# THE EFFECT OF CURRICULUM ON FOUNDATION PHASE LEARNERS' RECEPTIVE VOCABULARY

by

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**DECLARATION**

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

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# Declaration

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Signed:

WConrad

September 2008

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# Table of Contents

**Declaration** ii
**Acknowledgements** iii
**Abstract** iv
**Table of Contents** v
**List of Tables** vii
**List of Appendices** viii
**List of Appendices** viii
**1.1 Motivation for the Study** 1
**1.2 Aims, Goals, Research Question and Hypotheses** 3
**1.3 Summary of Research Design** 4
**1.4 Summary of Methodology** 4
**1.5 Overview of the Dissertation** 5
**2.1 Introduction** 6
**2.2 Vocabulary Defined** 7
**2.3 Vocabulary Acquisition** 9
**2.4 Vocabulary Assessment** 14
**2.5 Vocabulary and Education** 14
2.5.1 Introduction 14
2.5.2 Traditional versus Progressive Education 15
2.5.3 Reading Instruction Models – Phonics versus Whole-word Approaches 16
2.5.4 Phonological Awareness as a Discourse: Horizontal and Vertical Discourses 18
2.5.5 Visible and Invisible Pedagogies 23
2.5.6 Integrated and Collection Codes 25
2.5.7 Semantic versus Themantic Clustering 27
**3.1 The Problem Re-stated** 30
**3.2 Research Design** 30
3.2.1 Design Classification 30
3.2.2 Research Question 31
3.2.3 Hypotheses 31
3.2.4 Key variables 32
**3.3 Sample** 32
3.3.1 Introduction 32
3.3.2 Choosing the Schools 32
3.3.3 Choosing the Learners 34
3.3.4 Socio-economic Status (SES) 34

3.3.5 School-level Factors: Curriculum 36
3.3.6 School-level Factors: Teacher Variables 39
**3.4 Research Instruments 39**
3.4.1 The Peabody Picture Vocabulary Test Revised (PPVT-R) 39
3.4.2 Teacher's Questionnaire: See Appendix A 40
3.4.3 Parent's Questionnaire: See Appendix B 40
**3.5 Data Analysis 40**
**3.6 Strengths and Limitations 41**
3.6.1 Threats to Internal Validity 41
3.6.2 Threats to External Validity 42
3.6.3 Threats to Reliability 42
**3.7 Ethical Issues 43**
**4.1 Results from the PPVT-R 44**
**4.2 Results of the Teacher's Questionnaire 49**
**4.3 Results of the Parent's Questionnaire 50**
**5.1 Introduction 52**
**5.2 Reading Instruction 54**
**5.3 Comparing Vocabulary-enhancing Features of the Two Curricula 56**
**6.1 Limitations of the study 59**

**Appendices 62**
**References 65**

# List of Tables

TABLE 1: Student-Centred Instruction versus Teacher-Centred Instruction 15
TABLE 2: NCS Phonics Curriculum and PA Skills 20
TABLE 3: Theoretical Bases for Traditional vs Progressive Approaches to Education 26
TABLE 4: Levels of Significance 41
TABLE 5: Raw Scores and Statistical Analysis 44
TABLE 6: t-test Results 45
TABLE 7: Age-equivalency of Raw Scores 46
TABLE 8: Parental Education Level in School A 51

# List of Appendices

**Appendix A: Teacher's Questionnaire** 63
**Appendix B: Parent's Questionnaire** 64

# Chapter 1: Introduction

## 1.1 Motivation for the Study

Does curriculum type influence vocabulary growth and consequently language development in learners? This has been a question in the forefront of my mind since various studies have claimed poor language development as being the cause of academic difficulties with reading, writing, mathematic and science ability.

In working with learners who are hearing-impaired and consequently, language-delayed, I have noticed how poorly they perform in learning areas such as numeracy due to their poor language comprehension. Educators who have been working at the school for a number of years have commented on the deterioration of learners' academic success and language proficiency. I have therefore wondered whether the National Curriculum Statement (NCS) has had a role to play in this phenomenon - with its use of themes that cut across the various learning areas that are quite weakly defined from each other. As a consequence, vocabulary gets repeated and re-used between learning areas within a particular grade, but possibly, also when a particular theme is repeated in another grade or phase.

It is questioned whether this "recycling" of vocabulary does not limit the opportunity for learning novel words, effectively inhibiting potential language development or whether there are other forces at play. Themes, also referred to as "semantic clustering", has a strong affinity with more integrated curricula as they tend to facilitate the "flattening" of curriculum structure. In other words, more segmentally-ordered curricula structures within integrated curricula are created when weaker boundary strength exists between themselves and other subjects, by means of "themes" that connect these subjects to each other. For example, subjects such as Mathematics, Science and English are not taught exclusively, but rather within or under an umbrella theme such as "My Body" where vocabulary items arise from body parts, actions or senses and mathematical or science concepts are assessed and facilitated via this vehicle. A phonics task may include having the learner clap out the number of syllables in words such as "finger", "eyebrow", "shoulder blade" etc.

Anecdotal evidence gleaned from educators in practice has often exposed the limitations that educators themselves feel when planning such a lesson. Reports of "not being able to adapt the concept or content of what they would like to teach to the current theme" abound when discussing for example, an event receiving wide media coverage at the present time. This leads one to ponder whether the "theme" drives the knowledge learnt by children at the expense of other vocabulary (language), mathematical or scientific concepts.

While there are numerous studies, both in South Africa and abroad, that have investigated the effect of language competence on reading achievement, none to date have explored the possible link, if there is one, between vocabulary and curriculum. The role and importance of language development for reading ability has been firmly established in all of these studies, and has implications for reading instruction in schools. If language and reading are so closely related, it could be presumed that curriculum, and its inherent reading instructional requirements would conversely have an effect on language development. South Africa, in particular, has experienced major problems with the reading ability of its learners. The National Grade 3 Systemic Evaluation in 2001, undertaken by the Department of Education showed that 61% of children cannot read or write at the appropriate level for their age. As reading literacy is a major tool for enabling all other learning, these children have little hope for coping in later grades unless urgent and effective intervention takes place. The implication of poor literacy levels among young learners is that they not only leave primary school illiterate, but that the trend continues as they enter secondary school (Buhlungu, 2007).

Some critics, such as Reeves (2005) have laid the blame on the new curriculum, specifically its understipulation of outcomes, while my experience has led me to question whether due to inadequate training, teachers lack the skills and are therefore unable to teach reading with success. This, coupled with an understipulated curriculum could exacerbate the problem of reading achievement in our schools. During my work experience where I was called upon by Learner Support staff from a local school clinic to facilitate a series of workshops in Phonological Awareness to Learner Support educators, I was appalled at the limited understanding and insight into Phonics instruction that these educators possessed. These educators were shared between two to three schools and functioned as "remedial teachers" to learners who needed extra support in literacy and/or numeracy. It was very disheartening to witness the level of their ability, especially since they were meant to be better able (than the class educator) to remediate any learning difficulties experienced by learners.

As previously stated, no literature examining language development in curriculum, or none that I am aware of after extensive journal searches, exists, and in light of these tantalising questions and hypotheses, I will attempt to probe the suspected relationship between curriculum structure and consequent language competence. I will be comparing a curriculum more traditional in nature to one which is more integrated and their natural affinities to a particular reading instruction method, i.e. either phonics or whole-word approaches. The role of pedagogy in curriculum will not be examined as I am most interested in the type of reading instruction method utilised within a particular curriculum as reading has been shown to have a key role in the development of language.

Language competence will be represented by receptive vocabulary, i.e. the comprehension of single words, as this is the most basic foundation on which morphological and syntactic knowledge is based. When children learn to talk, they typically use single words bereft of morphological markers such as tense markers e.g. –ed in "walked", or markers of number such as the suffix –s to indicate the plural form of a word. They then progress to two-word utterances and later 3 to 4-word sentences until their language resembles that of an adult's. Vocabulary is hence a platform for deeper and more complex language competence.

## 1.2 Aims, Goals, Research Question and Hypotheses

As mentioned above, this study aims to investigate the degree to which curriculum may affect language development through its reading instruction method as well as its favouring of semantic clustering in the form of "themes", and subsequent academic success. In doing so, I will need to locate two schools using different curricula (one integrated and the other traditional) and then investigate and research the reading instruction methods typically used within these two types of curricula and then review reading attainment associated with both.

It is hypothesized that the curriculum with better language-stimulating characteristics, namely more explicit reading instruction methods and language-learning opportunities, should yield learners with better language competence, all else being equal.

## 1.3 Summary of Research Design

The vocabulary level of Foundation Phase learners of two schools matched for socio-economic background but of differing curricula (one more integrated and the other more traditional) will be measured using a standardised test and then compared initially, and then one year later – after a full year is spent being educated in a particular curriculum. Closest in describing this study would be the prospective or cohort study – where some variable/s are assayed at the start of the study, viz. vocabulary level, then after a period of time the variables are assayed again (Trochim, 2006). This is thus a year-long cohort study examining and comparing learners in two schools.

The aim of this is to hopefully lay bare the effect that schooling with respect to curriculum type, and not sociodemographic variables, may have on a learner's vocabulary development.

## 1.4 Summary of Methodology

The sample would ideally comprise an equal number of learners from both a school using a more integrated curriculum as well as a school using a traditional curriculum. The learners would be from the Foundation Phase as they presumably would not have been exposed to other curricula preceding that of their current school thereby blurring the results of the testing. The effect of socio-economic background variables will hopefully be suppressed by trying to match these schools as closely as possible for socio-economic status (SES). School fees will be used as a proxy for SES, and will therefore need to be equated.

A standardized vocabulary comprehension test, namely the Peabody Picture Vocabulary Test-Revised (PPVT-R, 1981) will be used to measure the learners' vocabulary initially, and then a year later. A gain score will be obtained by calculating the difference between the initial and final scores of each learner. In order to compare gain differences between the two schools, the means of the learners' gain scores for each school will be examined.

## 1.5 Overview of the Dissertation

So far I have outlined the course of this study as firstly trying to demonstrate the link between vocabulary development and language competence, that is to say the more complex a child's vocabulary is, the greater his/ her language competence. Next, the link between language proficiency and reading ability will be established through reviewing research on this topic, confirming the syllogism that good vocabulary may be associated with reading ability. As reading ability has been shown to be a factor in predicting academic success, the important role that vocabulary plays in this predictive "flow chart" will be investigated in this study.

Different reading-instruction approaches have tended to produce differing reading outputs in learners. I aim to investigate the type of curriculum used at both schools and discuss their characteristic reading-instruction methods and the reported success associated with them. Links will be made between vocabulary gain and reading-instruction methods used – either phonics or whole-word reading, as well as the presence or absence of semantic clustering (themes) within the curriculum.

In Chapter 3 then, my study's methodology will be delineated in terms of its design, the selection of the sample, the instruments used as well as an analysis of the data. Chapters 4 and 5 present my results of the data analysis and discussion of these results. Chapters 6, 7 and 8 will comprise the conclusions, recommendations and future directions for study.

# Chapter 2: Literature Review

## 2.1 Introduction

Apart from formal instruction, there are various factors that influence language development, including, sensory impairment (e.g. deafness), cognition, as well as environmental factors such as socio-economic status (SES) and parental education level.

These sociodemographic variables, specifically maternal educational level have been investigated extensively. Evidence suggests that family income and parental education level are more significant influences on developmental performances than any other (Dolloghan et al., 1999). Low SES has been associated with poorer language development in children, due to these children's differing language experiences rather than fundamental deficits in the psycholinguistic operations required for linguistic processing (Dolloghan et al., 1999).

Learners from low socio-economic backgrounds are less likely to perform well at school, achieving lower pass rates, university exemptions and A-aggregates. Matriculation results in the Western Cape in 1997 reflect this trend, with A-aggregates especially concentrated in schools consisting of learners with higher SES (van der Berg & Burger, 2003).

Dolloghan et al. (1999) further explains that parental education level is associated with variations in the environment and experiences of children, including the quantity of language they hear. It is suggested that the characteristics of the child-directed language that the parent uses is affected by his/ her education level. Children's language development, characterized by Mean Length of Utterances (MLU's), vocabulary comprehension, total number of words as well as word complexity show significant linear trends based on maternal level of education (Dolloghan et al., 1999).

Thal & Tobias (1992) report that receptive language i.e. language comprehension, is a consistent indicator of language abilities. They have also shown that poor vocabulary development at a young age correlates to later limited language comprehension. This lends credibility to vocabulary comprehension as being a reliable measurement in language development.

## 2.2 Vocabulary Defined

*Random House Webster's Unabridged Dictionary's* (Pearson, Hiebert & Kamil, 2007) definition of *vocabulary* is "the words of a language." In turn, *word* is defined as "a unit of language, consisting of one or more spoken sounds or their written representation that functions as a principal carrier of meaning."

These dictionary definitions provide little specificity and hence little guidance to researchers studying vocabulary understanding. Vocabulary can be categorized in terms of type as a function of the cognitive operations involved and the context in which it is measured. Vocabulary could be productive or receptive, and its mode of communication oral or written (or manual as in sign language used by the Deaf). Hence, the quartet of vocabulary types being either: listening, speaking, reading and writing. In general, receptive (comprehension) vocabulary is larger than productive vocabulary; we can understand more words through listening and reading than we use in speech or writing. This conclusion should not be surprising given the general psycholinguistic principle that comprehension normally precedes production and the recognition that additional cueing systems (various textual and contextual aids) are available to individuals during language reception, but not during production (Pearson et al., 2007).

Words may seem like simple entities, but they are not. Their surface simplicity belies a deeper complexity. For example, they connect with experience and knowledge, and their meanings vary depending on the linguistic contexts in which they can be found, including a variety of literal and figurative contexts. Complexity of word knowledge is evident in the five aspects of word knowledge used in reading (Pearson et al., 2007):

(a) *incrementality*: knowing a word is not an all-or-nothing matter, each time we encounter a word and each time we use it, our knowledge becomes a little deeper and a little more precise – eventually leading to nuanced understanding and flexible use.

(b) *multidimensionality*: word knowledge consists of qualitatively different types of knowledge such as understanding nuances of meaning between words such as "glimpse" and "glance" or typical collections of words e.g. "cold front" not a "cold back".

(c) *polysemy*: many words have multiple meanings, and the more common the word, the more meanings it is likely to have; a common word like "run" may have 20 meanings, but a rare word like "geothermal" has but one.

(d) *interrelatedness*: learning or knowing a word often entails derivation or association with the meanings of related words; either in a linguistic context (dogs bark or buffaloes roam) or in one's semantic memory store (dogs are members of the canine category and related to cats because they share the attribute that they can be domesticated).

(e) *heterogeneity*: a word's meaning differs depending on its function and structure. Contrast for example the following sentence, "I spilled the cocoa, get a broom, "with "I spilled the cocoa, get a mop". Over time, by experiencing a word like "spill" in different contexts, we learn more about the range of its application.

Vocabulary knowledge is therefore a very complex skill, as evidenced by the afore-mentioned levels of word-knowledge complexity. This then urges for more aggressive vocabulary instruction and studying of its relation to comprehension more carefully. However, if we are to teach it more effectively and if we are going to better understand how it is implicated in reading comprehension, we must address the vexing question of how we assess vocabulary knowledge and, even more challenging, vocabulary growth.

Pearson et al (2007) do not doubt vocabulary's close ties to comprehension. In their study, vocabulary knowledge predicts comprehension performance consistently with positive correlations typically between .6 and .8. Because a correlation is not an explanation of a conceptual relation between factors, they draw on three hypotheses to explain this high correlation. The *instrumentalist hypothesis* argues that learning the words causes comprehension. The *verbal aptitude hypothesis* suggests that general vocabulary ability is the root cause of both vocabulary and comprehension performance. And thirdly, the *knowledge hypothesis* argues that both vocabulary and comprehension result from increases in knowledge.

For this study, it does not really matter which of these hypotheses are adopted. The bottom line appears to be the direct association that exists between vocabulary and comprehension – their causal relationship is of no great consequence, instead this study will be examining factors, namely education approach, but more specifically, curriculum type that would have an impact on vocabulary and by association, comprehension.

## 2.3 Vocabulary Acquisition

Higgins (2003) states that vocabulary knowledge is fundamental to learners' comprehension of text. Knowing the meanings, relationships, and contextual interpretations of new vocabulary words enhances comprehension of text. Vocabulary therefore has an important role in reading comprehension, which in itself (reading) is a fruitful approach in acquiring new words.

Williams' (2007) claims of vocabulary's important role in reading comprehension rest on the 'incidental vocabulary learning hypothesis'. This hypothesis is based on the assertion that most words are acquired when learners are constantly exposed to them in a variety of contexts, and that this acquisition is unconscious. He purports that extensive reading programmes are one way of providing the means for learners to be constantly exposed to language input. This appears to be an advantage of student-centred or more progressive curricula. The integration of materials across learning areas (subjects) would allow vocabulary to be repeated in various learning contexts, however, the complexity level of the vocabulary that the learners are exposed to is not formally monitored by teachers within the NCS. In other words, while learners are exposed to the same vocabulary items, teachers are not purposefully introducing these words at various levels of comprehension that is, they are not presenting cognitively-graded vocabulary to their learners. It would appear that both the learners' acquisition and the teachers' presentation of vocabulary are unconscious.

Furthermore, Krashen (1989) suggests that the study of the acquisition of vocabulary and spelling ability can help us understand language acquisition in general. His review of the 'Input Hypothesis' (IH) lauds it as being the most consistent with language acquisition. The IH assumes that we acquire language by understanding messages. More precisely, comprehensible input is the most essential environmental ingredient – a richly specified internal language acquisition device also makes a significant contribution to language acquisition. He also argues, like many others, that competence in vocabulary and spelling is best attained by comprehensible input in the form of reading.

According to IH, when the Language Acquisition Device is involved, language is unconsciously acquired – while you are acquiring, you are not aware of it; your conscious focus is on the message rather than the form. Thus the acquisition process is identical to what has been termed 'incidental learning' as described earlier. IH has several competitors. Two of the most popular are the 'Skill-Building Hypothesis' (SBH) and the 'Output Hypothesis' (OH). According to SBH, we learn language by first consciously learning individual rules or items, and gradually through drills and exercises. In vocabulary learning, the SB view involves learning words one at a time, by deliberate study, and may include analysing their parts, prefixes, suffixes and roots. The OH argues that we learn language through production – we learn items and rules by trying them out in production. If we experience communicative success, our (conscious) hypothesis about the rule is confirmed and consequently altered if we do not. Skill-building and output with feedback, it is hypothesised, may produce some competence, but the competence is learned, not acquired and thus very limited (Krashen, 1989).

If IH is correct, it predicts that more comprehensible input, aural and written, results in more language acquisition. This prediction has been confirmed for other aspects of linguistic competence. Chomsky, according to Krashen (1989), reported that children who grew up in richer print environments displayed more grammatical competence. Several studies show that better writers read more outside of school, and this holds true for vocabulary: more comprehensible input, in the form of reading, is associated with greater competence in vocabulary and spelling.

Echoing cries for more aggressive and purposeful vocabulary teaching, is the perspective of word selection for instruction. Vocabulary could be viewed as falling into three tiers. The first tier is comprised of high-frequency words e.g. "come", "go", "happy", that do not need to be taught, and the third tier is comprised of rare words that are specific to certain content domains. Second tier words, where it is believed that instruction should be pitched at, is the vocabulary of mature language users when they read and write. They are best thought of as less common labels for relatively common concepts e.g. "pulchritude" for "beauty". As such, they constitute the language of sophisticated academic discourse. Another approach to selecting words is the identification of words judged to be worth teaching during the primary grades. These are words known by 40 to 80% of students by the end of grade 2 and are ranked in terms of their "knownness" with the least known words usually acquired last. The advantage of this approach is that enables the vocabulary gap to be minimized between students who have different vocabulary experience and stimulation, allowing at-risk students to be on track with their word knowledge. Reading series that are grade-normed allow for this kind of tracking and is decidedly less learner-centred. (Pearson et al., 2007) From this store of literature, reading appears to be the most cited source of word-learning. This provides further encouragement for this study's examination of the two curricula's, viz. traditional and progressive approaches to reading instruction.

Repetition of vocabulary has also been shown to lead to greater gain. (Pearson et al, 2007; Tinkham, 1997; Krashen, 1989) However, a study by Webb (2007), examining the effects of repetition on word knowledge of second language learners, found that only 10 repetitions of a word in context was sufficient for learning gains, although more than ten was needed for developing "full word knowledge". Word knowledge was characterized by knowledge of orthography, association, grammatical functions, syntax, meaning and form. Harley (1996) has pointed to the fact that vocabulary knowledge is multi-faceted and complex. She also states that classroom teachers must take a more comprehensive approach to vocabulary development in order for learners to reach a higher quality and quantity of language output. There are three facets to this complexity: (a) receptive (comprehension) versus productive vocabularies, (b) breadth versus depth of vocabularies, and (c) direct teaching versus contextual inferencing.

### a) Receptive vs. Productive

Receptive vocabulary refers to the words and expressions learners can understand when reading or hearing them. Productive vocabulary refers to the words and expressions that the learners can use correctly when producing oral or written language. Both capacities need to be developed to communicate effectively (Swain, 1996).

An adaptation of the Gass (1988) framework for language development hierarchically delineates the processes needed for word acquisition and production. It also highlights the importance of repeated exposure and manipulation of the vocabulary available for the learner to internalize and in turn to produce newly-acquired vocabulary.

### b) Depth vs. Breadth

A second facet to vocabulary acquisition, which is key to quality language development, is depth of knowledge. Similar to Webb's (2007) notion of "full knowledge", depth of vocabulary deals not only with meaning, but with morphology, phonology, syntax, sociolinguistic aspects, differences between written and spoken uses, and strategies for approaching unknown words. That is, not only do learners have to be able to define a word (first level), but they have to correctly be able to apply/ select an appropriate use of the word (second level), as well as recall the various meanings of the word (third level), apply the word correctly to all possible situations (fourth level) and be able to use the word productively (fifth level). That teachers therefore need to make a conscious effort to create learning activities that allows for vocabulary development beyond the first level. Webb's (2007) results had concurred in that he found that 10 repetitions of a word were sufficient for acquisition in terms of word meaning (i.e. first level), but that more than 10 repetitions of a word, in many contexts, were required for "full knowledge" of a particular word.

### c) Direct Teaching vs. Contextual Inferencing

The emphasis of most teachers' vocabulary instruction entails one main tactic – encouraging learners to glean meaning from context. Raptis (1997) reports that inferring the meaning of new vocabulary in context is a lengthy and error-prone undertaking. Guessing from context is not always possible, due to the learner's limited ability, and also due to varied text construction. Texts range drastically in contextual quality and due to this, learners may encounter texts that are not context-rich. Teachers should therefore offer contextualized and decontextualized (direct teaching) vocabulary-learning activities.

Once again, this provides support for purposeful, cognitively-graded vocabulary input from teachers, not mere repetition of words which could largely be the case when a language-learning curriculum is lacking. Reading ability of learners would then be vitally important in ensuring that they are exposed to complex vocabulary in varying contexts. The rationale for this study involves the precept that language plays an important role in a learner's comprehension of oral as well as written instructions. An age-appropriate vocabulary is vital in enabling a learner to perform higher cognitive tasks within other discourses such as mathematics and the sciences where knowledge structures are more hierarchical and where language comprehension is the vehicle by which learners' knowledge of mathematical operations are tested. An inability to comprehend what is asked of them presents as an inability to perform numerical operations which they may otherwise be able to perform. Hence, a lack of language growth hinders cognitive development in spite of a learner's potential.

Howie's (2005) report on the Third International Mathematics and Science Study (TIMMS) and its Repeat (TIMMS-R) aimed to describe and explore the main factors influencing South African Grade 8 learners' poor performance on the mathematics test. While classroom-level variables resulted in the most variance on the mathematics test, according to Howie (2005), the second-most influential variable in predicting performance was found to be language proficiency. The learners who performed poorly in the mathematics test, also did poorly in the language proficiency test.

## 2.4 Vocabulary Assessment

The earliest measures of vocabulary consisted of asking learners to define or explain words that were selected because they were likely to be found in the texts they would encounter in schools. With the movement towards mass testing, came the need for more efficient, easily-administered, and easily scorable assessments; hence the move to standardised, multiple-choice versions of items the students read and responded to. From here, vocabulary testing progressed to more sensitive, contextualised assessments. However, many of the major assessments still use fairly isolated approaches, one of them being the Peabody Picture Vocabulary Test (PPVT) and its versions. This test, a widely used standardised measure of vocabulary development, uses the listening mode of the receptive (comprehension) dimension. It is therefore completely oral and does not require any form of reading knowledge.

The PPVT consists of plates/ sets of 4 pictures, and the task is to identify the picture that matches the word spoken by the test administrator. If the stimulus word was "surfing", the picture set might include someone surfing, someone playing water polo, someone swimming, and someone driving a speedboat (Pearson et al., 2007).

## 2.5 Vocabulary and Education

### 2.5.1 Introduction

Vocabulary and education are closely linked in that different types of curriculum and pedagogy would imply different language-learning methods and approaches. This section will explore the two main types of educational approaches as cited in the literature, and how they may have an impact on vocabulary acquisition and development, with respect to particularly their reading instruction methods, pedagogy and curriculum – specifically with regard to the integratedness of materials across subject areas.

### 2.5.2 Traditional versus Progressive Education

The two basic educational approaches are namely the traditional, or teacher-centred approach and the progressive or student-centred approach. These two polarised or ideal types of education have been discussed and compared at length over the last century by many scholars. A commonality exists in all cases of these two approaches being contrasted, being that the traditional is a more formal in nature and emphasises the acquisition of knowledge, while the other one focuses more on the individual learner and "on learning beyond its purely intellectual dimensions" (Chall, 2000 p. 27).

Educational research has presented a list of characteristics of the two approaches:
(Chall, 2000 p. 29)

**TABLE 1: Student-Centred Instruction versus Teacher-Centred Instruction**

| Characteristic | Student-Centred schools | Teacher-centred schools |
|---|---|---|
| Curriculum | Follow, as much as possible, student interests; integrate materials across subject areas | Standards are established for each grade level; specific subject areas are taught separately |
| Role of the teacher | Teacher as facilitator of learning: provides resources, helps students plan and follow their own interests, and keeps records of learners' activities and use of time | Teacher as leader of class: is responsible for content, leading lessons, recitation, skills, seatwork, and assigning homework |
| Materials | A rich variety of learning materials, including manipulatives, are used | Teachers work with commercial textbooks |
| Range of activities | Use of a wide range of activities based on individual interests | Smaller range of activities, largely teacher-prescribed |
| Grouping and teaching target | Students work in small groups, individually, and/or with teacher guidance based on their own initiative; teaching target is the individual child | The whole class is moved through the same curriculum at roughly the same pace; teacher may occasionally teach small groups, especially for beginning reading, and may provide a degree of individualized instruction; teaching target is the whole class |
| Movement | Students are permitted to move around freely and cooperate with other learners | Child-child interactions are restricted |
| Time | The use of time is flexible, often permitting uninterrupted work sessions largely determined by the learners | The day is divided into distinct periods for teaching different subjects |
| Evaluation | Based on comparisons of learners with themselves rather than with their classmates or grade standards; preference for diagnostic rather than norm-referenced evaluation; deemphasis of formal teaching | Norm-referenced tests and grade standards; informal and formal testing |
| Progression | Learners proceed at different rates | Students are assigned to grades by age |

### 2.5.3 Reading Instruction Models – Phonics versus Whole-word Approaches

Owing to good evidence suggesting that more comprehensible input (reading being one of the best) results in more language acquisition (Krashen, 1989), it is valuable to explore the various approaches to reading instruction.

Reading is a complex process which requires a number of different skills operating simultaneously and in complimentary ways. Visually, we move our eyes across a line of text and see the shapes of letters and identify whole units e.g. words. When reading an unfamiliar word we may access the phonological form of the word (sound it out) or read it by analogy (compare it to a familiar word of similar form). Meaning must be processed, and integrated within phrases and sentences using our knowledge of syntax and semantics. At the same time, this must be integrated with information already read. This then allows us to make predictions about the rest of the text. All this must then be related to our world knowledge so that the ultimate aim of reading is achieved: understanding the text (Ehri, 1992).

Crucial to this comprehension of text, is the development of expressive and receptive language. In literate societies, children learn the uses of written language through watching people in their environment. They learn about the conventions of print: the way to hold a book and turn the pages. They learn the schema of a story and their vocabulary and general language skills improve rapidly. Hence, exposure to reading results in the improvement of receptive and expressive language skills (Bernstein, 1971).

Chall (2000) tracks the various approaches to reading instruction and distinguishes between the more traditional teacher-centred and more informal learner-centred approaches. Teacher-centred approaches have tended to be formal, "utilizing direct instruction form the teacher, systematic instruction in phonics, the use of reading texts that have controlled vocabularies, as well as assigned literature and non-fiction". (pg. 58) On the other hand, student-centred reading approaches rely on learners' choice of reading material, promoting whole-word recognition (sight-words) and teaching phonics incidentally. This has sparked great debate over the teaching of whole words versus phonics in particular.

Proponents of whole-word reading claim that reading for meaning, with texts selected by the child is the most efficient way of word recognition and decoding. They also view the reading process as a universal one – beginner and later reading is essentially the same process. Those who support the phonic approach view reading as a developmental approach, and the importance of phonemic awareness (PA) as a precursor to reading has been confirmed by findings from various studies. Most research comparing the effectiveness of a whole-word versus a phonic approach to reading instruction, has found that the classic i.e. direct, systematic instruction in phonics, was more effective than any other (Chall, 2000).

Chall (2000) delineates the trends in reading instruction and clearly notes the effects of the two main types i.e. the whole-language (student-centred) approach versus the traditional, teacher-centred, phonics approach on reading achievement. Whole-language, while considered by many as a relatively new approach, resembles practices from the 1920's that relied on using more informal reading material, usually the child's own stories. The child would then be expected to infer specific letter-sound relationships without formal phonic instruction. Emphasis was therefore placed on the child recognising whole words, or even whole sentences. Proponents of this method claim that the most effective way of facilitating word recognition and decoding was to promote reading with comprehension from the start. However, knowledge of letter-sound relationships and its importance for reading is upheld by supporters of the phonic approach. Chall (2000), states that research on phonemic awareness (PA) has proved that if phonics "is not learned early, phonological factors may indeed interfere with the use of language and reasoning in reading development" (p.61). As children get older, these phonological problems result in difficulties with reading comprehension and fluency. Hence, in younger learners – i.e. up to grade 3 level, phonic skills appear to be the greatest influence in reading ability, while knowledge of word meanings (after phonics skills have been acquired) seems to be an indicator of reading ability of older learners (Chall, 2000).

### 2.5.4 Phonological Awareness as a Discourse: Horizontal and Vertical Discourses

Phonological Awareness (PA) refers to the conscious awareness of the sounds in words, separate from a word's meaning. PA emerges gradually during the pre-school years. Children who begin their formal reading instruction with well-developed PA skills appear to have an advantage in learning to read. A large body of research indicates that PA is highly related to early reading ability. Studies have shown that children with poor PA have more difficulty learning to read than do children with well-developed speech-sound awareness. It is argued that a lack of awareness of the sound structure of a language makes it particularly difficult to learn correspondence between letters (graphemes) and the speech sounds (phonemes) they represent. The lack of PA could therefore be seen as a primary causal factor in many early reading difficulties.

Bernstein (1999) distinguishes between what he describes as being 'vertical discourses' and a 'horizontal discourses'. He further defines these two fundamental types of discourses in terms of their form.

Horizontal discourse is described as a form of knowledge which everyone has access to and uses. The features include: its likelihood to be oral, local, context-dependent and tacit. The main defining feature of this type of knowledge structure is that it is segmentally organised. An example of this type of discourse would be knowledge of how to tie your shoelaces. It is a skill which is very context-dependent i.e. it would not assist you in brushing your teeth, as they are two different contexts.

Contrariwise, vertical discourse is hierarchically organised and has a coherent, explicit and systematic structure e.g. the sciences. It could also take the form of a "series of specialised languages with specialised modes of interrogation and specialised criteria for the production and circulation of texts" i.e. horizontal knowledge structures such as the social sciences and humanities. Integration of procedures of the former typically happens at the level of meanings and not the level of relation between contexts (as is the case with horizontal discourses) i.e. it has a hierarchical structure. General theories are therefore produced and used to integrate knowledge at lower levels of this knowledge pyramid.

Although PA is not a "knowledge structure" as such, it can nevertheless be described as having a hierarchically-organised structure. This is exhibited by results of various statistical and investigative studies around the components of PA skills which focus on generating theories to assist in the development and remediation of PA difficulties in children.

This empirical evidence has generated the following PA components and their developmental progression (Stuart & Coltheart, 1988).

Stage 1:
  a) Rhyme production as part of spontaneous linguistic development.

Stage 2:
  a) Sensitivity to rhyme and alliteration as reflected by comments that words sound the same.
  b) Detection of rhyme
  c) Rhyme production on demand

Stage 3:
  a) Syllable analysis
  b) Synthesis of syllables
  c) Synthesis of onset and rime patterns {str (onset)---ing (rime)}
  d) Analysis of initial sounds in words
  e) Analysis of last sounds in words
  f) Syllable manipulation
  g) Letter knowledge (phoneme-grapheme awareness)

Stage 4:
  a) Synthesis of consonant-vowel-consonant (CVC) words
  b) Analysis of each phoneme in CVC words
  c) Synthesis of longer phoneme sequences and phoneme clusters
  d) Simple phoneme manipulation

Stage 5:
  a) Manipulation of phoneme clusters

PA's structure (from empirical evidence) has been recontextualized into a curriculum for PA in the form of the NCS: Literacy & Languages (Home language) - Learning Outcome 3 (Revised National Curriculum Statement Grades R-9 Policy Document, 2002).

**Grade 1: Assessment Standards for Phonic Awareness (1.3.5)**

- Recognises the names for letters of the alphabet;
- Understands the difference between letter names and letter sounds;
- Understands that letter names remain constant but the sounds they represent may vary;
- Understands the letter-sound relationships of most single consonants and short forms of vowels like 'hat' and 'mat';
- Segments simple words with single initial consonants and short vowels (CVC pattern) into onset and rime (the last part of the syllable) e.g. f-at;
- Groups common words into word families (e.g. fat, cat, mat)
- Recognises the silent 'e' in common words such as 'cake';
- Recognises two letter blends at the beginning of words
- Recognises common consonant digraphs at the beginning and ends of words e.g. 'sh', 'th'
- Recognises some high frequency sight words.

A comparison (see TABLE 2 below) between the recontextualised NCS Phonics curriculum and the developmental stages of Phonological Awareness highlights the lack of age- or stage-referenced norms built into the NCS's Phonics curriculum.

**TABLE 2: NCS Phonics Curriculum and PA Skills**

| Assessment Standard | PA Stage |
|---|---|
| Recognises the names for letters of the alphabet | Stage 3 (g) |
| Understands the difference between letter names and letter sounds | Stage 3 (g) |
| Understands that letter names remain constant but the sounds they represent may vary | Stage 3 (g) |
| Understands the letter-sound relationships of most single consonants and short forms of vowels like 'hat' and 'mat' | Stage 4 (a) and (b) simultaneously |
| Segments simple words with single initial consonants and short vowels (CVC pattern) into onset and rime (the last part of the syllable) e.g. f-at | Stage 3 (c) |
| Groups common words into word families (e.g. fat, | Stage 2 (b) |

| | |
|---|---|
| cat, mat) | |
| Recognises the silent 'e' in common words such as 'cake' | This is not a PA skill, but a spelling rule of English |
| Recognises two letter blends at the beginning of words | Stage 5 |
| Recognises common consonant digraphs at the beginning and ends of words e.g. 'sh', 'th' | This is not a PA skill, but a spelling rule of English |
| Recognises some high-frequency sight-words | This is not a PA skill, but sight-reading |

From the table above, it is evident that the NCS overlooks the early stages that are crucial for the development of phonic awareness. Stages 1 and 2 which involve the development of rhyming skills, are out of developmental order, as well as Stage 3 (a) and (b)'s development of skills in operating with syllables. The importance of rhyming ability and its correlation with later reading ability has been shown in many studies as reported by Stuart & Coltheart (1988).

Syllable-level operations are skipped completely, with immediate progression to phoneme-grapheme awareness (Stage 3 g). Learners are therefore expected to identify, discriminate and manipulate single sounds (phonemes) before they have mastered working on the syllable level. Furthermore, learners are expected to read and spell CVC (Consonant-Vowel-Consonant) words i.e. Stage 4 (a) and (b) before they have worked on identifying single consonants and vowels in isolation in CVC words. In other words, learners should firstly be able to identify the initial sounds, then final sounds and lastly medial vowels in CVC words auditorily before being expected to read or spell those words. An example would be asking the learner to listen and identify the first sound in a word like "sun"; on succeeding, he/she should then be asked to listen and identify the last sound. Progression to the identification of the vowel in the middle of the word would only be attempted when the learner is successful at identifying the first and last sounds.

The downfall of not breaking down the process of syllable and single-sound (phoneme) analysis and synthesis is that remediation of a PA problem is made difficult, in that the teacher would not be able to pin-point the exact stage at which the learner is functioning at and having difficulty in progressing from. Subsequent stages are then progressed to without remediation of earlier-stage difficulties, causing "gaps" in their literacy development, resulting in poor reading and spelling skills in these learners. Remedial intervention is needed in allowing a child to acquire the necessary reading skills. The class teacher may not be adequately qualified to treat the problem as he/she may not have received the specialised training to do so, thereby necessitating the services of a consultant remedial teacher.

Consonant clusters viz. "pr" in "pram, "sp" in "spat" are dealt with (Stage 5) before longer words with single consonants and vowels are developed such as "lemon" or "tablet". Learners are therefore not mastering a specific level, either rhyming, syllables, single sounds (phonemes), and later consonant and vowel clusters, before moving on to more complex skills.

In summary, the NCS assessment standards for Grade 1 Phonics do not follow the developmental framework for these skills, either through its omission, or by its erroneous ordering of precursing skills as well as its understipulation of expected assessment standards. Recognition of sight words is also listed under Phonic Awareness although this forms part of a whole-word approach to reading rather than a phonic one. This lack of specificity and developmental understanding embedded in the curriculum is particularly worrying as the Foundation Phase is exactly so, the time in which the foundations for literacy and further academic learning are laid. If learners do not possess adequate basic skills in literacy, they will continue to perform poorly in all other academic areas.

Chall's (2000) commentary on focus of a student-centred approach to reading instruction highlights the point that it promotes differentiating instruction to each child's learning style and ability. In larger classes, differentiating instruction would enable only a few learners to receive individualised attention each day. This would necessitate remedial treatment, a costly and highly-specialised type of intervention. On the other hand, traditional approaches tend to promote prevention of a reading problem before difficulties arise – methods and materials that would benefit most of the class for teaching reading are sought. Clearly stipulated assessment standards are adhered to enabling the teacher to identify learners that are lagging behind, and to what degree they are doing so.

### 2.5.5 Visible and Invisible Pedagogies

Bernstein (1975) makes the distinction between two types of pedagogy: the visible (traditional) and the invisible (progressive or emancipatory). Bernstein (1990 p. 73), states that "pedagogic practices are cultural relays of the distribution of power" and that different pedagogies have different effects on the learners exposed to them.

Visible pedagogic practices occur when the hierarchical relations between the teacher and learner, sequencing and pacing rules; and criteria for evaluation are explicit (visible) and therefore known to the learners. With invisible pedagogic practices these rules are not made known to the learners and they are therefore unaware of them (Bernstein, 2000). In a curriculum where strong classification and framing abound, a visible pedagogy is indicated and in turn with a curriculum displaying weak classification and framing between its knowledges, an invisible pedagogy is indicated. Learning takes place quite differently in these two contrasting pedagogical transmission types. In classrooms/ schools practising a curriculum with a visible pedagogy, the teacher explicitly controls and regulates the organization, pacing and sequencing of learning. For example, the criteria for evaluation of learners' texts are specific, and expectations are clearly defined. "The emphasis is on the academic performance of the child and the extent to which his/ her 'external product' is meeting the external criteria for evaluation" (Bernstein, 1990).

Invisible pedagogical practices allow learning to occur through learners' exploration and discussion within real-world contexts. Learners are expected to be self-regulating, active, autonomous and take responsibility for the organization, pacing and timing of learning. The authority of the teacher is more covert i.e. transformed into facilitator and is negotiated rather than an assumption of power as evident in visible pedagogies. The criteria for evaluation are unknown to the learner and tend to be more focused on the learner's innate social competencies, rather than their "written or textual performance". Creativity, reflexivity, self-regulation and autonomy is highly valued along with co-operation and interaction with peers (Reeves, 2005).

Although these two types of pedagogy are presented as idealised types, they are meant to be used as a heuristic device for characterizing practices along a continuum with the two types as oppositional forms. In addition, Bernstein's (2000) principles of classification and framing make the characterization of different elements of pedagogical relations possible.

Using Chall's (2000) table (TABLE 1) and its listed characteristics of the two main educational approaches, the student-centred approach definitely has an affinity to a more invisible pedagogy in terms of the role of the teacher, materials and activities that are based on the interests of the learner, the flexible use of time and the individualised pacing rules evident with such an approach. In contrast, the teacher- or more traditional approach to education has implicit in its makeup, a visible pedagogy as the teacher is clearly the leader within the classroom, dictating the materials and activities. Strong and explicit pacing rules are evident as norm-referenced tests are made use of.

In addition to pedagogy, these two approaches tend to differ in terms of their curriculum type. The following section delineates the types of curriculum associated with these educational practices.

### 2.5.6 Integrated and Collection Codes

Bernstein describes two contrasting types of curricula, namely integrated and collection codes. A collection (traditional) code is characterised by strong classification and framing between contents/ knowledges, encouraging specialisation within contents. It also favours a more visible pedagogic practice.

An integrated curriculum is characterised by reduced insulation (open relations) between contents. There are no fixed periods of time dedicated to a particular content, and in contrast to collection-type curricula, where specialisation (hierarchically structured knowledge) is present, integrated curricula focuses on education in breadth (knowing less about more) rather than depth (knowing more about less). That is to say that each content forms part of a general idea which is subject to change. Owing to this in conjunction with its more invisible pedagogical practices, the status of the learner is increased and educators are united in one endeavour. This causes changes in the power structure of educational institutions as they are not as clearly defined as with collection curricula.

Bernstein (1975) discusses how a collection code with its explicit and strong boundary maintaining features, has a covert structure of that of mechanical solidarity. Paradoxically, he states that due to the specialization of knowledge created by collection codes, organic solidarity is created. Organic solidarity highlights the differences (individual identities) between members of a society, characterized by divisions of labour.

Linguistic codes are cultural relays and emphasize different social relations and identities. Culture is transmitted via socialization in four critical social roles, namely – the family, peer group, school and work. Bernstein (1971) also states that children who learn different social roles by virtue of the class of her or his family may adopt different intellectual orientations despite the common potential s/he may have with a more affluent peer.

Intellectual orientation would also then be seen as a result of social class. The linguistic code is hence the vehicle for conducting social class. Elaborated codes arise out of societies displaying organic solidarity where individuality is promoted. As individual experiences are verbalised, the communication is quite explicit and specific – a more varied lexicon and syntactical structure of what is being expressed is required (low predictability of the selection and organization of speech). A greater development in verbal language is promoted in this way.

Restricted codes tend to be used in cultures or sub-cultures such as prisons, adolescents and married partners, where members have closely shared identities and expectations. The group rather than the individual is emphasized, and differences between groups not sharing this code are presupposed. The linguistic characteristics are that of high predictability and rigidity of syntax, vocabulary and morphology. A narrow range of linguistic alternatives are available for selection when communicating. Hence, extra-verbal communication would be a feature of this type of communication to differentiate meaning, such as gesture and intonation (suprasegmental features of sound). Although this creates a large potential of meanings, it may limit the development of verbal language which is socially enforced and not as a result of an intellectual deficit.

The following table delineates both the conceptual framework of Bernstein's (1975; 1990) theories as well as Chall's (2000) notions of progressive and traditional curricula. In doing so, we are able to recognise the relationships between what is termed "progressive" and "traditional" educational approaches to their associated curricula and modes of instruction.

**TABLE 3: Theoretical Bases for Traditional vs Progressive Approaches to Education**

| Traditional | Progressive |
|---|---|
| Chall's Teacher-Centred Education | Chall's Student-Centred Education |
| Phonics approach to reading | Whole-word approach to reading |
| Bernstein's Collection code | Bernstein's Integrated code |
| Bernstein's Visible Pedagogy | Bernstein's Invisible Pedagogy |

In the rest of this thesis, it is the curriculum proper, rather than the pedagogy that is the focus of study. Nevertheless, it is illuminating to see the affinities between 'integration' and lack of explicitness on the one hand; and 'collection' and explicit criteria being made visible.

### 2.5.7 Semantic versus Themantic Clustering

While it is well-established that vocabulary comprehension is a reliable indicator of language ability, and that poor language ability impacts negatively on scholastic success, the role that curriculum plays in language development, all else being equal, has not been a topic for exploration. More specifically, more traditional curricula have strong classified and framed contents, and more progressive integrated curricula, whose weaker insulation between contents is promoted with the use of "themes". What are these "themes" exactly, and how do they affect vocabulary development?

Recent developments in semantic elaboration have better informed us regarding vocabulary learning. First language (L1) research shows that elaborated learning only takes place when learners can relate new lexical items to existing background knowledge. This has in turn prompted the development of the semantic field, semantic map, or semantic grid strategies in which new words are presented and organised in terms of "maps" or "grids" of interrelated lexical meanings e.g. the category of "pets", "farm animals", "body parts". Semantic mapping (SM), one of the most popular techniques, has been intensively discussed in relation to its effective applications of vocabulary instruction. A keyword is usually visually presented to the learners, after which they are encouraged to think of as many words as they can that are related to this topic and then discussed. A major advantage of this approach is SM's motivation of learners to connect new lexical knowledge to any prior knowledge (Stoller & Grabe, 1993).

However, other researchers warn against the danger of presenting closely-related new words. They suggest that learners should start by learning semantically unrelated words (Tinkham, 1993) and also avoid learning words with similar (visual) forms. For example, because "affect" and "effect" have similar forms, simultaneously studying them is likely to cause confusion. Likewise, words with similar, opposite, or closely associated meanings (e.g. types of vegetables, jobs etc.) may interfere with one another if they are studied at the same time. SM functions to introduce words in a certain category, so the words in the map are always semantically or syntactically similar and learners often confuse them. For example, some learners mistake "carrot" for "cabbage" etc. The worst performance takes place if the linked words or representations include both similar and different features, such as in the case of synonyms and antonyms. Thus teaching pairs of words like "prevent" and "protect", "open" and "shut" makes learning more difficult.

An explanation for this phenomenon is that the difficulty is caused by the similarity between the two items strengthening their association and the differences interfering with each other. The possibility for interference and confusion occurs when both of the words in the same lesson are new for the learners, and this impedes rather than enhances learning. In order to avoid this, learners should be presented with new words unrelated to each other rather than those with semantic links – as the distinctiveness (non-similarity) of information to be learnt increases, so does the ease of learning that information (Tinkham, 1993).

However, some researchers postulate that grouping words in a different way – "groupings" or "frames" that are cognitively rather than linguistically organised may facilitate learning more successfully. This notion has been raised by the work of lexical semanticists investigating hypothesised manners by which speakers of a language subconsciously organise their 'mental lexicon' i.e. the words they know. While these semanticists would recognise semantic clusters as "sets of words drawn from 'semantic fields' within which speakers of a language may organise lexemes in accordance with interlexical similarities" (Tinkham, 1997 p. 141), many would also speculate that words might be subconsciously be organised in accordance with their participation within certain "frames" or "schemas". These are concepts that segment a speaker's background knowledge. Words drawn from such a frame may include "frog", "pond", "hop", "slippery", "green" etc. – words of different parts of speech that are all closely associated with a common thematic concept, in this case "frog". Tinkham's (1997) study measuring learners retention and recall of vocabulary using either semantic clustering as compared to thematic clustering and unrelated word clusters, showed that learners' vocabulary retention with thematic clustering far outweighed their performance when semantic clustering and unrelated word clusters were used.

In examining the NCS's language-learning strategy, it could be posited that the term "theme" is a bit of a misnomer. Instead, I propose that they (themes), particularly in the lower grades, more-closely resemble the semantic clustering approach minus its intentional vocabulary "brainstorming". NCS "themes" may include the category "Occupations" or "Celebrations", containing lexical items that are quite closely related. For example, with "Occupations", the vocabulary items may include policeman, fireman, postman etc, increasing the risk for interference to occur as these all involve the naming of various job descriptions, and impeding vocabulary acquisition. The theme "Celebrations" may include the vocabulary items such as Christmas, Easter, Eid etc.

However, these "themes" could also be cognitively framed, by accident rather than intentionally, remaining truer to their definition. For example, possible "themes" such as "Healthy Living" would have interrelated words that are not semantically linked and do not resemble each other in form, crossing the semantic boundaries of "vegetables", "fruit", "hygiene" etc. Possible vocabulary used could be words relating to living healthily when HIV positive, such as healthy foods, good sanitation and housing conditions, exercise etc. These words do not fit under a particular "schema" but are instead connected by virtue of them all encouraging a healthy lifestyle.

The problem therefore lies in, and is further exacerbated by the non-purposeful fashion in which "themes", are conceived, with no thought for the type of vocabulary-facilitating stimulus words. More specifically, whether the "theme" is one driven by *semantic clustering* or *thematic clustering*. Moreover, both methods assume the generation of word lists (either by teacher/ students or both), which does not occur within the expected practices of the NCS. The NCS does not dictate the theme that is to be used, instead, this decision usually lies with the teacher, or phase Head or both.

From the literature it is evident that while mere repetition (oral or written) of a word may be sufficient for its acquisition, deeper, or "full" knowledge is only achievable with purposeful, systematic learning activities. Examples of systematic instruction are weekly word lists and basal readers – a routine way of expanding the depth of knowledge of new lexical items. Planned instruction involves "deciding which lexical knowledge you will teach", viz. the content-obligatory and –compatible lexical items needed to be taught (Swain & Carroll, 1987). This technique lends itself to a rather *visible pedagogy* in terms of its teacher-centredness, usually characteristic of a traditional curriculum or in Bernsteinian terms, a *collection code*.

# Chapter 3: Methodology

## 3.1 The Problem Re-stated

As stated in an earlier chapter, my aim was to investigate the relationship between curriculum type and language competence. In order to do this, I would have to compare the language of learners educated within a more traditional curriculum versus those educated within a more integrated one, while hailing from similar or as closely matched socio-economic backgrounds as possible.

## 3.2 Research Design

### 3.2.1 Design Classification

Hopkins (2000) describes studies aimed at quantifying relationships as being one of two types: either experimental or descriptive. Experimental designs are often touted as the most "rigorous" of all research designs, or as the "gold standard" against which all other designs are judged. If an experimental design could be implemented well, then the study is probably strongest compared to other designs with respect to internal validity (Trochim, 2006).

Experimental studies are also known as longitudinal or repeated-measures studies. They can also be referred to as interventions, because more than just observations of the subjects occur. In the simplest experiment, a time series, one or more measurements are taken on all subjects before and after a treatment. A crossover design (where subjects are given both the control and reference treatment) or control group (group that does not receive the treatment) may solve the potential problem of extraneous factors causing change rather than the treatment. In short, experimental studies aim to determine whether a programme or treatment (independent variables) causes some outcome or outcomes (dependent variables) to occur (Hopkins, 2000).

My study is descriptive, rather than experimental in design. Descriptive studies are also called observational as subjects are observed without any intervention. The simplest descriptive study is a case, which reports data on only one subject, examples of which would be the study of an outstanding athlete or of a dysfunctional institution. A case series would involve studies of a few more cases. Closest in describing this study would be the prospective or cohort study – where some variable/s are assayed at the start of the study, viz. vocabulary level, then after a period of time the variables are assayed again (Trochim, 2006).

However, this study has one characteristic of an experimental design, in that it effectively wishes to compare two different "treatments". School A's "treatment" would be the NCS, while School B's would be their independent curriculum which will be examined for being more "traditional" in nature. The independent variable would then be the curriculum type, while the dependent variable would be the vocabulary size after one year of schooling in the respective curricula.

The various designs differ in the quality of evidence they provide to assess a cause-effect relationship between variables. As stated earlier, experimental studies provide the best evidence to infer causality. With regards to descriptive studies, cases and case series are the weakest: a well-designed descriptive study could provide evidence for the absence of a relationship, but could only represent suggestive evidence of a causal connection. This study's design, a descriptive study which nevertheless compares two "treatments", is generally more time-consuming and difficult to execute well, but could produce more convincing conclusions about cause and effect.

### 3.2.2 Research Question

The aim of this research is to establish the existence of a possible link between curriculum type (traditional versus integrated) and vocabulary development as represented by receptive (comprehension) vocabulary scores on a standardized language test.

### 3.2.3 Hypotheses

*Null Hypothesis ($H_0$)*: Learners educated at a school using a traditional, teacher-centred curriculum would have language development equivalent to that of their SES counterparts educated at a school using a more integrated, learner-centred curriculum.

*Alternative Hypothesis ($H_1$)*: Learners educated at a school using a traditional, teacher-centred curriculum would have better language development than their SES counterparts educated at a school using a more integrated, learner-centred curriculum.

### 3.2.4 Key Variables

The *dependent variable* would be the resultant receptive vocabulary development as typified by the gain scores on a standardized vocabulary test. The *independent variable* would be the curriculum type, viz. integrated or traditional.

## 3.3 Sample

### 3.3.1 Introduction

The total group with which the study is concerned is referred to as the population or universe of concern. The population is the group which the researchers are interested in gaining information about which subsequent conclusions are drawn (Trochim, 2006).

Similarly, Howell (1995) explains that a population can be defined as the entire collection of events in which you are interested. In this study, this would be the entire population of Foundation Phase learners in our country who attend schools utilizing the NCS as well as those placed at schools using other curricula.

However, we almost always have to work with a sample of subjects rather than the full population, and in the case of this study's practical and logistical limitations, a rather limited sample. According to Hopkins (2000), people are interested in the population, rather than your sample. To generalize from the sample to the population, the sample has to be representative of the population. The safest way to ensure that it is representative and to guard against selection bias, is to use a random selection procedure. A typical source of bias in population studies is age or SES: people with extreme values for these variables tend not to take part in the studies. Thus, some compliance is important in avoiding bias.

### 3.3.2 Choosing the Schools

Two co-educational schools needed to be identified for purposes of this study – one school utilizing the NCS, from hereon referred to as School A, and the other, a school utilizing a more traditional collection-type curriculum referred to in this study as School B, sharing a similar socio-economic background. Given that all public schools in South Africa are obliged to follow the NCS, this will necessarily be an independent school. My immediate priority was to locate a school using a traditional, collection-type curriculum, as there are not too many situated in Cape Town. I visited a website marketing all the private schools in South Africa, and was able to contact their principals/ heads of department telephonically to query their curriculum used at the school. To my surprise, very few schools (one out of the 7 schools contacted), even though they were private, did not use the NCS and I was therefore restricted in my selection of a school that met the criteria for participation in the study and who would be willing to participate.

One school was found that had already been assessed as using a traditional curriculum (Pritchard, 2008) and was also willing to participate. This school, later called School B, had approximately 230 learners and was situated in Constantia and catered for Kindergartners through to Grade 12 (school-leavers). A large percentage of their learners were foreign nationals, mostly Americans and to a lesser degree from other African countries. English was the language of instruction and average class sizes in this school consisted of 18 learners. The only potential problem at this point was the school fees, which at this school were comparatively on the high side. I then set about selecting a matching school using the NCS. Because School B was necessarily an independent/ private school, I decided to restrict the pool for School A also to private schools. I used the same pool of 7 schools (except for School B) and queried their willingness to participate in the study.

School A is a private school using the NCS situated in Rondebosch, and was the only school contacted that was willing to participate in the study. Other potential schools either claimed to be very busy, that it was a school policy not to participate in studies. In a number of cases I was simply unable to contact them. School A's learners were predominantly South African citizens, and were mostly of so-called "coloured and Indian" racial groups. They also had provision for pre-schoolers through to Grade 12 with English as its language of instruction. Their numbers were higher than that of School B's, with about 250 learners on their roll (Grade R through to Grade 12) with and an average class size of 24.

### 3.3.3 Choosing the Learners

Owing to the difference in learner numbers, two different sample selection procedures were performed. At School A, twenty Foundation Phase learners were selected from those whose parents had given permission for their participation, using a random number generator. At School B, eighteen learners' parents had given their permission for participation out of about 23 learners in total. This correlates to just over 78% compliance (the proportion of people contacted who end up as subjects), a reasonably high rate, and according to Hopkins (2000), comfortably above the target rate of approximately 70%. As this was already a limited number, I decided to retain all of these learners as subjects and therefore did not use any random sampling method for School B.

Using learners from the Foundation Phase (ages ranging between 6 and 9 years) is particularly crucial as this lessens the possibility of them having been exposed to any previous curriculum which may confound results. This small sample is not ideal, but was limited by the availability of learners in the independent school as well as a lack of extra testers and time constraints for conducting the assessment.

In summary, my aim was to try to vary the curriculum-type used at the two schools – one school utilizing a traditional approach and a more collection-type code in Bernsteinian terms; and the other using a more progressive approach and integrated code. However, to suppress the effects of socio-economic status (SES) on vocabulary development, these two schools had then to be matched for SES.

### 3.3.4 Socio-economic Status (SES)

***School fees***

Previous studies have made the case that socio-economic background could be inferred from school fees, specifically the amount of school fees paid per annum (Reeves, 2005). Consequently, the annual school fees charged was therefore used as a proxy for SES in this study. In a study by van der Berg and Burger (2003), learners at schools with fees greater than R 1000 per annum had higher pass rates, university exemptions and A-aggregates. From her study, Reeves (2005) inferred SES from school fees which she took as a fairly narrow indirect measure of household income. She assumed low SES with school fees less than R200 per year.

As school fees were taken as a proxy for socio-economic status (SES), both schools selected were those accommodating middle class learners due to the difficulty in locating independent schools that have non-middle-class learners, itself a result of high school fees charged. School A's (using the NCS) school fees were approximately R15 000 per annum, while School B's fees were about R40 000 per annum. This equates to a R25 000 per annum difference between fees at the two schools. The question is how significant this difference is.

Both the Reeves (2005) and van der Berg & Burger (2003) studies leaves us with a very wide range of school fees which accommodates higher SES – Reeves only correlating low SES with fees less than R200 per annum and the latter study correlating higher SES with school fees above R1000 per annum. In the light of this, I was not able to match the two schools for SES very closely due to the fact that, although they both far exceed the R1000 per annum figure, there is still a R25000 per annum difference in fees. My supposition was that School A's learners would probably fall within the lower end of the middle class spectrum while School B would be at the higher end of the middle class spectrum. How material this difference would be remained to be seen.

### *Parental Level of Education*

In line with Chall (2000), this study also presumed that "the children of parents who were more highly educated and economically more stable did better in school than those of lesser-endowed parents" (p. 157). A questionnaire was designed to be disseminated to parents of the participants in the study to gauge their level of education as well their current job titles. In matching for SES, the school fees paid per annum would be the primary indicator of SES while parental education level would provide additional evidence for SES.

The plan was thus for a questionnaire (see Appendix B) to be given to the parents of the learners tested, requesting information about both parents' level of education and current job description. However, School B's policy prevented the dissemination of questionnaires to their learners' parents in protection of their privacy. At School A, 11 out of the 17 learners that had participated returned the Parent Questionnaire completed. These results are to follow in Chapter 4. Naturally, the comparative dimension is now lost.

Both observational and experimental research has shown that the learners whose parents had a higher level of education did better at school than those of lesser-educated parents (Chall, 2000; Dolloghan et al, 1999) and it was hoped that data from this questionnaire would help match these learners for social background, and in conjunction with the amount of school fees paid at each school, augment the indicator for socio-economic status. Ideally, one would want to match for SES as closely as possible in order to make possible associations of the findings to the curriculum – which would be the only variable that differed between the two schools. However, this proved to be a very challenging task due to factors that have been mentioned earlier, viz. the small number of private schools utilizing an independent curriculum, and also the lack of willingness to participate that these private schools showed. The difference in school fees charged – R40 000 at School B as compared to R15 000 per annum at School A and the lack of information regarding the parents of School B's learners' academic levels and vocation does therefore place a question mark against the validity of the study. Nevertheless, having proceeded thus far, it was decided to press on with the study, in the hopes that the potential SES gap would not prove to be of decisive importance.

### 3.3.5 School-level Factors: Curriculum

*School A*

As stated before, School A was a private school i.e. not state-funded and utilized the NCS as its curriculum. For purposes of this study, I have used Bernstein's (1999) model of pedagogical discourse as a theoretical framework within which I am able to describe the two curricula used at the two schools, as pertaining particularly to language-learning and reading. Chall's (2000) table listing the characteristics of the two polarised educational approaches is also useful as a protocol for characterising the type of curriculum used a particular school. The curricula will further be classified in terms of their structure, specifically for reading instruction as this is a primary source of vocabulary-learning (Higgins, 2003; Williams, 2007).

In applying Bernstein's theoretical constructs to the NCS, it could be described as a curriculum which is predominantly, rather than totally integrated. It consists of "learning areas" that have considerably weak insulation between them, with common "themes" that are supposed to connect them. In the Foundation Phase, there are 5 broad "learning areas", namely Numeracy, Literacy, Arts and Culture, Social Sciences (History and Geography) and Life Orientation. The policy document portrays this curriculum as being an Outcomes Based model of education (OBE), and therefore endeavours to shift from a norm-referenced assessment method to one which is competency-defined (Reeves, 2005).

If we were then to infer that the NCS is a more progressive learner-centred approach, it is likely to favour the whole-word reading approach and rely on incidental learning of phonics by its learners. The NCS does in fact have a rather "loose" Phonological Awareness (PA) curriculum as evidenced in an earlier comparison between the Grade1 Phonic Awareness Assessment Standards and the developmental progression of PA skills. PA, as outlined in the NCS, demonstrates weak classification between itself and other learning areas. There is a weaker degree of boundary strength, for example between itself (Literacy) and Life Orientation. A PA activity could easily be performed whilst a discussion on HIV/AIDS is taking place, viz. the educator asks the learners for the number of syllables in the words "needle", "safety" etc – hence, at the same time the outcome "syllable segmentation" could be achieved. There are therefore no fixed periods of time dedicated to particular contents as has been discussed earlier. The NCS could therefore be seen as a "more" integrated curriculum rather than a totally integrated one.

### *School B*

At School B, however, a more traditional, collection-type curriculum is used. In contrast to the NCS, the term "subjects" is used instead of the so-called "learning areas" of the NCS. The term "subject" tends to conjure up a feeling of greater insulation between knowledges as compared to the term "learning area" which is a more loosely defined term and serves to denote laxer boundaries or less insulation between knowledges.

As stated before, Pritchard (2008) had conducted a fairly extensive analysis of the curriculum of School B, and had concluded that (School B) "tended strongly towards a traditional curriculum" (p 54). In addition, an informal assessment of School B's curriculum was conducted by perusing their year-long Tracking Sheet (planner). There are ten "subjects" in School B's curriculum, namely Mathematics, Language, Arts, Science, Physical Education, Kinetic Sport, Music, Drama, Computers and Social Studies. Language is further divided into Reading and Literature – encompassing comprehension exercises, phonics (from text book), actual books that learners are to read etc, writing and grammar as well as speaking and listening. Social Studies involve learning about other countries, cultures and traditions and has a set textbook by which learning is guided.

Set programmes such as the Saxon Math programme is followed at School B, which has very explicit sequencing and pacing of content. The UK SATS tests are used to establish mathematical ability levels of the learners at the start of each year and textbooks with age guides are used in conjunction with the set math programme – more able learners are catered for with "extension workbooks" being available to them. These formal programmes and developmentally sequenced textbooks act as "pace-setters" and learners are therefore very aware of what the expected assessment criteria are and are able to gauge their progress by means of their advancement in the math programme. More able children are also quite aware of their giftedness as they are exposed to the extension workbooks that not all learners are using. Various developmentally-staged textbooks are used, such as "Everyday Spelling", "325 Creative Prompts for Personal Journals", a literacy as well as a phonics textbook. Various literature of interest to the learners is available.

In comparison to School A, School B's curriculum content is more textbook driven, with explicit sequencing and pacing. It is thus considerably more visible (explicit) with regard to its pedagogic practices, and therefore arguably more traditional in type. Strong classification and framing of contents are evident, in that a distinction between 10 different "subjects" are made, allowing for greater specialisation. Reading is taught via a phonics approach in combination with whole-word recognition using literature that holds the learner's interest, also consistent with more visible pedagogical practices and more traditional curricula.

### 3.3.6 School-level Factors: Teacher Variables

A questionnaire (See Appendix A) was given to the three class educators available for interviewing at the schools to gauge their respective types and levels of qualifications as well as experience. It was also designed to gather information around the planned translation and transfer of the "official" (or intended) curriculum adopted by their schools into the reality of their classrooms (implemented curriculum).

Informal notes and personal impressions of the teachers were also collected when any communication such as e-mailing, telephonic or face-to-face conversation had taken place between us.

## 3.4 Research Instruments

### 3.4.1 The Peabody Picture Vocabulary Test Revised (PPVT-R)

The Peabody Picture Vocabulary Test- Revised (Dunn & Dunn, 1981) was used to test the learners' vocabulary comprehension. Although this test is standardized on the British population, in the absence of any test standardized on the South African population, it was selected due to it also being probably the most widely used in the Western Cape. Although it does not allow us to assess the level of expressive vocabulary, it does enable us to gauge the approximate level of expressive ability. It is highly unusual for a child's expressive ability to exceed his or her comprehension. Most commonly, a child's comprehension would be greater or equal to his/ her expressive ability.

All the learners' receptive vocabulary was assessed (individually) initially and then again one year later in a room free of visual and auditory distractions. The two sets (initial and final) raw scores were converted into age equivalent (AE) scores as outlined in the manual of the PPVT-R (Dunn & Dunn, 1981) and then used to obtain a gain score i.e. the difference between the initial and final scores in points and then translated into months for each learner. These gain scores, amongst other measures, were then compared between the two schools.

### 3.4.2 Teacher's Questionnaire: See Appendix A

A questionnaire was devised and given to the teachers of the learners tested in the study. Questions about the teacher's qualifications, years of teaching experience as well as the curriculum used and to a lesser degree, its delivery were posed.

### 3.4.3 Parent's Questionnaire: See Appendix B

A questionnaire centred around the level of parental education and occupation was devised and given to all the parents of the learners who had participated in the study.

## 3.5 Data Analysis

According to Howell (1995), the mean is the most common measurement of central tendency, and is generally indicated when referring to the *average*. It is further defined as the total of the scores divided by the number of scores. A two-sample independent t-test was used to compare the means of the gain scores from the two samples, while two one-sample t-tests were performed to determine whether the means of the initial and final scores within each school differed significantly. In other words, the following questions were asked:

a. Is there a significant difference between the initial and final vocabulary scores at School A ? (one-sample t-test)
b. Is there a significant difference between the initial and final vocabulary scores at School B? (one-sample t-test)
c. Is there a significant difference between the average gain score at School A versus that of School B? (two-sample t-test)

When we are testing for the difference between the mean of one sample, and the mean of a second sample, we will be testing a null hypothesis. The null hypothesis ($H_0$) assumes that there is no significant difference between the two means. The two sample t-test does so by producing a p-value and measuring this against the significance level of the test. Conventionally, a significance value of 0.05 (5%) is used. If the p-value is large i.e. larger than 0.05, we accept the null hypothesis – there is no significant difference between the two means from the two samples. However, if the p-value is equivalent or smaller than 0.05, we reject the null hypothesis and in turn accept the alternative hypothesis ($H_1$) – that the means from the two samples are significantly different (Hopkins, 2000):

**TABLE 4: Levels of Significance**

| p-value | Outcome of the test | Statement |
|---|---|---|
| > 0.05 | Fail to reject $H_0$ | No evidence to reject $H_0$ |
| between 0.01 and 0.05 | Reject $H_0$ (Accept $H_1$ ) | Some evidence to reject $H_0$ |
| between 0.001 and 0.01 | Reject $H_0$ (Accept $H_1$ ) | Strong evidence to reject $H_0$ |
| < 0.0001 | Reject $H_0$ (Accept $H_1$ ) | Very strong evidence to reject $H_0$ |

## 3.6 Strengths and Limitations

There are a number of threats to the validity and reliability of any study. They can be described in terms of those that affect the internal- or external validity as well as the reliability of a study.

### 3.6.1 Threats to Internal Validity

The size of the sample was, as explained earlier, limited by the following constraints: (1) the number of learners available to test in School B as there were so few of them, this small pool of learners also further affected the number of parents opting for their children not to participate as they may not be at the school the following year when follow-up testing was to take place; (2) time taken to conduct the testing as there was only one tester, and lastly (3) financial constraints limiting the ability to employ another qualified Speech and Language Therapist to assess learners. Hopkins (2000) states that a small sample may amplify the errors in measurement, while a large sample lifts the effect of the treatment from any extraneous variables that may be impacting on the subjects of the study.

These extraneous variables could include the cognitive ability of learners. This was not formally assessed and did not affect the eligibility of learners for participating in this study. It was assumed that none of the learners had diminished cognitive ability as they are all in mainstream schools. Although this is not always the case and the effects of maybe just one or two learners will be seen in a sample of this small size, as reported earlier, the literature suggests that IQ is not as strong an indicator of good language development as parental education level and family income are (Dollaghan et al., 1999).

Learners' time spent with their mothers was not known. As both the quality and quantity of interactions seem to influence language development (Dolloghan et al; 1999), this is a threat to the study's validity.

### 3.6.2 Threats to External Validity

Threats to external validity are usually associated with the intrusive nature of experimental studies, hence does not pose a problem for this study. The creation of an artificial "laboratory-like" situation was avoided as this study was descriptive and did not provide a treatment or intervention. The degree of generalisation of the results to real contexts is thus increased with this type of design. (Hopkins; 2000)

The degree to which the educator, at a classroom level, implements the curriculum may not be consonant with the intended curriculum at any given school, and possibly so at neither of the two schools involved in this study. According to IEA thinking, curricula are vital in the evaluation of educational achievement. They differentiate between the intended, the implemented and the attained curriculum, and illustrate the linkages that the curriculum has with other elements – at a school-, classroom- as well as student-level. These links demonstrate causality between themselves and the learner's achievement (Howie et al., 2005). Teacher requirements, characteristics and their instructional quality are classroom-level factors that impose upon the curriculum to deliver varying outcomes. Hence, this could affect the external validity of any study comparing curricula.

### 3.6.3 Threats to Reliability

Reliability is an indicator of the reproducibility of the results on a retest (Hopkins, 2000). While normative data for the assessment tool (PPVT-R) is based on the British population, this should not affect the feasibility of the results and its application as only the gain scores in learners' performance on the test were compared. The age-appropriateness of a said learner's vocabulary lent interest, but was not central to the aims of this study. The PPVT-R is also a widely-used assessment tool in most hospitals, schools and private Speech Therapy practices in South Africa as well as the world over. Therefore, it has over time become a very reliable measure of vocabulary comprehension.

## 3.7 Ethical Issues

There are no ethical issues that stood out. Parents had given their signed permission for their children's vocabulary to be assessed as part of the study. Strict confidentiality was promised to all participants and their families.

# Chapter 4: Results

## 4.1 Results from the PPVT-R

The following table records the results obtained during the initial- and final testing at both schools:

**TABLE 5: Raw Scores and Statistical Analysis**

| | School A | | | School B | | |
|---|---|---|---|---|---|---|
| Learner # | Initial | Final | Gain | Initial | Final | Gain |
| 1 | 88 | 100 | 12 | 90 | 105 | 15 |
| 2 | 71 | 86 | 15 | 91 | 105 | 14 |
| 3 | 77 | 94 | 17 | 65 | 94 | 29 |
| 4 | 58 | 62 | 4 | 85 | 107 | 22 |
| 5 | 50 | 57 | 7 | 89 | 109 | 20 |
| 6 | 73 | 78 | 5 | 75 | 103 | 28 |
| 7 | 94 | 111 | 17 | 72 | 85 | 13 |
| 8 | 65 | 70 | 5 | 110 | 121 | 11 |
| 9 | 90 | 100 | 10 | 85 | 100 | 15 |
| 10 | 86 | 99 | 13 | 64 | 87 | 23 |
| 11 | 67 | 79 | 12 | 98 | 119 | 21 |
| 12 | 53 | 67 | 14 | 82 | 106 | 24 |
| 13 | 47 | 58 | 11 | 94 | 115 | 21 |
| 14 | 72 | 79 | 7 | 118 | 142 | 24 |
| 15 | 68 | 64 | -4 | 81 | 102 | 21 |
| 16 | 60 | 71 | 11 | | | |
| 17 | 60 | 68 | 8 | | | |
| | | | | | | |
| *N* | 17 | | | 15 | | |
| Mean | 69.35 | 79.00 | 9.65 | 86.60 | 106.67 | 20.07 |
| Median | 68 | 78 | 11 | 85 | 105 | 21 |
| Standard Deviation | 14.17 | 16.64 | 5.36 | 14.97 | 14.10 | 5.40 |
| Minimum | 47 | 57 | -4 | 64 | 85 | 11 |
| Maximum | 94 | 111 | 17 | 118 | 142 | 29 |

As is evident from the results table, 17 learners (*N*) out of the original 20 from School A participated in both the initial and final testing. Three learners were no longer enrolled at the school for 2008 and were therefore extracted from the study. Similarly, 15 out of 18 learners from School B completed the study for the same reason as those in School A.

Owing to this, the sample sizes (*N*) from the respective schools differed, but not drastically. However, statistical analysis allowed us to compare the performance of learners nonetheless. The mean score (in points) at the initial testing was 69.35 at School A and 86.60 at School B. This indicates a 17.24 point difference between the two schools, with School B's learners outperforming their competitors quite markedly. When correlated into age equivalent (AE) scores using the scoring manual of the PPVT-R, the mean initial score (rounded off) for School A was found to be 5 years and 11 months, while contrastingly, at School B, 7 years and 7 months. This then translated into an average difference in initial performance of 20 months between learners at the two schools, with School B in the lead.

Subsequent testing a year later revealed mean scores of 79 and 106.67 points at Schools A and B respectively. In keeping with the point difference in the initial testing, one would expect a margin of around 17 points. However, a difference of just over 27 points was obtained with School B not just retaining the lead, but also improving upon it by more than 10 points. The mean AE score at School A now stood at 6 years and 9 months (approximately 10 month average gain within one year), while at School B it was 10 years and 2 months (2 years and 7 months gain within one year). Hence, the average gain score at School B was more than double that of School A. In the following chapter, I will consider what factors this exponential difference in gain scores could be attributed to.

**TABLE 6: t-test Results**

| | |
|---|---|
| Two-sample t-test (School A gain vs. School B gain) | $6.69\text{x}10^{-6}$ |
| One-sample t-test School A (initial vs. final) | 0.07835802 |
| One-sample t-test School B (initial vs. final) | 0.00076058 |

* Significance value of 0.05

A two sample t-test was performed to test whether the means of the gain scores of the two schools were significantly different. A value (p-value) of $6.69\text{x}10^{-6}$ (0.0000669) was obtained when comparing the means of the gains scores of the two schools. According to Hopkins (2000), if a significance level of 0.05 is used, a p-value of less than 0.0001 presents very strong evidence to reject the null hypothesis and therefore accept the alternative hypothesis. The alternative hypothesis being that these mean gain scores *are* in fact significantly different notwithstanding the small sample size. The p-value for this test was thus found to be considerably less than the significance value, resulting in the rejection of the null, and acceptance of the alternative hypothesis.

The second and third (one sample) t-tests compared the difference in initial and final scores of each learner involved in the study, more specifically, trying to determine whether the gain difference for a specific school was statistically significant. At School A, the p-value obtained was 0.078. Owing to its being greater than the significance value of 0.05, this leads us to accept the null and consequently reject the alternative hypothesis. In other words, no significant difference, or a weak one only in terms of gain was obtained at School A after one year had elapsed.

At School B, a p-value of 0.00076 was obtained. In strong contrast to School A, this value is considerably less than the significance value (0.05) and therefore confers strong evidence for the rejection of the null hypothesis. Extensive gain in receptive vocabulary was thus made at School B within the same time period as School A.

As was earlier stated, the age-appropriateness of the learners' results would lend interest to the results of this study. That is, it would allow test scores to be translated into a practically relevant form, enabling us to explore some of the implications the results of this study have for education in our country.

The results with respect to age-appropriateness of vocabulary levels at the two schools are tabulated (Table 4) below. The results depict the number of learners either achieving (1) a score well above what is age-appropriate; (2) an age-appropriate score; (3) a score 1-2 years below the expected age norm or (4) greater than 2 years below the age norm at both the initial and final testing.

**TABLE 7: Age-equivalency of Raw Scores**

| School A (N=17) | | | | |
|---|---|---|---|---|
| | > Age-appropriate | Age-appropriate | 1-2 yrs below | >2 yrs below |
| Initial | 0 | 5 | 7 | 5 |
| Final | 0 | 5 | 7 | 5 |
| Ave. Gain (months) | - | 14 | 8 | 8 |

| School B (N=15) | | | | |
|---|---|---|---|---|
| | > Age-appropriate | Age-appropriate | 1-2 yrs below | >2 yrs below |
| Initial | 4 | 9 | 1 | 1 |
| Final | 8 | 6 | 1 | 0 |
| Ave. Gain (months) | 21.75 | 18 | 23 | 29 |

As per the PPVT-R, 1 point correlates to roughly 1 month age-equivalency. Hence, one would expect a 12 point gain over 12 months assuming that development is constant. At School A, the average gain was 13.8 (14) points for the initially age-appropriate learners, 8 points for the learners 1-2 years below the norm; and 8 points for learners > 2 years below the norm. None of the learners tested scored above their age norm.

At School B (non-NCS), 4 out of the 15 learners tested scored above their age norm and 9 learners at an age-equivalent score. The average gain was 21.75 points for the learners who had scores above their AE score, 18 points for those who were found to have age-appropriate receptive vocabulary scores at the initial testing, 23 points for the learners 1-2 years below the norm and 29 points for the learners greater than 2 years below the norm.

We may then extrapolate the following from these results:

- Thirteen out of the 15 learners tested at School B tested as age-appropriate (AA) or above, while only 5 out of the 17 at School A were found to have age-appropriate receptive vocabulary and none scored above their age norm. Therefore, the learners at School B displayed an advantage in language-learning.
- The average gain difference between the initially-AA learners at the two schools was 4 points (correlating to 4 months) with School B taking the lead.
- The average gain difference between the learners initially 1-2 years below the age norm was 15 points, with School B once again in the lead. Even more apparent was the gain difference for the group initially greater than 2 years below the age norm. A difference of 21 points was calculated for this sub-group, translating to nearly two years age-difference in gain at School B.
- Markedly noticeable was the trend that learners at School A never "caught up" their vocabulary level to a more age-appropriate one, but in fact, only gained 10 months worth of vocabulary development in a year. Thus, numbers in the three subgroups (TABLE 3) remained static between the two tests. Contrastingly, at School B, these subgroups had changed with 4 learners who had originally scored at an AA level, now having scored above their age norms. One learner, initially scoring below his/ her norm reached age-appropriacy, and the learner initially >2 years below the age norm improving to the point where his/her vocabulary has been within 2 years of the norm, gaining more than double the expected number of points over the year (29 points).

- The average gain trends indicate that while the initially AA learners at School A made the most gain, at a slightly higher rate than expected i.e. 14 points per year, their peers who had scored below their age norms had gained only 8 months' worth of receptive vocabulary. At School B the trend was the very opposite in that learners who had initially scored >2 years below their age norm had made the most gain i.e. 29 months/annum, followed by those who had scored within 1-2 years below the norm at 23 months/annum, then the learners who had exceeded their AA score at 22 points/annum and lastly the AA learners with 18 months average again within a year.
- In summary, one might infer that learners with possible language-learning delays were not being supported appropriately at School A, resulting in lower than expected gains for one year's development. At School B, those learners had made the most improvement in vocabulary, gaining more than double the expected rate within the space of one year.

The Standard Deviation (*s*) is defined as the positive square root of the variance of a sample. In simpler terms, it is the average of the deviations of each (individual) score from the mean. Within a normal distribution, approximately two-thirds of the population lie within one standard deviation of the mean (Howell, 1995). Because of the small sample sizes, the Standard Deviations can be expected to be fairly large. Nevertheless, the Standard Deviation scores for Gain between the two schools were 5.36 and 5.4 for School A and B respectively. This indicates that mean variance from the mean gain score was not very different at the two schools, implying that there were no significant outliers within either sample and that they were therefore relatively comparable, despite the rather high Standard Deviation.

Another point of interest is the median, or "the score corresponding to the point at or below which 50% of the scores fall when the data are arranged in numerical order" (Howell, 1995 p. 45). The major advantage of considering the median lies in the fact that it is unaffected by extreme scores or "outliers" as other measures of central tendency such as the mean is subject to. The median gain scores at Schools A and B were 11 and 21 respectively. It is also noteworthy to compare the medians of the gain scores between Schools A and B as the Median at School A (11) was equal to that of the learner with the lowest gain score at School B.

Strong internal validity was therefore established with results that correlated well and confirmed rather than conflicted with one another.

## 4.2 Results of the Teacher's Questionnaire

Two teachers at School A and 1 at School B completed and returned the questionnaires. Both the teachers at School A were found to have more than 30 years teaching experience. They had both completed teaching Diplomas that focused on "Junior Primary" learners – now Foundation Phase. They had both confirmed that their school made use of themes, that were changed every two weeks or so. They had also stated that there were fixed periods/ sessions for teaching one of the three "learning areas" or subjects exclusively, namely, either Numeracy, Literacy or Life Orientation and that this timing and organization was planned by the teacher without input from the learners. An informal interview with the Grade 2 teacher revealed that a reading programme for whole-word recognition is used in the form of graded readers, although phonics is taught incidentally without any explicit sequencing or pacing.

Personal contact on two occasions with the teachers revealed that the teacher at School B was much younger in age than those at School A, and was quite interested in what I would be doing and my course of study. She had completed an Honours Degree and then a Postgraduate Certificate in Education (PGCE) and also expressed a very strong urge to pursue her own academic career by completing her Masters degree as well. She was very talkative, helpful and was always contactable and promptly responded to e-mails. Both the teacher and principal at School B were interested in the results of the study and seemed to appreciate the feedback at the end of the final testing.

At School A, as stated earlier, both teachers were older than the one at School B and not as communicative. Although they had requested that the results of the testing be made available to them, on receipt of the results, not much interest was shown. There was little contact between myself and the school other than what the data collection required.

Assessment criteria are listed within the NCS, albeit very broadly, and learners are usually informed of when an assessment is going to take place, but are unaware of the expectations/ criteria of assessment and their progress. Pacing, though not content, is changed to accommodate the progress of learners.

At School B, as stated earlier, the teacher had an Honours degree followed by a PGCE. She had 7 years teaching experience and was also trained in working with learners in the "primary" or

Foundation Phase. She confirmed that themes were not used and that 10 different "subjects" were taught. Subjects are taught separately with clearly-defined boundaries i.e. time and content between them. Strong developmental norms are adhered to and are embedded within the curriculum where hierarchical knowledge structures are taught i.e. reading and mathematics. Learners are aware of the assessment criteria through these criteria being transmitted to them by the teacher in class. The assignments and tests are also graded in percentages rather than the 1-4 number system of School A. Greater differences in performance is able to be tracked and measured in this way.

Pacing may be changed for less able learners, but due to the explicitness of the pace-setters, learners are aware of their progress as compared to other learners. Content does not get simplified for learners and is also text-book driven.

The main differences between the teachers at the two schools were with regard to the levels of qualifications and teaching experience. Both teachers at School A had teaching diplomas while the teacher at School B had an Honours Degree in Education and had much less teaching experience (7 years) as compared to the teaching experience of the teachers at School A which amounted to more than 30 years between them. It could then be surmised that they might have retained some of their teaching practices from the previous curriculum before the NCS has been introduced, but in-depth classroom observation would be needed to confirm that. That was however beyond the scope of this study.

## 4.3 Results of the Parent's Questionnaire

A questionnaire (see Appendix B) was given to the parents of the learners tested, requesting information about their (both parents') level of education and current job description. However, School B's policy prevented the dissemination of questionnaires to their learners' parents in protection of their privacy and this therefore presents a limitation to the study as parental education level which is an indicator of language competence in children (Dolloghan et al.; 1999), could not be compared. At School A, 11 out of the 17 learners that had participated returned the Parent Questionnaire completed.

Parental educational level was determined by means of check boxes that ranged from Pre-Matric, Matric, Certificate, Diploma, Degree, Honours, Masters to Doctorate. The data was then separated into Maternal and Paternal educational levels for ease of analysis and have been tabulated as follows:

**TABLE 8: Parental Education Level in School A**

| Maternal Educational Level (School A) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pre-Matric | Matric | Certificate | Diploma | Degree | Honours | Masters | Doctorate |
| 1 | 4 | 0 | 6 | 0 | 0 | 0 | 0 |

| Paternal Educational Level (School A) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pre-Matric | Matric | Certificate | Diploma | Degree | Honours | Masters | Doctorate |
| 0 | 2 | 1 | 5 | 3 | 0 | 0 | 0 |

Owing to School B not allowing the dissemination of the Parent Questionnaire, a comparison between the parents of the learners of the two schools could not be made. It could be seen though, that none of the mothers (of the 11 learners who had returned the questionnaire) had graduated from university. This does not exclude the possibility that they might have attended university but had not graduated. Six mothers had a diploma, 4 had a Matric while 1 had pre-matric qualifications. Three of the fathers had a university degree, 5 a diploma, 1 a certificate and 2 a Matric qualification. All of the fathers had completed high school as was evident from the data. Hence, most of the fathers had achieved a higher level of education than the mothers at School A. It is unclear whether this has any significance.

# Chapter 5: Discussion

## 5.1 Introduction

Following the analysis of the results from the Peabody Picture Vocabulary Test Revised (1981), some interesting findings have emerged. The first is that the number of learners found to have age-appropriate (AA) receptive vocabulary at School B far surpassed that at School A at the initial testing, indicating that they had some prior advantage with respect to language-learning. Possibly, this could be attributed to better language stimulation at home, in the form of language models from adults in the home, exposure to reading material and other literacy-enhancing activities such as television or computer programmes as well as games to promote language development. Krashen (1989) reports that linguistic competence is achieved when children are brought up in richer print environments. They display more grammatical, vocabulary, reading and spelling ability than children who are not privy to this. Whether this is in fact the case – whether School B parents are more language-active than School A parents – remains however, unclear.

With regards to age-appropriacy, most of the learners tested (13 out of 15) at School B were found to have age-appropriate vocabulary, with 4 out of the 13 scoring above their age norm. In contrast, only 5 learners tested age-appropriately at School A, with none of them scoring above this. The majority of the learners (12 out of 17) at School A therefore scored either 1-2 years or greater than 2 years below their age norm. Final testing a year later showed a shift in learner achievement at School B, with a doubling of the number of learners scoring above their age norm; learners previously scoring at, or 1-2 years below their age norm had now "caught up" the developmental lag that they had initially displayed. This trend, unfortunately, was not mirrored at School A. Results had shown that while learners at School B were playing "catch up", School A's learners had remained within their initial categories, making less gain than expected (10 months mean gain in 1 year). Hence, no upward shift was observed within this group.

Most remarkable was the trend at School B where the most gains were *not* made by those learners who were found to have AA vocabulary initially. The average gain for initially above-AA learners was 21 points. The average gain of the initially AA learners was 18 points, those 1-2 years below the age norm was 23 points, and the gain difference for the group initially greater than 2 years below the age norm was 29 points: computing to nearly 2 and half years vocabulary development within one year! Therefore all learners were developing vocabulary at a higher rate than normal (being 12 points within 12 months), with learners initially lagging behind, progressing the fastest – making an average of 11 months gain above that of the initially AA learners. By contrast, at School A, learners who had initially achieved age-appropriate vocabulary scores made the most gains (14 months in 1 year), while all learners scoring below this achieved an average gain of 8 months in a year. In other words, with each passing year, they were developing a backlog (of approximately 4 months) – ultimately creating the possible scenario of never catching up with their age cohort.

Questions around the cause or causes of these results now need to be asked. Admittedly, SES could not be closely matched for the two schools due to the difference in school fees paid per year at the two schools, as well as the lack of information around the education level of parents at School B. As a result, SES effects were present as was displayed with the results at the initial testing – School B's learners had achieved a mean vocabulary score of 86, while School A's learners' scored a mean of 69. In terms of age-equivalency, *all* but 2 of the learners at School B were found to have age-appropriate vocabulary, while just 5 learners out of the 17 tested at School A tested age-appropriately.

These results show that School B's learners were in fact at an advantage for learning language when starting school. This could most probably be attributed to the SES factors such as parental level of education and income, amongst others. An incidental language-learning advantage, ascribed more to parental education level factors than curriculum in the literature (Dollaghan, 1999), would most prominently be seen in learners who had excelled at the initial testing, i.e. those found to have scored at or above their expected age norms. Learners who had scored below their norm could then be seen as *not* possessing this initial advantage when entering school.

However, at School B the very learners who had scored the lowest initially had subsequently achieved the greatest gain in vocabulary. It is proposed that this is due to the effect that the *curriculum* has on vocabulary for the following reason: If SES was the primary cause of vocabulary gain, we would find that the learners' (both those doing well initially and those performing below their age norms) vocabulary at a particular school would continue to develop at a constant rate as they would all be exposed to the same curriculum. However, at School B, learners who had scored below the age norms initially had made notably greater gains than their age-appropriate counterparts. This exponential growth in vocabulary development therefore has to stem from another source of language stimulation other than the home – the curriculum. If this rationale is applied to the results obtained from School A, very little positive curriculum effects on vocabulary could be seen as the learners who had tested below the age-equivalent scores were not only still lagging behind, but getting further and further behind their expected age scores – with gains of only 8 points per year instead of the expected 12. The learners who had scored age-appropriately at the initial testing had, however, continued to progress at an expected rate.

It would then appear that the curriculum at School B favours weaker or "at-risk" learners for language, while the curriculum at School A does not. Learners with initial age-appropriate language skills have continued to make acceptable gains at both schools, with the gain at School B being slightly higher than that of School A (18 at School B and 14 at School A).

What is then occurring at School B that results in this type of language gain? I suggest that examining their curriculum as it pertains to reading and vocabulary instruction would provide us with the best possible answer to this question.

## 5.2 Reading Instruction

As previously discussed, School A's curriculum resembled a more integrated curriculum while School B's curriculum was found to be a more traditional, collection-type one. Customarily, the adoption of either one of these curricula would presuppose the favoured kind of reading instruction method associated with them. That is to say, more traditional approaches favour a phonic approach to teaching literacy, and more progressive, integrated curricula promote the whole-word approach.

These two approaches to reading instruction can further be described in terms of their focus, i.e. whether they are more teacher- or learner-centred. The whole-word methodology, associated with integrated curricula, is a learner-centred approach, and tends to be more informal, relying more on the learner's choice of reading materials, promoting sight recognition of words and even sentences. Phonics is taught incidentally and as the need for it arises. The phonic approach, utilized by more traditional curricula, is a formal, method, purposefully teaching systematic phonic rules (letter-sound relationships), often with the use of textbooks, or readers (Chall, 2000).

While the "on paper" literacy curriculum of School A (in the form of the NCS), lists phonic outcome measures that are reasonably explicit (p. 19-20 of this dissertation), these outcomes do not necessarily follow the developmental hierarchy and makes developmental assessment of a learner's phonic ability difficult because of its lack of specificity. This vagueness or understipulation of expected outcomes makes plotting the progress and remediating areas of phonic development of especially at-risk learners quite problematic, often resulting in those learners "slipping through the net". Furthermore, at School A, the lack of a formal phonics instruction programme could also be seen as disadvantageous to these learners who already have arrived at school with a vocabulary backlog (as captured by the initial testing). Teachers would then firstly be unable to locate where the learner has "fallen out" on the phonic skills hierarchy, causing the acquisition of subsequent skills higher up along the developmental pathway to be unattainable. Secondly, there would be insufficient guidelines, in the form of pre-cursing skills for example, to apply curative interventions for the learner.

Research has confirmed the importance of phonemic awareness in reading development, particularly for the lower grades and for emergent readers. Chall (2000) explains that reading capability is "cumulative and developmental, and it needs different instructional emphases for different stages of reading development" (p. 64). She further states that the process of beginning reading (as with Foundation Phase learners) may look identical to mature reading, but differs quite remarkably. Beginning reading has much to do with phonics and word recognition – it relies heavily upon learning the relationships between spoken words and the letters and sounds that represent them. As reading develops and matures, it has more to do with language, experience and reasoning.

In other words, different aspects of reading need to be emphasized at different stages of reading development, and early success is essential since it influences not only early reading achievement but also reading competency at subsequent levels of development. The National Assessment of Educational Progress (NAEP) report of reading proficiency in 1994 (Chall, 2000) showed little or no improvement in reading amongst fourth graders, and a decline amongst eleventh graders who had been exposed to whole-language approaches in the lower grades.

School B's curriculum, a more traditional one in nature, utilizes both approaches, but differs from School A in that phonics is taught systematically and purposefully, aided by textbooks and controlled reading. A major advantage to the phonic approach is that it encourages independent reading from a much earlier age than the whole-language approach does, enabling self-selected reading. A criticism of phonics instruction has always been the dearth of literature in the reading textbooks. However, the amount and quality increment that occurs when learners are reading independently as a direct result of phonics instruction is what is really notable (Chall, 2000).

To take this one step further, self-selected reading has been extolled as the best generative factor in vocabulary, spelling and writing proficiency. To go back to the 'input hypothesis' (IH) for language-learning, which claims that language is learnt unconsciously or *incidentally* via *comprehensible input*, reading is considered as being the best possible examplar of this. Krashen (1989) reports that children who perform better on vocabulary tests report more free voluntary reading. Similar findings were obtained with adults who said that they spent more time doing leisure reading; they also scored higher on a vocabulary test. With this in mind, it could be postulated that learners at School B, advantaged by formal phonic instruction, are able to read independently much earlier than those at School A are, resulting in more self-selected leisure reading. This interest-driven reading then results in better vocabulary development, as demonstrated by comparing the mean gain scores of the two schools.

## 5.3 Comparing Vocabulary-enhancing Features of the Two Curricula

The superior gain difference in learners initially "at-risk" at School B, namely those performing at greater than 2 years below their age cohort, is not accounted for only by the type of reading instruction. Exploring the additional vocabulary-enhancing features of the two curricula may shed further light on the matter.

School B (traditional curriculum) does not make use of "themes" with which to frame curricular content as School A does. Instead, contents, or subjects, are taught quite exclusively with strong boundary strength (framing) between the knowledges. Literacy textbooks and controlled reading through recommended texts as well as precocious leisure reading of learners as a result of early reading ability all result in a wide and varied vocabulary.

However, the previously-highlighted, misleading term "theme" may have resulted in less than adequate vocabulary proficiency in learners attending School A. Following my claim that "themes" are not truly so, but instead are more often a form of semantic clustering with unrelated lexical terms being united within one frame, resulting in confusion for learners and impeding vocabulary acquisition, could explain how weaker learners at School A are disadvantaged for language-learning. Perusal of the results for School A shows that the largest gains were made by initially age-appropriate scoring learners while learners scoring below their age norms made the least gains. A possible explanation for this trend is that the initially age-appropriate learners are probably reading at a more advanced level (because of their language level) than their (weaker) school peers and are acquiring new vocabulary items through reading. If this is true, then it could be said that learners with lower language levels do not benefit from this method of vocabulary learning and require more aggressive intervention: they are in fact more curriculum-dependent than their independent reading peers. Where School B succeeds in aiding this "catching up" of weaker learners, is in their employment of more purposeful and systematic phonic instruction and controlled vocabulary exposure via recommended reading materials. This cannot be said to be definitively proved here, but the results of this study provide at least a very strong indication.

# Chapter 6: Conclusion

This study has endeavoured to investigate the effects of curriculum on vocabulary development in primary grade learners. In doing so, the isolation of two different curriculum types, one more traditional and another more integrated, was attempted. This, like most research, was fraught with challenges. A major one was the identification of appropriate schools willing to participate, and even more arduous, matching these two schools for SES. School fees, an acceptable proxy for SES (Reeves, 2005), was mostly relied upon to do this.

In doing so, this study aimed to investigate the degree to which curriculum (traditional versus progressive) may affect language development through its reading instruction method as well as its favouring of semantic clustering in the form of "themes", and subsequent academic success. It was hypothesized that the curriculum with better language-stimulating characteristics, that is, more successful reading instruction methods and language-learning opportunities, should yield learners with better language competence, all else being equal. Conversely, it could then be implied that the curriculum rendering more learners with more complex language competence may in fact display characteristics favouring reading attainment.

Analysis of the data found that learners' vocabulary gain at School B, which was found to be more traditional in its approach to reading instruction, far surpassed that of their peers at School A which was found to be using a reading curriculum more progressive in approach (NCS). Explanations for this phenomenon include the fact that the NCS's phonics curriculum did not adhere to the developmental progression of Phonemic Awareness and above-all, contained severely understipulated outcomes (assessment standards). It was then hypothesized that these qualities disadvantaged Foundation Phase learners for reading attainment and concomitant language-learning. This curriculum seemed to have the most negative effect on vocabulary-learning of learners who were found to have below age-appropriate vocabulary scores at entering school and the least damaging effect (10 points in 12 months) on vocabulary development of learners found to have age-appropriate vocabulary to begin with.

Chall's (2000) overview of historical changes in the preferences for either traditional or progressive approaches over the past 100 years shows that various studies found that the traditional teacher-centred approach produced higher academic achievement than the student-centred one. Social class has been shown to interact with the two approaches. Learners identified as coming from families of low SES achieved at higher levels when receiving traditional education. That is not to say that learners from higher SES backgrounds achieved better academic results when educated in a progressive approach, but rather that the positive effects of traditional education was seen most prominently with learners of weaker educational backgrounds. Other than social class, learning disability also interacted with the two approaches, with learners who were identified as being learning disabled or at-risk also benefiting more from being educated with a traditional approach, regardless of SES. Chall (2000) also reports that teacher-centred learning is "particularly effective for those who enter school with limited knowledge, language, experience, and skills" (p. 117).

The results of this study therefore confirm Chall's (2000) findings with regard to achievement as a product of educational approach, with the traditional approach rendering the largest vocabulary gains in learners, particularly those who initially performed at a below-average level.

## 6.1 Limitations of the study

School fees, used as a proxy for SES in this study and many others, reflected that both schools fell into the middle class category, but lacked parity – R15 000 pa at School A versus R40 000 pa at School B. It was postulated that while School A's learners were from middle class backgrounds, School B's learners were at the top end of the middle class spectrum. Hence, they were not as closely matched as was initially hoped.

In addition, the process of categorisation was particularly problematic as most research in Sub-Saharan Africa is focused on learners from low socio-economic backgrounds. There was therefore limited information available on middle class learners and their education in South Africa. In order to complement and support the process of matching for SES, the study attempted to measure parental education level by means of a questionnaire. Unfortunately, a major stumbling block was encountered when this was sought at School B. As explained previously, the administration of the school prevented the dissemination and elicitation of this type of information, deemed confidential in nature.

# Chapter 7: Recommendations

In light of the poor performance of learners at School A and the proposed causes thereof, the following recommendations and modifications to the NCS could be made for the improvement of language development and reading attainment in the Foundation Phase:

- A greater emphasis on formal phonics instruction.
- The phonics curriculum of the NCS to be aligned with the developmental progression of phonemic awareness.
- Outcomes are to be more clearly stipulated and aligned with assessment standards.
- Formal training for teachers in phonics instruction to be provided.
- Clear exemplars for the Literacy learning area.
- Thematic rather than semantic clustering of vocabulary for "themes" i.e. vocabulary schema should not be horizontally interrelated such as in the theme "Occupations", but rather vertically related such as in "The Frog" – related vocabulary such as "pond", "slimy", "amphibian" would not overlap and cause confusion as with closely-related words such as "policeman", "fireman" in a theme such as "Occupations".
- More aggressively and purposefully-planned vocabulary to be contained in "themes" to allow for the conscious facilitation of new vocabulary being learnt.

Hopefully, by making our approach to reading instruction more explicit, we would see an increase in reading attainment in our learners and subsequent language improvement.

# Chapter 8: Future Directions for Study

While this study has found a curriculum effect, a large-scale form of this study would enable us to track this phenomenon more clearly and allow us to generalise its results. While it was proposed that the vocabulary gain differences could be attributed to a curriculum's affinity for a particular reading instruction method and related pedagogy, the assessment of pedagogic practices in the classroom is only possible by means of observation. The inclusion of pedagogic practice as a variable in a future study would generate a better understanding of what is actually taking place within the classroom and would allow pin-pointing of the practices responsible for any differences in vocabulary that arise.

No qualitative information with regards to parents' academic support activities at home was gathered as it was felt to be beyond the scope of this study. Comparing the time and quality of parental support against the backdrop of their children's vocabulary development would be very enlightening as the extent of SES advantage could be more accurately measured. This information in addition to pedagogic practices in the classroom would augment the data obtained from the vocabulary testing, allowing for a much clearer understanding of a curriculum's effect on language development.

# Appendices

## Appendix A: Teacher's Questionnaire

*Please note that all information supplied will remain strictly confidential.*

Personal Information
Name : ______________________________
School currently employed at : ______________________________
Please state your course of study : ______________________________
College/ University of study : ______________________________
Highest qualification achieved : ______________________________
Number of years teaching experience : __________

Classroom Practice:
*Please circle "yes" or "no" where appropriate.*

| | |
|---|---|
| Does your school's curriculum make use of themes? | YES / NO |
| If yes, for how long is a "theme" used before changing to a new one? ______________ | |
| Are there separate "subjects" that make up your curriculum?<br>How many? ________ | YES/ NO |
| Are subjects taught separately with sessions/ periods clearly demarcating them? | YES / NO |
| Does more than one subject get taught within one period/session? | YES/ NO |
| Is there a sequence in which skills are taught e.g. reading programme with clearly marked developmental goals/milestones? | YES/ NO |
| Are there clearly-defined assessment criteria for a learner to meet? | YES / NO |
| Is the learner usually aware of these assessment criteria? | YES / NO |

If "yes", how do they become aware of them? E.g. Are reading books graded in terms of difficulty to inform the learner of his/her progress, or any other means?

______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________

| | | |
|---|---|---|
| If a learner lags behind, does the curriculum get adapted? | | YES/ NO |
| i.e. | does the pace slow down? | YES/ NO |
| | does the content get simplified? | YES/ NO |

**Thank you for taking the time to complete this questionnaire. You input is highly appreciated.**

## Appendix B: Parent's Questionnaire

**UNIVERSITY OF CAPE TOWN**
**PRIVATE AND CONFIDENTIAL**

Dear Parent/s

Thank you once again for allowing your child to participate in this study. The following additional information is needed to provide background to the learners who were tested. Do remember that this information will remain confidential and that no names will be mentioned in the study.

Child's name : ______________________________

Grade : ____________

*Please tick the relevant box/es*

Highest educational qualification of mother:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pre-Matric | Matric | Certificate | Diploma | Degree | Honours | Masters | Doctorate |

Highest educational qualification of father:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pre-Matric | Matric | Certificate | Diploma | Degree | Honours | Masters | Doctorate |

Occupation of mother : ___________________________

Occupation of father : ___________________________

If you would like the results of your child's vocabulary assessment, please contact the principal. They will gladly be made available to you as soon as possible.

Regards,

_________________

W Conrad (Ms)
Speech Therapist & Audiologist

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