someone in their family along tomorrow. (Please ensure having a few photographs available for children unable to bring their own.)

Syllable segmentation and blending
The following activity aims to introduce the children to segmentation and blending skills on a syllabic level in order to ensure progress to the next level of segmenting and blending of phonemes. By using the SSCAN Approach, try to establish which learners require more practice at this level and aim to give them more opportunities for practicing this skill.

Teacher: "Today we are going to listen for long and short names. Let's listen how many parts you hear in each of these children's names." Clap the syllables and indicate on your number cards how many syllables were present.
Stephan
Thabo
Maria
Matt
Pete
Peter
Patricia

Bongani
Sarah
Bulelani
Don
Fundiswa
Tikki Tikki Tembo

Repeat this activity by using the names of the children in the group.

DAY 3

Give each child in the group a photocopy of the "Who is this?" pictures.
Read the names of each of the children in the pictures:
Miko, Tonya, Mary Ellen, Jenny, Kathy, Maria and Abby
Todd, Jerome, Kevin, Alan, Jude, Sam and Matt

Teacher:
"Abby has freckles on her cheeks. She has short hair. Where is Abby?"
"Jerome has dark, curly hair. Point to Jerome."
"Mary Ellen has long blonde hair. She has two big buttons on her dress. Where is Mary Ellen?"
"Sam has straight, black hair. There is a soccer ball on his shirt. Find Sam."
"Miko has straight, black hair. She is wearing glasses. Find Miko."
"Kevin has blonde hair. There are three buttons on his shirt. Where is Kevin?"
"Maria has pretty long braids. Where is Maria?"
"Matt has freckles. He has straight blonde hair. Where is Matt?"

Now, in order to facilitate generalization of this expressive language skill, let each child describe the person in their photograph and tell the group what the person's name is.

(Activity from "*Talking in Sentences*")

Phoneme Matching and Isolation

Use the same picture of the different children.
Teacher: "Let's find all the children whose names start with:
/S/: Sam
/M/: Miko, Mary Ellen, Maria, Matt
/A/: Abby, Alan
/T/: Tonya, Todd

Now, give each child in the group the opportunity to isolate the first sound in their own names e.g. "Robert, what sound does your name start with?"

If a child struggles with this task, you may either give an auditory prompt by prolonging the initial sound "Rrrrobert", rephrase your instruction "What is the first sound in your name?" or write down the name while emphasizing the initial sound.

DAY 4

Give one or two children in the group the opportunity to re-tell the story of Tikki Tikki Tembo. The pictures in the book may be used to support their memory and the order of events.

Revision of new vocabulary items

Ask: "Who can remember what (**a well, ladder, the bottom, float and a precious pearl** is?"

Expand on any response by:

- **Giving more information** ("Yes, we get all kinds of precious stones. A diamond is precious, an emerald is precious etc.")
- **Explaining** ("Something will float when it is light enough. A feather will float on the water, but a rock will sink to the bottom, because it is too heavy.")
- **Talk about feelings and opinions** ("Do you have anything that is precious to you? How would you feel if someone takes that from you?")

Phoneme Detection

Teacher: "I have two new sounds today. Let's see if you can find out what they are? I am going to say five words that begin with the same sound. Guess what the mystery sound is:"

Pen
Pan
Pig
Pie
Peacock

If they are able to identify the /p/ as the initial phoneme, take out the five pictures and repeat the words. By pointing to the graphemes under the picture, sound-letter awareness will be stimulated.

Teacher: "Try to guess this mystery sound:"

Egg
Elephant
Edge

You may associate the letter with a familiar example from your classroom phonics program e.g. Eddy Elephant.

DAY 5

Defining the key concepts of a vocabulary item is an important skill. This activity aims at facilitating the skill of word definition.

Teacher: "Who can remember what a **well** is?"
Turn to the picture in the book where Chang falls down the well. Talk about:

- What a well looks like

- What is the purpose of a well
- What do we need to get water from a well
- Who has seen a well before

Repeat this procedure with **ladder.** Turn to the picture of the old man and his ladder.

Phoneme Categorisation and Matching
Take out all the pictures of the target phonemes: /s/ /m/ /a/ /t/ /p/ and /e/. Divide them amongst the group. Take out the first envelope with the letter /s/ on.
Teacher: "Who has a picture of something beginning with /s/?"
The child has to say the word out loud before placing the picture in the envelope.
Repeat with each envelope.
Now, with the envelope closed ask: "Who can remember the pictures inside the /s/ envelope?" Can anyone think of another word beginning with /s/ that's not in here?"

Hold up the sign-in sheet with the children's names on. (Example provided).
Teacher: "Whose name begins with a /S/?" If a child correctly identifies his/her name on the sign-in sheet, he/she may "sign in" in the right hand column. Repeat with all the children in the group.

WEEK 6

Goals:

1. The learner will understand the following concepts about print:
- **We read words, while we look at pictures.**
- **We read from left to right and top to bottom on the page.**
- **A story has a beginning, middle and an end**

2. New vocabulary items from the story will be introduced and reinforced
3. The learner will be engaged in language enriching activities aiming at developing receptive and expressive language (structure and use)

5. The learner will be made aware of different phoneme positions in CVC short vowel words.
6. The learner will be segmenting CVC short vowel words into phonemes
7. Sound-letter association will be facilitated.

DAY 1

Reading the sixth book: **Bear wants more (Wilson, K)**

Instructions:
Refer to the SSCAN Approach i.e. observe each child's level of participation and interaction in the group.

Show the learners the cover of the book. Follow with your finger as you read the title of the book. Say: "The name of this weeks' book is: "Bear wants more"
Introduce the author: Say: "Karma Wilson is the author of this book. She wrote the story."
Introduce the illustrator: Say: "Jane Chapman is the illustrator of this book. She drew the pictures."
As you turn to the first page, direct the learners' attention to the written words. Follow with your finger as you read the story.

This book was selected for its potential for phonological awareness activities, as well as the repetitive language patterns.
After completion of the story, use any two CROWD prompts:

Wh- question
("What is _____?" unfamiliar vocabulary)
Badger
Mole
Raven
Decorate
Snores

As some of these animals may be unfamiliar to the children, use the pictures as well as appropriate analogies to clarify the meanings e.g. "A raven looks like a crow. It is also black with a large beak." "A badger is family of the weasel. It usually has black and white stripes on the side of its head." "A mole is small animal with short legs and tin eyes. A mole usually lives undergrounds."

DAY 2

Read Book 6 once again. This time make use of **Completion-** and **Recall Prompts** while reading the story to ensure interaction and participation from the group.
Pause before getting to the predictable part: *"They nibble on their lunch, with a crunch, crunch, crunch! But…"* "Bear catches fish, but he still wants…" Give the children the opportunity to respond before continuing with the story.

Revision of new vocabulary items
Ask: "Who can remember what (a badger, mole, raven, decorating and snoring) is?

Expand on any response by:

- **Giving more information**
- **Explaining**
- **Talk about feelings and opinions**
- **Project into situations never experienced**
- **Talk about the future**

Use the magnetic clickets provided in the gift bag.
Teacher: "Remember all the different sounds we've listened to? They are all on these little magnets. Let's put all the /s/ magnets together."

Continue by sorting the magnets with similar phonemes on.
Now, I am going to build a word with three sounds. Let's see if you can guess the word:"
m – a – t

As you say the individual sound, hold the magnet up and attach the next one.
"The first sound is /m/, then /a/ and the last one is /t/."
"m-a-t makes mat"
Take out the picture of mat to reinforce the concept.

Let one of the children in the group now attach the same three phonemes and repeat the target word: mat.

Let's try one more…
Repeat the above procedure with **tap.** Use the picture from the target words in Week 4 to reinforce the concept.

DAY 3

The SMILE activity **"Bear Pairs"** is included in the program as it stimulates the use of descriptive language as well as social interactive language. The game can be played in pairs (as a barrier game) or the teacher can provide the stimulus: "Who has a bear with a scarf and an ice cream?"

Teacher: "I have built some new words today. Let's see if you can help me find out which sounds are in the word."
As you say this, keep three clickets with **m-a-p** spelled out in your hand. Say the word: "**map**"
"Which sound do you hear first?"
"Which sound do you hear last?"
"Which sound do you hear in the middle?"

The group may find it difficult at this stage to identify the final and middle phonemes. You may open your hand and show them the word – and as you remove the clickets from one another, repeat the phonemes: **/m/ /a/ /p/**
If I put them together again, the word is **map.**

By using the magnetic clickets the segmentation and blending processes are more easily visualized. By reversing the process continuously, you heighten awareness of the different phonemes in a word as well as the position of the phonemes. Always ensure that you position yourself in such a way that all the children in the group will be able view the word from left to right.
Repeat the above procedure with the following words:
/p/ /a/ /p/
/p/ /a/ /t/

DAY 4

Give one or two children in the group the opportunity to re-tell the story of "Bear wants more". The pictures in the book may be used to support their memory and the order of events. Encourage them to describe the animals if they have difficulty remembering the unfamiliar names.

Talk to the learners about surprise parties.
Who likes a surprise?
Why?
Who has been to a surprise party before?
If they have to plan a surprise party for their mom or dad, how would they go about doing that?
What will they be eating?
Where will they have the party?
Hand out three clickets to each child in the group.
Teacher: "Today we are going to build our own words. Let's see who can build a new word with his/her clickets."

The aim of this activity is to encourage the group to experiment with phonemes in different word positions and become aware of the effect of phoneme manipulation. You may have to facilitate the process by changing the initial and final phonemes for them and say the word to provide auditory feedback.

After reading out a few inventions, allow the children to borrow other clickets to invent new words.
map-tap-met-pet-set-mat-sat-at-pat-Pam

This activity may be done in pairs to encourage peer learning.

DAY 5

By using **recall prompts,** relevant vocabulary in the Book can be further explored:
Teacher: "Who can remember why bear could not fit into his den?"
Take out a box of any size (e.g. a shoebox)
"Let's think of things that will fit into this box. Who can think of something that will fit into this box?"
"Now let's think of things that will NOT fit into this box. Things which are too big. Who can think of something that is too big for this box?"

At this stage you may take out the pictures of different animal homes. Show the picture of the cage.
Teacher: "Who do you think lives in a cage like this?"
Talk about the features of the different homes and why some are more appropriate for certain animals. Which ones will be too big or to small for particular animals.

Take out all the following pictures of the target phonemes: /s/ /m/ /a/ /t/ /p/ and /e/:
Sun, six, soup, sock, mat, mouse, moon, man, tap, pen, pan, pig

Divide them amongst the group.
Teacher: "Who has a picture of a /s/ /u/ /n/?
Segment each word and wait for the child to respond by holding up his/her picture.
If the child responds correctly – take the picture card and reinforce the segmenting concept by saying the following:
"How many sounds do you hear in /sun/? /s/ /u/ /n/ - three sounds.

Repeat this procedure with all the remaining CVC – words.

WEEK 7

Goals:

1. The learner will understand the following concepts about print:
- **We read words, while we look at pictures.**
- **We read from left to right and top to bottom on the page.**
- **A story has a beginning, middle and an end**

2. New vocabulary items from the story will be introduced and reinforced
3. The learner will be engaged in language enriching activities aiming at developing receptive and expressive language (structure and use)

5. The learner will have the opportunity to practice segmenting and blending CVC words with familiar phonemes.
6. The learner will have the opportunity to practice segmenting and blending CVC words with novel phonemes.
7. The learner will engage in invented spelling using regular CVC patterns

DAY 1

Reading the seventh book: **Papa Bear's Holiday Adventure (Wee-Ha, M)**

Instructions:
Refer to the SSCAN Approach i.e. observe each child's level of participation and interaction in the small group.
Show the learners the cover of the book. Follow with your finger as you read the title of the book. Say: "The name of this weeks' book is: "Papa Bear's Holiday adventure."
Introduce the author: Say: "Maggie Wee-Ha is the author of this book. She wrote the story."
As you turn to the first page, direct the learners' attention to the written words. Follow with your finger as you read the story.

This book was selected for its potential for developing and consolidating narrative skills. The content involves several events which follow a particular sequence.

After reading the story for the first time, ask Wh-questions to clarify unfamiliar vocabulary items:
What is…?
Balance
Zig-zag
Tiring
Reeling
A heavy weight

DAY 2

Make use of **Recall prompts** to facilitate memory of the storyline of Book 7, e.g.
"Can you remember where Papa Bear went on holiday?"
"What did he do after he checked into the hotel?"
"What did he do then?"
"What did Papa Bear catch?"
"What happened when he reeled in the big fish?"
"What happened in the end?"

By using **Distancing prompts** ask children about their holidays or where they plan on going. By using **open-ended** questions you may get more detailed feedback from the group e.g.
"Tell me about the best holiday you've ever had."
"Why do you like going to the beach?"
"What do you do on a fishing trip?"

Take out all the following pictures of the target phonemes
mat, tap, pen, pan,
Keep three clickets at hand to illustrate the concept of first, middle and last.
Teacher: "This is a **mat.** Who can tell me what is the first sound in mat? And the last sound?"
If you get to the middle sound, position the third clicket between the other two to emphasize the middle position.
Teacher: "Yes, /m/ /a/ /t/ makes mat. Now, who wants to try this with our next picture **tap.**"
Use the written word underneath the picture to aid the concept of reading from left-to-right. Point to the three letters as you say the names of the sounds.

Teacher: "Let's count the sounds in **mat.** /m/ /a/ /t/. Three sounds. Now, you count the sounds in **tap."**

DAY 3

Take out Book 7 but do not open it. Ask who would be willing to tell the story today. The learner can use the pictures to guide the sequence of events. Allow questions or comments from the group to expand on the attempt.

Revision of new vocabulary items
Ask: "Who can remember what **balance, zig zag, tiring, reeling and a heavy weight** is?"

Expand on any response by:

- **Giving more information**
- **Explaining**
- **Talk about feelings and opinions**
- **Project into situations never experienced**
- **Talk about the future**

Based on the Say-it-and-move principle (Road to the Code Phonological Program), provide each child with a Blank Elkonin card and three clickets. Use the sun and net Elkonin Cards as examples.

Teacher: "What is this? Yes. It is a sun. I'm going to put three clickets on my picture. Now I'm going to say the sounds in sun and move my clickets into the little squares."
"Now it's your turn. Let's say each sound slowly. /s/ /u/ /n/. /sun/.
"let's do one more. /n/ /e/ /t/. Let's say each sound slowly and move the clicket."

Now, depending on the letters each learner has, let them build their own, novel word on their "Blank-Elkonin card" and then draw a picture of the new word. Examples you may facilitate are: man, tap, pan, pen. Each learner has to drag the clicket into the box while saying the sound and then end by repeating the word: m – a – n: "man"

DAY 4

The following activity aims at developing the learner's ability to express him/herself in complete, well-structured sentences. The teacher will use specific questions to provide scaffolding structures during this activity.

Teacher: "Do you remember all the different things Papa Bear did on his adventurous holiday? Let's see:
"He went windsurfing."
"What does a windsurfer look like?"
"How does a windsurfer work?"
"Where will you go windsurfing?

"Then Papa Bear rode on a Jet Ski."
"What does a jet ski look like?"
"How does a jet ski work?"
"How is a jet ski different from a windsurfer?"
"Where will you go jet skiing?"

For each of the activities in the book, focus on a) distinctive attributes b) function and use and c) distinguishing category by using descriptions and comparisons.

Ask the children to bring a photograph of them on holiday to class tomorrow. (Please ensure having a few photographs/magazine pictures available for children unable to bring their own.)

Use the novel CVC picture cards provided. Spread them out in order to be visible for the whole group.
Teacher: "I'm going to say a word. If you can find the picture, you may take it and colour in your picture."
"/c/ /a/ /n/"
The first child, who is able to blend these phonemes into can, may take the picture and start colouring in. The remaining children in the group now have the chance to compete. With this activity, you will be able to assess the individual child's skill in phoneme segmentation and blending. You may have to provide the last children with some more examples with regards to developing this particular skill.

DAY 5

Give each child the opportunity to tell the group about their holiday-photograph. You may start by giving a short description of your own photograph and thereby provide them with an example of a simple, yet well-structured narrative:
Teacher: ***"This is a picture of me and my husband Mark. Last year, we went to Cape Town for our holiday. We went up Table Mountain in the cable car. We had a lovely time."***
Ask the group to take out the picture they have coloured in yesterday as well as their Blank Elkonin Card. They are to say each sound and move their finger along the line to spell the word on their picture card. At this stage the clickets are no longer used in order to reduce the level of scaffolding provided. You may have to assist some of the children in the group by sitting next to them and trace the sounds with your fingers along the line towards the squares.

WEEK 8

Goals:

During the last week of this program, the learners will have the opportunity to engage in meaningful, yet enjoyable activities in order to practice their skills with regards to:

1. **Concepts about print**
2. **Language: content, structure and use**
3. **Narrative ability**

4. **Phonological Awareness Skills including Rhyming, Alliteration and Sound Blending and Segmentation**

ACTIVITY 1: Pretend Reading

Display the seven books that were read during the past seven weeks. Children are divided into pairs and one child in each pair may choose a book to "read" to the other child. **Pretend and Memorized Reading** is a proven technique which aids the development of story-retelling skills and is an important step towards conventional reading and writing.

ACTIVITY 2: Rhyming Pockets

Put the rhyming pockets with picture on the front up against the blackboard. Each child gets the opportunity to draw a picture from the pile of remaining cards and put it into the correct pocket.

CAT:	**BAT**	**MAT**
WELL:	**BELL**	**SHELL**
LOCK:	**SOCK**	**ROCK**
CAKE:	**SNAKE**	**RAKE**
FAN:	**CAN**	**PAN**

At the end of the activity, take the picture cards out and repeat the rhyming words inside.

ACTIVITY 3: Sammy Smith

Aimed at consolidating alliteration skills, play the following game:

Sam Smith has a suitcase. Let's put other things in his suitcase that starts with /s/…
"Sammy Smith has a suitcase with a sock, snake, sun, slide…"

"Billy Bear has a bag with bread, butter, broccoli, beads, blocks…"

"Timmy Teddybear has a trolley with a train, tap, telephone, television…"

"Connie Cat has a cupboard full of cookies, corn, cake, cream, Coke…"

ACTIVITY 4: Songs

To the tune of **"Old Macdonald had a farm"**

"What's the sound that starts these words: sun and sock and soup? Wait for a response. /s/ is the sound that starts these words: sun and sock and soup. With a /s/s/ here and a /s//s/ there here a /s/ there a /s/ everywhere a /s//s/. What's the sound that start these words? Sun and sock and soup: ***S!"***

When getting to the end of the song, hold up the letter of the sound.

Repeat the above tune with all the target sounds of the past seven weeks:

M: mat and mouse and moon
A: ant and axe and apple
T: toe and two and tap
P: pen and pan and pie
E: egg and edge and empty

To the tune of **"Twinkle twinkle little star"**

"Listen listen to my word
Then tell me all the sounds you've heard: ***sun***
/s/ is one sound
/u/ is two
/n/ is the last sound
Yes it's true
Listen listen to my word: /s/ /u/ /n/ is what you've heard."

When completing the verse, hold up the picture of sun.
Repeat the above tune with the following words as well:
Mat
Pen
Car

(Yopp & Yopp 1992)

ACTIVITY 5: Names

At this stage children should be familiar with and able to write their names. Give them each a piece of paper to write their names on.
Teacher: "Someone's name starts with a /s/"
Wait for a response. Let the child hold up his/her name and prolong the initial sound: "Sssss Sally's name starts with a /S/".

Repeat for each child. Make sure to emphasise the correct letter-sound correspondence for each name. Write down 3 other words that start with the same phoneme and read them out, while pointing to the initial phoneme:
"sun, sock and snake also start with /s/."

Repeat the "signing-in" activity (Week 5, Day 5) each day to consolidate alphabet recognition skills with regards to their names.

APPENDIX E:

BEARS TRAINING MANUAL AND POWER POINT TRAINING SESSION

Training Manual for Early Literacy Program for Second Language Learners

WHY?

"Children who start off poorly, remain poor readers throughout their schooling years." (Stanovich, 1986)

The pre-school years are critical in the development of emergent literacy skills that will ensure smooth transition into formal reading.
Several risk factors have been identified that leave preschoolers vulnerable to literacy: Factors innate to the child (e.g. oral language impairment, intellectual disability or physical disability) but also factors pertaining to the environment (e.g. speaking a language or dialect that differs from that of the local academic curriculum). We know that literacy is strongly influenced by a child's language proficiency – and statistics tell us that 25.7% learners attending English medium primary schools in the Western Cape do not have English as their first language.

Reading experts estimate that if children receive proper exposure in these foundational skills during early childhood, as few as 5% of them may experience serious reading difficulty, rather than the current level of 20% to 30% (Snow et al., 1998).

Teachers trained in addressing early literacy skills are more likely to have students who show cognitive gains that carry into kindergarten (Whitehurst and Lonigan 1998).

Catts and Kamhi (1999) reported that more than half of children with language impairment in preschool or kindergarten demonstrate later reading difficulties whereas Snow (1998) noted that between 40% and 75% of preschoolers with early language impairment develop reading difficulties as well as generalized academic problems.

WHO?

"To teach well is to know what and whom you teach" – author unknown

Learners at risk for literacy difficulties should be identified as early as possible. Research has indicated a significant correlation between the quality of literacy interaction at home and emergent literacy skills (Rebello 2004). As many of the ELLs in our classrooms have limited exposure to proficient English role models at home, they start off with a severe disadvantage.

What do we know about second language acquisition at this stage?
Simultaneous (consistent exposure to two languages before age 3)
vs. Sequential (most children in classrooms sequential LL)
Subtractive vs. Additive bilingual environment (Recommend support for children to maintain their native language while acquiring a second language)
Child's characteristics: motivation, language aptitude, learning style and personality.

Typically observe a silent or non-verbal period – not indicative of language disorder, but delay. Important to offer support and stimulation to aid comprehension appropriately.

WHAT?

"Intervention should focus on facilitating both meaning and skills…while also stimulating children's interest and motivation."

During the first phase of my research I compared L1 and L2 learners with regards to several emergent literacy components to determine which aspects should be included in an acceleration program. Research Question was: "Which critical components should be included in a stimulation program aimed at preparing the ELL for acquiring literacy?" The ELA test battery was used and L1 learners performed significantly better than L2 learners on the following subtests:
Receptive Vocabulary
Oral language (narratives and word definitions)
Concepts about print
Phonological awareness (rhyming, sounds in words)

The one part of the program will focus exclusively on oral language development and print awareness (facilitating meaning) while the second part will involve direct instruction in phonological awareness (facilitating skills).

My results confirmed "Current research suggests that emergent and early literacy interventions should focus on facilitating both meaning (comprehension, vocabulary, print awareness) and skills (letter knowledge, letter-sound associations, phonological awareness, phonics)." (p.179)…while also stimulating children's interest and motivation…" (Justice 2006)

HOW?

"Preparing children for literacy involves immersing them in an environment where interactions with reading and writing are a natural part of each day." (Weitzman and Greenberg 2002)

Different types of programs with regards to emergent literacy stimulation are cited in the literature: Some focus on parental involvement, some on small group programs while others describe whole language group approaches.

A survey by Hartas (2004) found willingness for collaboration between teachers and speech therapists that involved making professional changes and mutual learning in the context of professional equality and shared values. The difficulties noted concerned time constraints and organizational work structures as obstacles to collaboration. Dodd (2007) found that a phonological awareness and language intervention program, planned by speech therapists and delivered by a classroom teacher, enhanced the performance of socially disadvantaged preschoolers in comparison to their peers who received no intervention. In light of these findings as well as the South African context where parent participation and language proficiency may be problematic, it was decided to implement the program in a consultative model with the pre-school teacher being the primary agent.

Underlying premises:
Language is learned in socially-interactive settings and children construct their linguistic systems from the language they hear from adults and more capable peers (Tabors 2004)
Because of current limitations in available research with regards to culturally and linguistically diverse populations, literacy programs must be flexible and adaptable to reflect emerging research findings. Future empirical evidence and personal experience will continue to shape recommended practice (Justice, 2006).

Intervention strategies are based on the following **principles:**

1. Language and literacy skills should be promoted together.
2. Intervention activities should address both written language awareness and phonological awareness, however in light of the current findings (ELL specific), the emphasis will not be on emergent writing skills
3. Activities should include naturalistic embedded opportunities as well as explicit exposure to key concepts – should occur in a highly contextualized, meaningful, familiar environment.
4. Children should participate actively in their learning.
5. Practices should be evidence based
6. Intervention will follow a developmental sequence of instruction in order to enable the learner to progress from the "Awareness and Exploration" phase to the "Experimenting Reading" phase (McGee and Richgels 2003)

The program was based on the following **evidence-based practices**:

1. Adult-child shared storybook reading (dialogic reading (van Kleeck 2006) Interactive read-aloud strategy (McGee and Richgels 2003)
2. Careful selection of appropriate books ("high quality children's books are distinguished by richness of vocabulary, compliance with story grammar, congruence with children's world knowledge and interplay of text and illustrations." McGee and Richgels 2003:88) Cultural appropriateness of the books was also taken into consideration in the selection process.
3. Literacy enriched play settings (e.g. literacy props; Morrow 2007; McGee Richgels 2003)
4. Adult-child interaction with explicit use of: repetitions, expansions and topic extension, open ended questions, facilitation of comprehension (say less, stress, go slow, show – Weitzman and Greenberg 2002) and context-based vocabulary exploration
5. Development of narrative skills by incorporating specific scaffolding structures (Weitzman and Greenberg 2002:285)

The following strategies were incorporated in the print awareness part of the program:

1. Fingerpoint reading (McGee and Richgels 2003)
2. Systematic and explicit print referencing during interactive shared reading (McGinty *et al.*, in van Kleeck 2006)
3. Scaffolding – by making use of high-support and low-support techniques interchangeably, depending on the individual learner's needs

The following strategies were incorporated in the phonological and letter awareness part of the program:

1. Teacher directed structured phonological awareness curricula. Explicit instruction in phonological awareness i.e. not drill-like, but engaging, meaningful and enjoyable.
2. The SEEL-curriculum (Systematic and Engaging Early Literacy Instruction) – will be used as guideline to develop this part of the program. The following SEEL strategies will utilized in developing the different components: Theme-based instruction and small-group activities.(Culatta 2006)
3. "The best research programs are short (research suggests that a total from 8 to 18 hours of instruction is plenty of time for children to develop phonological awareness). They engage small groups of children in short (as few as 10minutes) game-like activities. (Justice 2006).

WHICH QUESTIONS DO WE TRY TO ANSWER BY DOING THIS STUDY?

1. Does this program enhance ELL's emergent literacy skills?
2. Does language stimulation alone enhance ELL's emergent literacy skills?
3. Does this program succeed in closing the gap between L1 and L2 learners upon entering Grade 1?
4. Does this program enhance ELL's reading ability? (one year post-program)

Continue to discuss format and content of BEARS program.

BEARS PROGRAM FOR THE ACCELERATION OF EMERGENT LITERACY SKILLS OF ELL

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE: D.LITT in GENERAL LINGUISTICS

UNIVERSITY OF STELLENBOSCH

EMERGENT LITERACY

- THE SKILLS, KNOWLEDGE AND ATTITUDES THAT ARE DEVELOPMENTAL PRECURSORS TO READING AND WRITING.
- Print Knowledge (alphabet knowledge and concepts about print)
- Phonological Awareness (sound structures)
- Writing (invented spelling, name writing)
- Oral language (grammar, vocabulary, narrative)

WHY?

"Children who start off poorly, remain poor readers throughout their schooling years.: (Stanovich, 1986)

- RISK FACTORS FOR LITERACY
- STATISTICS OF ELL IN SCHOOLS
- LITERACY IS STRONGLY INFLUENCED BY LANGUAGE PROFICIENCY

WHO?

"To teach well is to know what and whom you teach."

- Facts about second language acquisition:
  - *Simultaneous vs. Sequential*
  - *Subtractive vs. Additive*
  - *Child's characteristics*
  - *Language Delay vs. Language Disorder*
- Quality of literacy interaction at home

WHAT?

- Language comprehension
- Language expression (narratives)
- Concepts about print
- Phonological Awareness

WHAT?

"Current research suggests that emergent literacy intervention should focus on facilitating both **meaning** (comprehension, vocabulary, print awareness) and **skills** (letter knowledge, letter-sound associations, phonological awareness, phonics)…while also stimulating children's interest and motivation". *(Justice, 2006)*

HOW?

"Preparing children for literacy involves immersing them in an environment where interactions with reading and writing are a natural part of each day."

- Consultative Model with pre-school teacher being the primary agent
- Within socially-interactive setting
- Flexible and adaptable
- In a highly contextualized, meaningful, familiar environment
- Developmental sequence of instruction

HOW?

EVIDENCE-BASED PRACTICE:

- Adult-Child shared storybook reading
- Careful selection of appropriate books
- Literacy enriched play settings
- Explicit use of language stimulation strategies
- Development of narrative skills
- Specific PA curricula focusing on literacy precursors (letter-sound knowledge; phoneme awareness)

RESEARCH QUESTIONS TO ANSWER

- Does this Program accelerate ELL emergent literacy skills?
- Does Language stimulation alone accelerate ELL emergent literacy skills?
- Does this program succeed in closing the gap between L1 and L2 learners upon entering Grade 1?
- Does this Program significantly improve ELL's reading ability

BEARS PROGRAM

- Oral Language Component
- Concepts about print
- Phonological Awareness
- ELL Teaching Tips

BEARS PROGRAM

- 8 WEEKS
- CONTENTS
- MATERIALS
- SELECTION OF CHILDREN
- EVALUATION PROCEDURES
- TIME SCHEDULE
- FEEDBACK FORM

QUESTIONS & ANSWERS

THANK YOU FOR YOUR TIME AND PARTICIPATION

APPENDIX F:

QUALITATIVE FEEDBACK FORM

Intervention Study: Teacher Questionnaire

Name of School: _____

Name of Teacher: _____

Tertiary qualification(s) of Teacher: Diploma _____ Degree _____ Other _____
Number of years of teaching experience:_____

How many children do you have in your class? _____
How many of these children do not have English as their First Language? _____

Which languages are represented in your class?
Afrikaans _____ Xhosa _____ Zulu _____ Sotho _____ Other _____

Have you had any special training (e.g. courses, workshops, reading materials) in managing English Second Language Learners in the classroom? YES____ NO_____

If YES, please describe:
_____
_____
___

What is your first language? _____
Are you proficient in any other language(s)? Please state: _____

Do you have a classroom assistant or translator available for children with English as Second Language? YES _____ NO _____

Do you use any special program for literacy development in your class? (e.g. Letterland, Jolly Phonics, THRASS) YES _____ NO _____
If YES, please describe: _____

On average, how much time do you spend on literacy-related activities during the school-day? _____

Examples of literacy-related activities: _____
_____
_____
Do you provide any additional stimulation for English Second Language Learners?
Explain:_____
_____

THANK YOU FOR YOUR TIME

TEACHER QUESTIONNAIRE/FEEDBACK
BEARS EMERGENT LITERACY PROGRAM

1. Did you find the BEARS Program useful? Yes ☐ No ☐
2. Did you find the BEARS Program easy to use? Yes ☐ No ☐
3. Were you able to fit the BEARS Program into your curriculum? Yes ☐ No ☐
4. Do you think the children benefited from the BEARS Program? Yes ☐ No ☐
5. Do you use any alternative Program for ELL learners? Yes ☐ No ☐

Please comment on the following aspects of the BEARS Program:

Choice of Books:_____
_____
_____

Pictures and Materials: _____
_____
_____

Layout and Content: _____
_____
_____

Activities: _____
_____
_____

Timing: (during which term would you recommend this program for Grade R learners?) _____

Any recommendations which may facilitate the use of the BEARS Program in Grade R classrooms:
_____
_____
_____
_____
_____
_____

Please feel free to complete this form anonymously and return to the following address:
Ms. Anna-Mari Olivier
P.O. Box 1965
Mossel Bay
6500

APPENDIX G:
INFORMATION LETTERS TO SCHOOL REGARDING MAIN STUDY

The Principal
Primary School
P.O. Box
MosselBay
6500

re. Research project: Grade R Second Language Learners

Dear Sir,

With reference to our previous correspondence I would hereby like to request your permission to conduct the second part of my study on the effects of an emergent literacy stimulation program in the Grade R classrooms of your school.

Based on the results from the first part of this study, a comprehensive literacy program, aimed at the specific needs of the English Second Language Learner (L2), has been compiled. The nature of the program is such that it will complement the daily curriculum and stimulate certain aspects of emergent literacy which so far appear to be critical for the L2 learner.

Implementation of this program will involve the following:

During the first week of the fourth term (1-5 October 2007), a two hour introductory workshop will be held with the Grade R teachers involved. All the relevant materials will be provided and explained in full detail.
A sample of 18 Grade R learners will be randomly selected and pre-program measurements will be done by the researcher and assisting speech-language therapists (without interruptions to the classroom routine).
The duration of the program is 8 weeks and will run from 1 October to 23 November 2007.

The sample of Grade R learners will be followed-up during the first term of their Grade 1 year to determine the effect of this stimulation program on their literacy abilities.

I strongly believe that the nature of this program will be beneficial to both the teacher dealing with L2 learners in her class, as well as to the learners who are currently at a disadvantage with regards to literacy experience. The following principles were followed in compiling the program:

- *Language and Literacy skills should be promoted together*
- *Children should participate actively in their learning*
- *Language and literacy activities should be meaningful to learners*
- *Direct instruction should co-occur with embedded opportunities for learning*
- *Prevention of language and literacy problems is the ultimate goal*

I will, as far as possible, assist and support the Grade R teachers without unnecessarily adding to their full workload. This program will hopefully provide the Grade R teacher with some practical solutions to the reality of a multi-cultural, multi-linguistic classroom.

I trust that you will view this request favorably. As a participating school, you will have access to the results of this study as well as the continued use of this program and materials. All direct costs of the implementation of the program will be carried by the researcher.

Should you have any queries in this regard, please do not hesitate to contact me or my supervisor.

Yours sincerely,

_____
Ms. Anna-Mari Olivier
Speech Therapist

Student D.Litt (US)
Tel. 044 – 691 9083
e-mail: annamari@iafrica.com

_____
Prof. C.Anthonissen
Supervisor and Head of Dept. of General Linguistics (US)

Tel. 021 – 808 2006
e-mail: ca5@sun.ac.za

APPENDIX H:

LETTER OF PERMISSION FROM WCED

Dr. R.S. Cornelissen
Western Cape Education Department
Private Bag X9114
Cape Town
8000

27/02/2007

(reference 20060105-0012)

re. Research in Southern Cape Schools:
Investigating Literacy Development among Grade 1 learners with a second language as medium of education – the effects of an emergent literacy stimulation programme

Dear Dr. Cornelissen,

Referring to previous correspondence (reference 20060105-0012), I hereby request permission from the Western Cape Education Department to complete the second part of the above-mentioned research project.

Based on results from the first stage of the study, a comprehensive literacy program for second language learners has been developed. This program should prepare the second language learners for the demands of literacy development in Grade 1. My request here is for special permission to complete this part of my study during the fourth term of 2007 in the following primary schools: (*Deleted for ethical reasons)*. Because the focus is on developing skills that these children will need in Grade 1, the best time to implement the program is in the last term before they enter Grade 1. As Grade R pupils do not prepare for any examination during the fourth term, I do not foresee that my research will have any negative impact on the completion of the syllabus. Also, I will not be present in the classrooms during the implementation of the program – the classroom teachers will incorporate it into the daily classroom activities – and therefore I will not disrupt teaching in any way. Careful planning and collaboration with the principals and teachers will ensure smooth implementation and monitoring of the program. These principals and teachers have been contacted, and are very positive about the potential impact of this program on the literacy skills of their learners.

I trust that my research will make a positive contribution to the current situation regarding second language learners in our schools. Should you have any other problems or concerns, please do not hesitate to contact me or my supervisor.

Ms. Anna-Mari Olivier
(student: D.Litt General Linguistics)
University of Stellenbosch
ph. 044-6919083

Prof. Christine Anthonissen
(Supervisor and Head of Department)
ph.021 - 8082006

Reference: **20060105-0012**

Miss Johanna Olivier
P.O. Box 1965
MOSSEL BAY
6500

Dear Miss J. Olivier

RESEARCH PROPOSAL: INVESTIGATING LITERACY DEVELOPMENT AMONG GRADE 1 LEARNERS WITH A SECOND LANGUAGE AS MEDIUM OF EDUCATION – THE EFFECTS OF AN EMERGENT LITERACY STIMULATION PROGRAMME.

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from **1st October 2007 to 9th November 2007**.
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December 2007).
7. Should you wish to extend the period of your survey, please contact Dr R. Cornelissen at the contact numbers above quoting the reference number.
8. A photocopy of this letter is submitted to the Principal where the intended research is to be conducted.
9. Your research will be limited to the following schools: *(Deleted for ethical purposes)*.
10. A brief summary of the content, findings and recommendations is provided to the Director: Education Research.
11. The Department receives a copy of the completed report/dissertation/thesis addressed to:

    The Director: Education Research
    Western Cape Education Department
    Private Bag X9114
    CAPE TOWN
    8000

We wish you success in your research.

Kind regards.

Signed: Ronald S. Cornelissen
for: **HEAD: EDUCATION**

APPENDIX I:

LETTER OF CONSENT FROM PARENTS OR GUARDIANS OF PARTICIPANTS

Dear Parent,

I am a doctoral student in General Linguistics at the Stellenbosch University and am currently doing research on the reading, writing and language (i.e. literacy skills) of Grade R learners in English and parallel medium schools in the Southern Cape.

The Western Cape Department of Education has granted me permission to do research in _____and the project was also discussed in detail with the Principal and teachers involved.

In order for your child to participate in the research, I need your consent as a parent. The study will entail the following:

1. A set of tests which will comprise of reading, writing and language activities will be completed. The tests will last no more than 30 minutes and will be completed during school hours on the school premises. Please note that these tests aim at gathering information on how children of this age develop literacy skills and are in no way used to check their ability for any other purpose. The children should not be prepared for these tests in any way.
2. Some of your child's responses will be tape recorded in order for me to make some analysis and comparisons.
3. Results of these tests will be used to evaluate a literacy program to assist learners who are being educated in their second language (English).
4. Results of the study will be included in my research dissertation, however all personal details of participants will be kept confidential and no names of schools or children will be mentioned.

If your child is not comfortable with the testing environment or procedures, he/she may withdraw at any time. I would really appreciate your support in this project. Should you have any questions or concerns, please do not hesitate to contact me at: 044 – 691 9083 (o/h).
Please complete the attached form, should you be willing to have your child participate in this project.

Kind regards,

_____

Ms.Anna-Mari Olivier
(B. Speech&Audio, US)
(M. Comm. Path, UP)

_____

Dr. C. Anthonissen
(Supervisor and Head of Department, US)

APPENDIX J:

PARENTAL QUESTIONNAIRE

CHILD'S NAME: _____

SCHOOL: _____

CHILD'S DATE OF BIRTH: _____

NAME OF PARENT/GUARDIAN: _____

LANGUAGE (S) SPOKEN AT HOME: _____

VISUAL OR HEARING DIFFICULTIES: _____

SPEECH OR LANGUAGE DIFFICULTIES: _____

DO YOU HAVE A TV/RADIO IN YOUR HOME?	**YES/NO**
DOES YOUR CHILD HAVE HIS/HER OWN BED TO SLEEP ON?	**YES/NO**
DOES YOUR FAMILY OWN A CAR?	**YES/NO**
ARE THERE MORE THAN 20 HARDCOVER BOOKS IN YOUR HOME?	**YES/NO**
HAVE ONE OF THE CHILD'S PARENTS PASSED STANDARD 8/GRADE 10	**YES/NO**
IS ONE OF THE CHILD'S PARENTS EMPLOYED FULL TIME?	**YES/NO**

YES, my child may participate in this research project.

_____

Signature of parent/guardian

APPENDIX K:

INSTRUCTIONS FOR USE OF ELA

1. Complete biographical data: Date, Name, School, D.O.B, Sex, L1, LA, LX

2. Sounds-in-words:
"I am going to show you 3 pictures. Two of these pictures start with the same sound. Listen and show me the 2 pictures that start with the same sound."
Point to each picture while saying the word: cat – ball –bag
Record the child's response as either 1 (correct) or O (incorrect)

"Now I want you to listen for the last sound. Show me the two pictures that end with the same sound. Which two pictures have the same sound at the end"?
Point to each picture while saying the word: fan –bat – cat
Record the child's response as either 1 (correct) or O (incorrect)

3. Rhyme Recognition
Explain the task by using the two test items: ***"Now we are going to listen for words that sound nearly the same. Words that rhyme. Mouse-house-chair. Which picture sounds like mouse?"*** If child responds incorrectly, you may correct him/her. ***"Bee-cup-tree. Which two pictures sound the same? Which two rhyme?"*** If child responds incorrectly, you may correct him/her.

"Now let's listen to these words. Cat – Hat – Ring. Show me which two sound the same?"
Record child's response as either 1 (correct) or O (incorrect)

4. Rhyme Production
"I am going to say two words. Can you think of any other words that sound the same? Can you think of more words that rhyme with cat and hat?"
Write down the child's responses. If no response, O.

5. Word Definitions
Explain the task by using the following example.
"Do you know what a chair is? Yes, a chair has four legs, it's made of wood or plastic and we sit on a chair. Now tell me what a bird is?"
Write down the child's responses. You may use a tape recorder to verify transcriptions.

6. Concepts about Print
Use "Follow Me Moon" Book. Put the book in front of the child, with the front cover on the table. Start with Question 1. Record the child's responses with 1 (correct) and O (incorrect).

7. Letter Recognition
"Show me any letters that you know. Can you name them?" Record all the correct responses by writing down the letters. If child is unable to identify any lower case letters, you my also show him/her the upper case set.

8. Fictional Narrative

"I would like you to tell me a story. Here are three pictures. Tell me what you think happened in this story?" Give the child 30 seconds to look at the pictures. Write down the child's narrative. You may use a tape recorder to verify transcriptions.

9. Peabody Picture Vocabulary Test
Follow standardized instructions as described in PPVT manual.

APPENDIX L:

CODING PROCEDURES FOR WORD DEFINITION SUBTEST

33. Word	34. Function/Typical 35. actions 36. $FUN	37. Definitional Features 38. $DFT	39. Descriptive Characteristics/ Associations/ 40. Examples/Applications 41. $EDAA 42. Score=1	43. Superordinates 44. $SUPO 45. Score=6
46. Bird	**47. Flies (4)** **48. Lives in/ builds a nest (4)**	**49. Has wings/ feathers/beak (4 for each item)** **50. Lays eggs (4)**	**51. Name of type of bird** **52. Eats seeds/ worms/signs** **53. Lives in trees** **54. Association with ducks etc.** **55. Reference to migration**	**56. Animal**
57. Foot	**58. For walking/ running/standing/** **59. kicking/ jumping/ hopping** **60. (2 for each action)** **61.**	**62. On your leg (4)** **63. Has toes (4)**	**64. Wear shoes / socks** **65. Associations – leg, toes, footprints, nails** **66. Has a heel** **67. Can stamp your feet**	**68. Body part**
69. Umbrella	**70. Keeps you dry when it rains (4)**	**75. Has a handle (4)**	**79. Use it at the beach**	**80. N/A**

71. Keeps you dry (2)

72. For the rain/ when it rains (2)

73. Keeps the rain / sun off you (4)

74. Protection (2)

76. Waterproof (4)

77. Has a dome (4)

78. Can be collapsed /folded (4)

81. Flower

82. Picking/ growing/ smelling/ planting (2 for each action)

83. Grows from seeds (4)

84. On a stem (4)

85. Has a smell (2)

86. Blooms (4)

87. Comes in various colours (2)

88. Has petals (4)

89. Found in a garden

90. Needs water

91. Bees sit on them /make honey (1 credit for bees and/or honey)

92. Association with trees/ leaves/ grass

93. Association with springtime

94. Names a type of flower

95. Specific colours named

96. For wedding bouquets

97. Can put them in a vase

98. Plant

99. Word

100. Function/Typical

103. Definitional

105. Descriptive Characteristics/

109. Superordinates

101. actions

102. $FUN

Features

104. $DFT

Associations/

106. Examples/Applications

107. $EDAA

108. Score=1

110. $SUPO

111. Score=6

112. Bicycle

113. For going places (4)

114. For riding (2)

115. For driving (2)

116. Has two wheels (4)

117. Pedals (4)

118. Has wheels

119. Handlebars

120. A bicycle ride

121. Has brakes/ chain/ seat

122. Tricycle

123. Helmet

124. No credit for "handle" instead of "handlebars"

125. Vehicle

126. Clock

127. For telling time (4)

128. So you can see the time (4)

129. Tells you what the time is (4)

130. For waking you up (2)

131. Has numbers on (4)

132. Not worn on person (4)

133. Goes tick-tock/ chimes/ rings to wake you up (credit only if it's clear that child is not understanding clock to mean "bell")

134. Has hands

135. Like a watch

137. Machine

138. Device

139.

136. List of times e.g. three o' clock

140. Alphabet

141. Writing (2)

142. Spelling (4)

143. Making/ learning words (2)

144. For learning to read (4)

145. Letters (4)

146. Naming of specific letters (=1 regardless of number of letters named)

147. To spell someone's name

148. Sounds

149. Words

150. To learn

151. A set of letters

152.

153. Donkey

154. For carrying people and/ or things (4)

155. For riding (2)

156. For packing things on (2)

157. Has long ears (4)

158. Almost like a horse (4)

159. Has four legs (4)

160. Eats plants/ grass (4)

161. Goes "hee-haw"

162. Kicks

163. A donkey ride

164. Animal

165. Creature

166. Diamond

167. Used for making jewellery (2)

168. Crystal (4)

169. Hard (4)

170. Shiny/ sparkly/ glittery (4)

172. Goes in a ring / for making rings

173. Diamond ring / diamond earrings

175. Jewel

176. Gem

177. Stone

171. Has four sides (4)

174. Like a triangle / circle

178. Shape

179.

184.

188.

191.

196.

180. Word

185. Function/Typical

189. Definitional Features

192. Descriptive Characteristics/ Associations/

197. Superordinates

181.

186. actions

198. $SUPO

190. $DFT

193. Examples/Applications

182.

187. $FUN

199. Score=6

194. $EDAA

183. ___

195. Score=1

200. Hat

201. For protection (from the sun/ rain) (4)

206. To put on your head (2)

210. To wear to church

214. Clothing

211. A cap

215.

202. To keep your head warm (4)

207. To wear on your head (4)

212. For summer

203. To wear (put on) when it's sunny/ rainy (2) (If child uses *wear* also credit for $DFT)

208. To wear (2)

213. For winter

209. For your head (2)

204. For the sun / rain (1)

205. To keep the sun out of your face (4)

216. Knife

217. For cutting (4)

223. Sharp (4)

227. For cutting food, bread etc. (specific instance of use)

231. Utensil

218. Making food/

224. Made of metal (4)

232. Tool

cooking (2)

219. Eating with (2)

220. Chopping (2)

221. Peeling (2)

222. Killing (4)

225. Handle (4)

226. Blade or point (4)

228. Cutting oneself

229. To butter bread

230. Can be made of plastic

233.

234. Nail

235. Holds things together (4)

236. For scratching self or others (4)

237. Hanging things (2)

238. On your fingers / toes (4)

239. On your feet / hands (2)

240. Toenails/ fingernails (4)

241. Metal (2)

242. Can be hammered in (2)

243. You knock it with a hammer

244. Cutting your nails

245. Varnishing your nails

246. Pinching

247. Chop it into wood

248. Tool

249. Body part

250. Thief

251. Someone who steals (4)

252. Criminal

253. Someone who steals money/ jewellery etc.

254. Criminal

255. Person

APPENDIX M:
CODING PROCEDURES FOR FICTIONAL NARRATIVE SUBTEST

% Structural Coding

$INTR Introduction

Conventional opening e.g. *"one day", "once upon a time", "once"*

$ORNT Orientation

Setting the stage for the narrative by introducing the characters, setting, time and activity.

Characters e.g. *"Once there was a bear"*

Setting e.g. *"It was in the park"*

Time e.g. *"One winter's day"*

Activity e.g. *"Some bears were out flying a kite"*

$CHAR Character delineation

Specific identification of the characters e.g. *"the littlest bear", "the baby bear", "the bear wearing the red hat"*

Naming of characters and identification of their social roles e.g. *"she was the bear's mother"*

$PRB1 Statement of the problem

e.g. *"The kite got stuck in the tree"*

$PRB2 Statement of the problem

e.g. *"The bear got stuck in the tree."*

$PRB3 Statement of the problem

e.g. *"The bear fell down from the tree."*

Resolutions are reference to the remedial actions taken to deal with either of the two problems in the story.

$RES1 Resolution

e.g. *"The bear got the kite down." "The bear tried to get the kite down."*

$RES2 Resolution

e.g. *"The bear jumped down from the tree."*

$RES3 Resolution

e.g. "*The other bears helped the bear who was hurt."*

$CLSG Formal closing

Conventional story closing e.g. *"the end", "that's all", "that's it", "and they lived happily ever after."*

% Content Coding

Narrative events relate the actions of the story characters and move the plot forward. They are expressed via actions verbs such as played, flew, climbed, jumped etc. There needs to be evidence of animate agency and only explicitly state events can be credited.

$PLAY Bears playing
$FLY Bears flying a kite
$ATMT Bears attempt to get kite
$STCK Bear stuck in tree
$DWN Bear fell or jumped from tree
$HRT Bear hurt or dead

% Microlinguistic Coding

This coding includes words or statements which indicate to the listener what the narrator thinks about the narrative events or characters.

$INTS Intensifiers and Delimiters

e.g. "All the bears came to see if the bear was okay." "It was *only* a small scratch".

$ADJ Adjectives

e.g. "The kite was *red* and *yellow.*"

$NEG Negatives or defeats of expectations

e.g. *"The bear could not reach the kite."*

$IST References to internal states

e.g. "The bear was *scared.*"

$PHY References to physical states

e.g. "The bear was *hurt.*"

$INTN Intentions

e.g. *Tried, wanted*

$CAU Causal markers

e.g. "The bear fell *because* he slipped out of the tree."

$WRDWords with high evaluative content

Emphatic or evaluative words other than qualifiers e.g. "The bear came *crashing* to the ground." The words *stuck* and *trapped* are to be credited as evaluative.

% Written Discourse Feature Coding

$SPCH Direct or Indirect Quotes

e.g. "Be careful", they said"
They told him to be careful.

$SDEF Sound effects

e.g. The bear fell *crash.*

$ADV-ly adverbs

e.g. He climbed the tree *carefully.*

$RELC Relative clauses

Relative clauses introduced by which, who and that when it substituted for which or who e.g. The bear *that was pushing the wagon.*

$ATTR Attributive adjectives

Adjectives used as modifiers e.g. "the *little* bear", rather than "the bear was little".

$COMP **Complement clauses** introduced by that

e.g. The bears were afraid *that the bear in the tree would fall down.*

$CONJ **Conjoined noun/ verb or adverbial phrases**

e.g. *The bear climbed the tree and fell down* (verb phrase)

They saw bears and lions (noun phrase)

He climbed the tree slowly and carefully (adverbial phrase)

% Holistic Coding

$TANC **Consistent use of tense**

$RPNS

Non-pre supposing introduction using indefinite article + noun or number = noun e.g. *a bear, some bears, five bears.*

$RPRS

Pre-supposed reference using definite article + noun e.g. *the bears, teddy bear*

$RUSP

Unspecified pronouns/ determiners used without prior specification in the text e.g. *he, they, one was flying a kite.*

$RNFM

No first mention

$ATSO

And, then, so

$OCON

Connectives other than *and* or *then;* includes *so that.*

% Total Word Count

Add all credits to arrive at Total Bear Story count.