

**SEMIOTIC ANOMALIES IN ENGLISH, AS SECOND LANGUAGE LEARNERS OF
IMMIGRANT PARENTS ACQUIRE FIRST TIME LITERACY**

by

ELIZABETH CLAIRE GIEN SNELGAR

Submitted in accordance with the requirements
for the degree of

MASTER OF EDUCATION

In the subject

INCLUSIVE EDUCATION

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: DR. N.M. NEL

NOVEMBER 2010

DECLARATION

Student number 351 -39013

I declare that **SEMIOTIC ANOMALIES IN ENGLISH, AS SECOND LANGUAGE LEARNERS OF IMMIGRANT PARENTS ACQUIRE FIRST TIME LITERACY** is my own work and that all sources I have used or quoted have been indicated and acknowledged by means of complete reference.

Gien Snelgar E.C.

Date

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation and gratitude to the following:

- ❖ Dr. N. Nel - my academic advisor who has been and still is, singularly supportive. I will always owe a great personal debt as well as an academic debt to her. I have learned more than I can say adequately, from her profound insight, wisdom, positivity and gentle manner.
- ❖ Professor E. Lemmer- has everything one could wish for in an editor with her formidable editing abilities.
- ❖ Mrs. H. Muller – for her astute statistical input which was invaluable accurate, and brought a depth and quality to my work.
- ❖ Dr. I. Gien, my father-for his love of learning, his inspiration, and more importantly, his belief that I would eventually grasp statistics and that this work was possible. His guidance, love and incisive supervision, continues to be invaluable.
- ❖ My mother – who gave me life and the courage to live it with grace and dignity.
- ❖ Capital College -I am indebted to Capital College for granting me permission to use their premises and access to their student body and families.
- ❖ Morris Allen - I am deeply indebted to Morris for his friendship, generosity and support. He is significantly responsible for my decision to study further and my interest in language learning.
- ❖ Morris Allen Study Centre - for their loyal support, openness and willingness to share invaluable information.
- ❖ Dr. L. Horovitz – who gave me the knowledge that this work was possible.
- ❖ The parents- for their enthusiasm and willingness to participate in the research.
- ❖ The learners- for their courage, generosity of spirit, their smiles and entrusting their skills to this research.
- ❖ The UNISA administrative staff- who create and maintain the framework without which none of this is possible.

DEDICATION

This study is dedicated to my much beloved family

&

the children of the world with their ongoing battle for literacy.

ON THE VALUE OF LITERACY

“As a poet, I cannot imagine a life without words.

Language is the element in which the mind lives, and it is the very basis of human being. It is that which distinguishes man from all other creatures. To speak, to read and write, to encounter the power and beauty and magic of words – these are gifts that enrich and ennoble our existence. It seems almost miraculous to me that a child, only two or three years of age, can learn the complexities of language. But children take possession of language naturally, as a birthright. And it should be by birthright also that the child learns to read and write, and is therefore enabled to discover the riches of the world and to share the riches with others. I believe with all my heart that every person in the world is entitled to the gift of literacy.

We must provide that gift to the best of our ability, for doing so ensures our humanity and makes possible the realization of a more perfect world” (Momaday,2009 UNESCO).

N.C. Scott Momaday
The Alphabet of Hope, UNESCO 2009

SUMMARY

Research has shown that literacy acquisition and the ultimate realisation of literacy, comprehension of the written text requires more than the ability to decode individual words. This study brings together a synthesis of current research on early language acquisition, language structure, vocabulary development and its intrinsic underpinning of comprehension in monolinguals thereby providing a theoretical framework for a comparative study of limited English proficient learners (LEP's)/English language learners (ELLs) acquiring first time literacy with the attendant vocabulary deficits and age appropriate decoding skills. A quantitative and qualitative study examines the statistical differences between reading, vocabulary, rapid automatic naming (RAN/decoding) and comprehension when a learner born of foreign parents acquires first time literacy in a language other than the language spoken at home. The study isolates and specifies an at risk educational minority through the identification of a hidden comprehension deficit (HCD).

In summarising the main findings from the literature review and the empirical investigation, an “at risk educational minority” was identified and isolated through the identification of the HCD. The envisioned outcome was achieved and the hypothesis accepted.

KEY TERMS

Learner; limited English proficiency (LEP)*; English language learner (ELL)*; first Language (FL); second language (L2); first Language acquisition (FLA); second language acquisition (SLA); second language learners (SLL); target language (TL); limited language proficiency (LLP) hidden comprehension deficit (HCD); reading specific comprehension deficit (SCD)***; Comprehension deficit (CD)**; specific comprehension levels (SCL) basic interpersonal communication skills (BICS); cognitive academic language proficiency (CALP); literacy skill; rapid automatic naming (RAN); phonemic awareness (PA); inclusive education; barriers to learning.

- The terms ELL/LEP for the purposes of this study, are used interchangeably. It is however noted that each term emphasises a particular paradigm. For example the term LEP is more representative of a deficit paradigm and for this reason is avoided by certain writers. The term ELL is used consistently throughout this study, as the research is taking place within the context of the Canadian education system and is the term used and preferred in Canadian policy documents. However, it is my assumption that ELL students have, with varying degrees, a deficit in English proficiency and that this should be understood wherever the term is used.

** The term comprehension deficit implies a comprehension age match deficit of both spoken discourse and the written narrative.

*** The term specific comprehension deficit refers to learners who have age appropriate word reading skills whose comprehension lags behind. Their comprehension of spoken texts is impaired, as is the ability to reproduce spoken narratives.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1	Introduction: Background to the research	1
1.2	Research aim	3
1.2.1	Primary aim	3
1.3	Problem statement	3
1.4	Context of the problem statement	4
1.5	Research objectives	5
1.5.1	Motivation for research	6
1.6	Concept clarification	7
1.6.1	Key terms used to define the population	7
1.6.2	Key terms used to define the literacy component	9
1.6.3	Key terms used to define semantic concepts	9
1.6.4	Key terms used to describe the acquisition of societal language by Language - minority children	10
1.6.5	Key terms relating to the reading process	11
1.6.6	Key terms relating to context	12
1.7	Research question	13
1.8	Hypothesis	13
1.8.1	Sub hypothesis	14
1.9	Research method	16
1.9.1	Sampling	16
1.9.2	Research instruments and procedures	17
1.9.3	Data analysis	18
1.9.4	Validity and reliability	19
1.10	Chapter overview	20
1.11	Conclusion	21

CHAPTER TWO

GLOBALISATION, INCLUSION AND THE RESULTANT PHENOMENON OF FIRST TIME LITERACY ACQUISITION IN A SECOND LANGUAGE OR THIRD LANGUAGE

2.1	Introduction	22
2.2	Globalisation	23
2.2.1	Globalisation as it pertains to the North Americas	23
2.2.2	Globalisation: the language and education context	25
2.2.3	Globalisation: the social, cultural and literacy context	27
2.2.3.1	Globalisation: the social literacy link	27
2.2.3.2	Globalisation: the cultural literacy link	30
2.3	Inclusion: Addressing diversity	36
2.4	Second language acquisition: The literacy link	40
2.4.1	Introduction	40
2.4.2	Historic perspective	41
2.4.3	The beginnings: Contrastive analysis	41
2.4.4	Interlanguage	42
2.4.5	Biological model	42
2.4.6	Rule governed behaviour	42
2.4.7	Interactionists	43
2.4.8	Parallel Distributed Programming (PDP) Theorists	43
2.4.9	Cognitive theorists	43
2.4.10	Chomsky: Language Acquisition Device (LAD)	44
2.5	Modern perspective	44
2.5.1	Factors affecting second language acquisition	45
2.5.1.1	Krashen's Affective Filter Hypothesis Theory	45
2.5.2	Social theorists	46
2.6	Stages of second language acquisition	47
2.6.1	The non verbal or pre production stage	47
2.6.2	The early productive stage	48
2.6.3	Productive use of the new language	48
2.6.4	The intermediate language proficiency stage	48

2.6.5	The advanced language proficiency stage	48
2.6.6	Basic Interpersonal Communication Skills	49
2.6.7	Cognitive Academic Language Proficiency	49
2.7	Cognitive and linguistic social variables	49
2.8	Benefits of first time literacy in a mother tongue	50
2.9	The role of linguistic proficiency as central to first time literacy acquisition in both a first and second language	51
2.9.1	Introduction	51
2.9.2	First and second language acquisition relative to literacy	52
2.9.3	Literacy and its determinants	55
2.9.4	Emergent literacy and language	56
2.9.5	Reading difficulties	59
2.10	At risk learners	59
2.11	Vocabulary	61
2.12	Conclusion	70

CHAPTER THREE

MEANING THE ESSENCE OF COMPREHENSION AND THE ULTIMATE REALISATION OF LITERACY

3.1	Introduction	71
3.2	Comprehension and meaning	72
3.2.1	Decoding, code cracking and meaning	74
3.2.2	Comprehension: vocabulary and meaning	75
3.2.3	Comprehension, language structure and meaning	79
3.2.4	Comprehension, language proficiency and meaning	81
3.2.5	Comprehension, context, background knowledge, domain knowledge and meaning	83
3.2.6	Comprehension, discourse, identity and meaning	84
3.3	Comprehension: language proficiency, functional literacy and learning	85
3.4	Comprehension and meaning relative to academic success	86
3.5	Conclusion	87

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1	Introduction	89
4.2	The problem statement, specific research question, hypothesis and sub hypothesis	91
4.2.1	The specific research question	91
4.2.2	The hypothesis	92
4.2.3	The sub hypothesis	92
4.3	Ethical measures	94
4.3.1	Informed consent	94
4.3.2	Voluntary participation	94
4.3.3	Anonymity and confidentiality	94
4.4	Modes of Enquiry	95
4.5	Design type	95
4.6	Reliability and validity	99
4.6.1	Reliability	99
4.6.2	Validity	101
4.6.3	Pilot study	103
4.7	Sampling	105
4.7.1	Sampling technique, respondents as sampling units and sampling description (unit analysis of subjects)	105
4.7.2	Target population and practical sampling (Population selected)	105
4.8	Analysis methodology, a comparative approach	106
4.9	Measuring instruments	107
4.9.1	Qualitative assessment methods/instruments	108
4.9.1.1	A structured questionnaire	108
4.9.1.2	A structured observation	109
4.9.2	Quantitative assessment instruments	109
4.9.2.1	A structured close ended semantic differential scale for young children	109
4.9.2.2	Reading assessment tests	109
4.9.2.3	Instruments utilised	109
4.9.3	Background information and test administration	111
4.9.3.1	Reading and comprehension in ELL's and monolinguals – NARA	111

4.9.3.2	Receptive vocabulary – The Peabody Picture Vocabulary Test (PPVT)	111
4.9.3.3	The Rapid Automized Naming and Rapid Stimulus Test (RAN/RAS)	112
4.10	Recording and electronic capturing of data	112
4.10.1	Qualitative data recording	112
4.10.2	Quantitative data recording and capturing	112
4.11	Statistical Analysis strategy	113
4.12	Phases of research	120
4.13	Conclusion	120

CHAPTER FIVE

PRESENTATION OF ANALYSES AND FINDINGS

5.1	Introduction	121
5.2	Analyses and presentation of qualitative data	122
5.2.1	The identification of a “high risk” educationally vulnerable ELL population acquiring first time literacy (A research objective)	122
5.2.1.1	Cultural and biographical background: Structured Parental Questionnaire Interview	123
5.2.1.2	Deductions from the structured interview- Questionnaire analysis results	125
5.2.2	Exploration and description of ELL’s acquiring first time literacy (A research objective)	125
5.2.2.1	Background on attitude towards reading: Observation data	126
5.2.2.2	Deductions from reading attitude observational data analyses	127
5.3	Analysis and presentation of quantitative data	128
5.3.1	Introduction: Assessment of the Hidden Comprehension Deficit (A research objective)	128
5.3.2	Identifying, describing and quantifying the HCD associated with ELL’s acquiring first time literacy in a second or third language (A research objective)	128
5.3.2.1	Analysis results of the Likert semantic differential scale for young children - learners’ attitude to reading	128
5.3.2.2	Analysis of the findings for the Semantic differential Likert scale	129

5.3.2.3	Analysis results of the reading and comprehension assessment on ELL’s and monolinguals – NARA	131
5.3.2.4	Deductions from the NARA reading comprehension data analysis for ELL’s and monolinguals	137
5.3.2.5	Peabody Picture Vocabulary test (PPVT)	138
5.3.2.6	Analysis results on the assessment data of the Receptive vocabulary – Peabody Picture Vocabulary test (PPVT)	138
5.3.2.7	Deductions from the PPVT receptive vocabulary data analysis for ELL’s and monolinguals	142
5.3.2.8	Rapid Automatic Naming test - RAN/PA	142
5.3.2.9	Analysis results of the Rapid Automatic Naming RAN/PA assessment on ELL’s and monolinguals	142
5.3.2.10	Deductions from the - Rapid Automatic Naming RAN/PA analyses Results for ELL’s and monolinguals	146
5.3.2.11	A comparison of t-test results for The NARA, PPVT and RAN/PA tests: standardised means and standard deviations	146
5.3.3	The main hypothesis of the study: Exploring, describing and quantifying the comparison between age appropriate comprehension, reading, vocabulary and phonetics in ELL’s during first time literacy acquisition in the ‘high risk’ population defined for this study as compared to the monolingual learner group (A research objective)	147
5.3.3.1	Deductions from the NARA, PPVT and RAN/PA data for ELL’s and monolingual learners	147
5.4	Overview and conclusion	148

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMENDATIONS

6.1	Introduction	151
6.1.1	Overview of the objectives	153
6.2	Summary of the literature review	154
6.2.1	Introduction	154
6.2.2	A summary of the findings of the literature review	155
6.3	A summary of the empirical findings	157
6.3.1	Introduction	157
6.3.2	Summary of the qualitative study findings	157
6.3.3	Summary of the quantitative study findings	158
6.4	Conclusions from the literature review and empirical investigation	159
6.4.1	Introduction	159
6.5	Recommendations	161
6.6	Limitations of the study	163
6.7	Concluding remarks	164

BIBLIOGRAPHY	165
---------------------	-----

LIST OF ABBREVIATIONS

The following abbreviations and acronyms are used in this study:

HCD	Hidden comprehension deficit
CD	Comprehension deficit
SCD	Reading Specific comprehension deficit
SEN	Special Educational Needs
LEP	Limited English Proficiency
ELL	English language learner
ESL	English as a second language
FL	First Language
L2	Second language
FLA	First language acquisition
SLA	Second language acquisition

SLL	Second language learners
SLT	Second language teaching
BICS	Basic interpersonal communication skills
CALP	Cognitive academic language proficiency
TL	Target language
RAN	Rapid automatic naming
PPVT	Peabody Picture Vocabulary Test
NARA	Neale Analysis of Reading Ability
P/A	Phonemic Awareness
SES	Socio – economic status
FL	Functional literacy
CPH	Critical period hypothesis
PDP	Parallel distributed processing
BC	British Columbia
SEN	Special educational needs
IQ	Intelligence quotient
EDI	Early Development Instrument

LIST OF TABLES

Table 2.1	A pyramidal representation of the literacy acquisition process in monolinguals	67
Table 2.2	A pyramidal representation of the literacy acquisition process of the ELL	67
Table 4.1	Modes of enquiry	95
Table 4.2	Design type	98
Table 4.3	Home language distribution of experimental and comparison groups of the study (columns 4 & 5)	104
Table 4.4	Instruments used for reading analysis	110
Table 5.1	Linguistic background of ELL: Frequency distribution of the eight most crucial language issues addressed in the structured parental interview/questionnaire	124

Table 5.2	Attitude towards reading: Frequency distribution of occurrence of eight behavioural patterns observed in ELL and monolingual learners	126
Table 5.3	Summary of results for the semantic differential scale for English monolinguals and ELL Learners on the question ' <i>Please point to the little face that shows how you feel when you read your English book?</i> '	129
Table 5.4	Reading and comprehension in ELL's (subjects) - Neale Analysis of Reading Ability (NARA)	133
Table 5.5	Reading and comprehension in monolinguals (comparison group) - Neale Analysis of Reading Ability (NARA)	134
Table 5.5.1	T-test results on standardised reading and comprehension scores	135
Table 5.6	Evaluation of ELL's' (subjects) receptive vocabulary - PPVT	139
Table 5.7	Evaluation of monolingual (comparison group) learners' receptive vocabulary - PPVT	140
Table 5.7.1	T-test results for small independent samples with unequal variances (PPVT standardised score)	141
Table 5.8	Evaluation of ELL's (subjects) decoding/naming abilities - RAN/PA	143
Table 5.9	Evaluation of monolinguals (comparison group) Decoding /naming ability - RAN/PA learners	144
Table 5.9.1	T-test results for small independent samples with unequal variances (RAN /PA standardised score)	145
Table 5.10	A comparison of summary statistics of the two sample t-test results for the NARA,PPVT and RAN/PA tests	147

LIST OF FIGURES

Figure 5.1	Bar graph -Linguistic characteristics	124
Figure 5.2	Bar graph -Behavioural patterns	127
Figure 5.3	Box plot – reading assessment (NARA assessment standardised scores)	136
Figure 5.4	Box plot – comprehension assessment (NARA assessment standardised scores)	136
Figure 5.5	Box plot – Receptive vocabulary (PPVT standardised scores)	141
Figure 5.6	Box plot – Rapid automatic naming (RAN/PA standardised scores)	145

APPENDICES:

Appendix A

A-1	Parent consent form – English	198
A-1.1	Parent consent form – Mandarin	199
A-2	Parent interview / Questionnaire	200

Appendix B

B-1	Differential Likert Semantic Scale for young children	202
B-2	Structured Observation Chart	203

Appendix C

C-1	Tabulation chart based on structured questionnaire	204
C-1.1	Tabulation for structured questionnaire/percentages	206
C-2	Frequency tabulation for ELL structured reading observation	207
C-2.1	Frequency tabulation for monolingual structured reading observation	208
C- 2.2	Frequency chart ELL structured reading observation	209
C -2.3	Frequency chart monolingual structured reading observation	210
C-2.4	Tabulation for reading analysis observation chart	211
C-3	Reading and comprehension data (ELL-NARA)	212
C-3.1	Reading and comprehension data (monolinguals -NARA)	213
C -4	Receptive Vocabulary Data (ELL-PPVT)	214
C -4.1	Receptive Vocabulary Data (monolinguals -PPVT)	215
C-5	Rapid Automatic Naming data (ELL-RAN)	216
C -5.1	Rapid automatic Naming Data (Monolinguals -RAN)	217

CHAPTER 1

INTRODUCTION TO THE STUDY

“One cannot emphasise too strongly the importance of those first years for the course that a child will follow throughout his entire life.”

(Erasmus, 1509, 1529/1985: 298)

1.1 Introduction: Background to the research

English language learners (ELL's) acquiring first time literacy in a second language (SL), who for the purposes of this study, are also deemed to be limited English proficiency learners (LEP) are an emerging phenomenon present in the Grades 1, 2 and 3 classrooms in most English – speaking countries today. (In this study the terms ELL and LEP are used synonymously and encapsulate the definitions in section 1.6.1 g and 1.6.1 c.) Their presence in inclusive education classrooms is not only evident but a requirement, often legislated. The challenge for teachers in the English- speaking inclusive classroom is to prepare both ELL's and monolingual learners for literacy acquisition, in other words, reading and writing. With this in mind, this research explores the nature of globalisation and its role in creating the phenomenon referred to in this research as an at risk educational minority by virtue of their LEP and attempts to identify this at risk educational minority linguistically, culturally, socially and affectively. In addition, the hidden comprehension deficit (HCD) manifested in this at risk group as they acquire first time literacy in Grades 1, 2 and 3 is described.

The ELL of immigrant parents acquiring first time literacy is characterised by a differential and deficit English proficiency, vocabulary and comprehension levels and therefore is deemed to be at risk. Literacy outcomes are known to be strongly related to language proficiency, structure, vocabulary levels and later reading comprehension (Cutting & Scarborough, 2006:277-299). Beimiller (1999:29) states that persisting differences in vocabulary size have been suggested as a cause of the 'fourth grade slump' that many learners experience even after effective literacy acquisition instruction. The 'fourth grade slump' heralds added difficulties, more specifically, poor academic outcomes for learners whose language proficiency is limited. Fundamental to literacy acquisition and positive academic outcomes is language proficiency, adequate vocabulary and comprehension levels. Cain and Oakhill (2007:31) note converging evidence of a common basis of basic language skills which underpins the development of written as well as spoken language comprehension. Research describing the difficulties of elementary ELL's is a broad, complex and a well documented field;

however, there is limited research on first time literacy in a second language. Thus the overall aim of this study is to explore the semiotic anomalies in learners born of immigrant parents whose home language is other than English. To this end, the primary objective of this study is to isolate and specify an 'at risk educational minority' through the identification of the HCD. Early identification and therefore support are necessary to reduce, if not eliminate, the 'fourth grade slump' and ultimate negative academic outcomes.

Globalisation has taken on dramatic proportions creating an unprecedented increase in the number of ELL's or 'second generation learners' entering classrooms in the United States and Commonwealth linked countries such as Canada, the United Kingdom, Australia and New Zealand. More specifically, in terms of this study, there is an increase of ELL's of immigrant parents, whose home language is not English, acquiring first time literacy in English only classrooms. The changing demographic data and the dynamic and diverse needs of these learners contribute to the need for further research to support this at risk educational minority. The aforementioned forms the essence of this study.

The proposed and actual increase in the number of ELL's entering formal schooling and acquiring first time literacy in a language other than the language spoken at home is not isolated to Commonwealth countries. Increasingly, teachers, schools and communities are being faced with the challenges of providing literacy acquisition education to learners who are limited in their English proficiency while meeting the needs of the English- speaking learners in the classroom, school and community. Research into the characteristics of first time literacy acquisition in a SL has only recently been explored and there is little systematic research in this field (Tabors & Snow, 2003:159). As a result, there is a need for an investigation into ELL's acquiring first time literacy in a SL in Grades 1, 2 and 3. More specifically research is needed concerning ELL's' language proficiency, structure and vocabulary levels, how these underpin comprehension and how age appropriate reading (decoding) levels compare with comprehension levels.

This study takes place in British Columbia (BC), where forty- six out of fifty- six districts report levels of vulnerability below 10% on the Early Development Instrument (EDI) scale in the language proficiency of young learners (Human Early Learning Partnership (HELP), 2001:46). The implication of these findings is that there are large numbers of learners who comprise an at risk educational minority. It is precisely these ELL's born of immigrant parents whose home language is other than English who are central to this research.

1.2 Research aim

This research aims to explore the semiotic anomalies in learners born of immigrant parents whose home language is other than English.

1.2.1 The primary aim

More specifically, the aim of the research is to identify, isolate and specify the at risk educational minority through cultural, social and linguistic differentials and deficits and identify the HCD present in these learners as they acquire first time literacy in English.

The problem statement and context of the problem statement follow.

1.3 Problem statement

As a result of the effects of globalisation and, more pointedly, of the policy of inclusion, a phenomenon is emerging: during reading, Rapid Automatic Naming (RAN) or Phonemic Awareness (PA) masks a comprehension deficit in learners whose home language differs from the language used in school. The aim of this research was to identify and highlight this phenomenon in the Canadian context, where children born in Canada of immigrant parents are perceived to be English-speaking as they acquire first time literacy; however, they are, in effect, ELL's. The target group will be first, second and third graders born in Canada of immigrant parents, whose home language, differs from the language in both school and the classroom.

Most work on phonological skills and reading development has focussed quite correctly on the relation to word reading (Cain & Oakhill, 2007:8). Research investigating learners' comprehension skills uses measures of reading comprehension that are dependent on the individual's ability to read words; therefore, the extent to which reading comprehension has been isolated and addressed is unclear (Cain & Oakhill, 2007:42). The aim of this research was the identification of the HCD in ELL 's and therefore reference to the extensive evidence linking phonological awareness and the development of word reading was limited to its relevance to the HCD. Studies that have reviewed the relationship between phonological skills and comprehension are varied, partly due to the differences in the nature of comprehension assessment and more particularly, its reliance on word recognition skills (Cutting & Scarborough, 2006:277-299). There is, however, a strong relationship between adequate early vocabulary levels, language structure and later reading comprehension (Cunningham & Stanovich, 1991:264-274) which speaks to the aim of this study: an at risk

educational minority who acquire English while simultaneously learning to read in English, resulting in a HCD.

1.4 Context of the problem statement

English is widely used as the *lingua franca* in government, business, education and socially, in the United States of America and many but not all Commonwealth linked countries (Bosch & De Klerk 1996 in Venzke, 2002:1). This stands true for Canada where through legislation there are two official languages, namely French and English (Protocol for Agreements for Ministry Language Education and Second Language 2009–2010 to 2012–2013 between the Government of Canada and the Council of Ministers of Education, Canada 2009:2). In BC, one of the ten provinces in Canada, English is legislated as the principal language for teaching, learning, examinations, text books and school governance. However, one in every five people in BC belongs to a visible minority (HELP, 2001:36), whose home language is other than English. The urban districts in the province report the highest rates of visible minority status. More specifically, roughly more than half the population of Richmond, Vancouver and Burnaby (municipalities within Metro Vancouver which have a large ethnic heritage linked to China and South Asia) are members of a visible minority. ELL's are concentrated in a relatively small number of urban areas in the province of BC, primarily in the populous Lower Mainland area (HELP, 2001:46) and therefore large numbers of learners in these areas belong to a visible minority. In addition, language minority learners are overrepresented among those learners with negative academic outcomes (Hakuta, 2001:29). LEP creates difficulties for parents and learners alike. Parents find it difficult to assist learners with their homework, in this instance, story reading at bedtime, communication with teachers at school, advocacy for their children, and staying abreast of important events and information in the community. This places ELL children at a considerable disadvantage, compared to their English-speaking peers in English proficient families (Cohen, Rivara, Marcuse, Mc Phillips & Davis, 2005:575-579). This is the context of this study: a visible minority population in Richmond, Burnaby and Vancouver, acquiring first time literacy and who, through LEP, become "outliers" in their communities and schools.

The following objectives shape and provide the framework of the study

1.5 Research objectives

The primary objective of the study is to isolate and specify an at risk educational minority through the identification of the HCD. In support of and in order to sustain the primary objective, the following general objectives were addressed.

1. To explore the cognitive, academic, cultural and social reality of ELL's acquiring first time literacy and their needs within the culture of inclusion prevalent in today's classroom.
2. To identify a high risk, i.e. educationally vulnerable, ELL population acquiring first time literacy.
3. To explore and describe ELL's acquiring first time literacy.
4. To identify, describe and quantify the HCD associated with ELL's acquiring first time literacy in a second or third language.
5. To explore, describe and quantify the comparison between age appropriate reading, vocabulary, Rapid Automatic Naming (RAN) and comprehension in ELL during first time literacy acquisition in the high risk population identified for this study.

Secondary objectives of this research are:

- To provide curriculum developers and teachers with a framework for and arouse awareness of vocabulary development, comprehension levels and the attendant barriers to meaningful learning among ELL's.
- To respond to, and enable adequate support for diversity. More specifically, to serve and support all ELL's in an inclusive classroom via the removal of barriers to learning; namely, by identifying, acknowledging and addressing vocabulary and comprehension deficits in ELL's. In addition, to provide ELL's with the necessary linguistic and emotional support during first time literacy acquisition. A fundamental goal of inclusion, namely, successful academic outcomes for an at risk minority acquiring first time literacy in a second language, can then be realised.
- To facilitate further research into the needs of this previously unidentified multilingual and multicultural minority and their subsequent educational vulnerability in inclusive classrooms.

1.5.1 Motivation for research

Having spent eleven years in Singapore as a vice principal and an English teacher and a further five years in Canada as a special educational needs (SEN) English/reading teacher assessing learners' comprehension levels, the following aspects became apparent:

- The assumption in English medium schools is that English is the first primary language of learners and that English is the language spoken at home. This assumption is incorrect. Many learners are identified as English-speaking by virtue of the fact that they are first generation Canadians. These learners do speak English; however, they are ELL's. English is a second or even third language for these learners. English is neither the spoken language at home, nor is it the spoken language of the parents. Parents are often new immigrants and speak little English, if any at all.
- Upon investigation, the researcher found that multicultural, multilingual ELL's, while deemed proficient in English as a first language, share a common characteristic when comprehension analyses were scrutinised, namely a marked differential between the comprehension abilities of authentic 'English as a first language' learners and those who were assumed to be first language learners but were in fact not.
- Multilingual learners repeatedly present with age appropriate reading, RAN and PA skills. However, when comprehension skills are isolated and examined, the skills are below the age appropriate level. In addition, there is a marked divergence between the comprehension skill and the reading, RAN and PA skills. These learners are not simply poor readers. Cain and Oakhill (2007:41) describe the phenomenon as a specific comprehension deficit (SCD). The HCD is apparent in Grades 1, 2 and 3 learners when measured and contributes to and creates an educationally vulnerable minority hitherto unidentified.

The discrepancy in comprehension and reading levels speaks to the objective of the study and the researcher's interest and research in this area.

Snow (2001:601) asserts:

Children learning to read in a language that they do not speak are at high risk of poor outcomes. This issue is relevant to schools in South Africa, Namibia, Singapore and other settings where English is being widely adopted as the universal language of schooling.

Considering the above as well as the limited research on first time literacy in a second language, further investigation of this vulnerable, at risk but neglected population, will influence teaching applications in the classroom and curriculum, by providing a framework for and awareness of

comprehension, language structure, levels of vocabulary, and positive academic outcomes in ELL's acquiring first time literacy in a second language.

1.6 Concept clarification

The field of education contains an array of acronyms and abbreviations. In pursuit of clarity, the key concepts as pertaining to the topic are defined below. In each instance the term's specific meaning and relevance to this study is outlined. For additional clarity, the concept clarification is divided into six broad categories namely: population, literacy components, semantic concepts, acquisition of societal language by language minority learners and reading analysis.

1.6.1 Key terms used to define the population

a. Learners: The term learner refers to a child studying in ordinary public schools and replaces the terms student or pupil. (Dictionary of South African Education and Training, 2000:95, s.v. "learner"). The term learner for the purposes of this study is specific to learners of immigrant parents whose home language is other than English acquiring first time literacy in Grades 1, 2 and 3. The term learner in a general setting however, refers to all learners ranging from early childhood education to adult education (Department of Education, 1997: vii).

b. Language minority learners (visible minority): This term refers to individuals from homes where a language other than English is actively used, who have had some opportunity to develop a level of proficiency in a language other than English. A language minority student may be of limited English proficiency (Hakuta & August, 2001:17). In the context of this study, language minority learners are those born in Canada of immigrant parents attending public school for the first time in Vancouver, BC. The terms, language minority and visible minority, are used synonymously and encapsulate the definition aforementioned.

c. Limited English Proficiency (LEP): Limited English proficiency is the term used to describe a minority learner in an English- speaking country, whose English language proficiency is not at the level of native speakers of English. Special instruction is therefore needed to prepare the learner for entry into a regular school programme (Richards, Platt & Platt, 1999:213).

Hakuta (2001:15)states that " the most commonly used term to refer to students who come from language backgrounds other than English and whose English proficiency is not yet developed to the point where they can profit fully from English only instruction is *limited English proficiency (LEP)*".

This study explores the LEP learner acquiring first time literacy in a second or third language with the attendant vocabulary and language structure deficits accompanied by appropriate decoding skills.

Language proficiency is broadly defined as the use of fluent speech (Arua & Magocha, 2002:454) which effectively conveys the intended meanings, encompasses the notions of grammatical correctness and communicative competence while taking into account the developmental levels of the learners.

d. English as a second language (ESL): The role of the English language used by immigrants and other minority learners in English -speaking countries such as Canada. These learners use their mother tongue at home and amongst friends who are also minority learners of English but use English at school (Richards, et al., 1999:124). ESL learners in English -speaking schools remain at a disadvantage compared to English - speaking children in elementary schools (Beimiller, 2003:9). The research explores learners acquiring first time literacy while acquiring English simultaneously; more specifically, the 'disadvantage' experienced by these learners is examined.

e. English language learner (ELL):

The English as a Second Language Policy and Guidelines document for BC (2009:4), defines English language learners (often referred to as ESL learners) as 'those whose primary language or languages, of the home are other than English. English language learners may be immigrants or may be born in Canada'. ELL is the preferred term and the term that is used in Canadian policy documents (English Language Learners ESL and ELD Programs and Services. 2007. Policies and Procedures for Ontario Elementary and Secondary Schools, Kindergarten to Grade 12. Ch1.2:8).

The three terms LEP, ELL and ESL, tend to be used interchangeably; however, each term has a slightly different emphasis. For example, LEP is more representative of a deficit paradigm and for this reason, is critiqued and avoided by certain writers. Hakuta(2001:15), proposed the use of the term ELL as opposed to the term LEP, as the former tends to be a positive term, whereas the term LEP 'assigns a negative label'.

As the research is taking place within the context of the Canadian education system, I have chosen to use the term ELL consistently throughout the dissertation as this term is the one used and preferred in Canadian policy documents. (English Language Learners ESL and ELD Programs and

Services. 2007. Policies and Procedures for Ontario Elementary and Secondary Schools, Kindergarten to Grade 12;The English as a Second Language Policy and Guidelines document for BC 2009).

For the purposes of this study, the term English Language Learner (ELL) indicates a learner who is in the process of acquiring English and has a first language or mother tongue other than English and in addition, includes ESL and LEP learners. However, it is my assumption that ELL's have, with varying degrees, a deficit in English proficiency and that this should be understood throughout the dissertation wherever the term is used.

1.6.2 Key terms used to define the literacy component

a. Literacy Skills: Literacy skills “Include pre reading skills, such as concepts of print and alphabetic knowledge; word- level skills, including decoding, word reading, pseudo word reading, and spelling; and text level skills, including fluency, reading comprehension and writing skills” (August & Shanahan, 2006:1).

b. First time literacy acquisition FLA: First time literacy acquisition refers to the initial acquisition of literacy in Grades 1-3.

c. Functional literacy: Functional literacy refers to the ability to use reading and writing skills sufficiently well for the purposes and activities which normally require literacy in an adult life or in a person's social position (Richards, et al., 1999:216).

1.6.3 Key terms used to define semantic concepts

a. Hidden comprehension deficit (HCD): Hidden comprehension deficit has been conceptualised by the researcher and is fundamental to this study. HCD refers to a comprehension deficit, prevalent in learners acquiring first time literacy, in a language that is not spoken at home. The comprehension deficit is masked by age appropriate reading, RAN and PA skills and therefore is often undetected.

b. Specific comprehension deficit (SCD): Specific comprehension deficit refers to children who have developed age appropriate word reading skills but whose reading comprehension skills lag behind (Cain, 2003:335-351; Yuill & Oakhill, 1991, cited in Cain & Oakhill, 2007:41).

SCD is manifested, according to Stothardt and Hulme (1992:254), by poor ‘comprehenders’ with satisfactory phonological skills but who perform poorly on tests of listening comprehension and

verbal IQ. Despite fluent and accurate reading and normal non verbal ability, these children are poor at understanding what they have read (Nation, Clark, Marshall, & Durand, 2004:199).

1.6.4 Key terms used to describe the acquisition of societal language by language-minority children

a. First language (FL): A first language is a person's mother tongue or the language acquired first. In addition, first language may refer to the language which the child is most comfortable using. This term may be used synonymously with the term, native language (Richards, et al., 1999:140).

Mother tongue or first language refers to the first language learned at home in childhood and still understood at the time of the Canadian census (Statistics Canada, 2001).

b. Second language (SL): Second language is a language which is not a native language in a country. In both Britain and North America, the term second language is used to describe a native language in a country as learnt by immigrants to that country, who have a different first language. English would be called the SL of immigrants whose first language is other than English, for example, Mandarin (Richards, et al., 1999:142). Garner (1990:2), explains that learners who hail from divergent language backgrounds and who are required to learn English in order to participate in an English – only school curriculum are referred to as ESL learners as English is not the mother tongue.

c. First language acquisition (FLA): A general term which describes the learning and development of a learner's mother tongue or the language acquired first (Richards, et al., 1999:140). In the context of this study literacy is an advanced or extended form of spoken language; in this instance, the first language (Lesaux & Geva, 2006:53).

d. Second language acquisition (SLA): The term used to describe the process by which learners develop proficiency in a second or foreign language (Richards, et al., 1999:324). SLA varies according to the conditions under which it is learned (Lightbown & Spada, 1993; Hakuta, 2001:29). The conditions, use and social status of the SLA in this study should be understood within the Canadian context, but more importantly the context of BC where one in six British Columbians belong to a visible minority group with an ethnic heritage linked to China or South Asia (HELP, 2001:18). It is not uncommon to find a classroom in Vancouver in which half of the children do not speak English or French as their first language (HELP, 2001:20).

e. *Basic interpersonal communication skills (BICS)*: Basic interpersonal communication skills (BICS) refer to the language proficiency needed to perform tasks not directly related to learning academic content, such as interpersonal and social communication (Cummins, 1980). This is the language of normal everyday speech, including pronunciation, grammar, and basic vocabulary. It is the ability to understand and speak informally with friends, teachers and parents. This conversation ability is not particularly demanding intellectually. It refers to the language skills that non English- speaking learners usually develop after two years of living in an English speaking society (Cummins, 1984:23). Cummins (1996 cited in Venzke, 2002:20) posits that learner's proficiency in a SL should not be measured by a learner's BICS, as learners are able to express themselves competently in English in natural settings but still perform poorly in an academic setting.

f. *Cognitive academic language proficiency (CALP)*: The cognitive academic language proficiency (CALP) hypothesis proposed by Cummins (1980) describes the specific language proficiency needed in order to perform academic tasks.

Cognitive academic language proficiency is the "language of the classroom- the language of the isosceles triangle, complex compound sentences, and photosynthesis." (Hill & Flynn, 2006:17). Learners must master academic English to understand textbooks, write papers and reports, solve mathematical word problems, and take tests. Without a mastery of academic English, students cannot develop the critical thinking and problem solving skills needed to understand and express the new and abstract concepts taught in the classroom. CALP usually develops over a period of five to seven years and even longer for a learner who is not literate in his/her primary language when beginning school (Collier & Thomas, 1989: 26-38).

g. *Target language (TL)*: Target language is the language into which a translation is made, for example, for example, in a bilingual dictionary. It can also be termed source language (Richards, et al., 1999:373).

1.6.5 Key terms relating to the reading process

a. *Reading*: Reading entails the process of constructing meaning from a written text (Day & Brumfit, 1998:12). It is a complex skill requiring the coordination of a number of interrelated sources of information (Ekwall & Shanker, 1989:3).

Reading requires learners to decode graphic symbols and then integrate the information embedded in the graphic symbols into the learner's language system, enabling the learner to extract meaning from the text (Dednam, 1999:147). In this study the fore-mentioned definition of reading will be encapsulated by the word reading.

b. Rapid automatic naming (RAN): Rapid automatic naming is a task, where the learner names rows of repeated letters, numbers, colours or objects, as fast as possible (Misra, Katzir, Wolf, & Poldrack, 2004:241-256). Wolf, Bowers and Biddle (2000:388) describe RAN as the ability to name a series of visual symbols, such as colours, pictures, letters, numbers or words, as quickly as possible with a minimal amount of error.

c. Phonemic Awareness (PA): Phonemic awareness is when learners become familiar with the sounds of the letters of the alphabet (Richards, et al., 1999:274). It is "the ability to attend explicitly to the phonological structure of spoken words" (Scarborough, 1998:95).

PA is an understanding of and an ability to manipulate phonemes (Ekwall & Shanker, 2003:15).

1.6.6 Key terms relating to context

a. Inclusive education: Inclusive education is the practice of including every child, irrespective of talent, disability, socioeconomic background or cultural origin, in supportive mainstream classrooms where all student needs are met (Stainback & Stainback, 2000:3).

Full inclusion means that "all children from all categories of disabilities and all degrees of severity [enter] into regular education classes" (Lerner, 2000:153). According to South African education policy, the *Education White Paper 6: Special needs education: Building an inclusive education and training system* (Department of Education, 2001:17):

Inclusion is about recognising and respecting the differences among all learners and building on their similarities....inclusion is about all learners, educators and the system as a whole so that the full range of learning needs can be met.

In this study, the needs of the minority language learners are of interest, ensuring that their differences are highlighted and addressed thus, realising their rights and ensuring a just education system and ultimately, society.

b. Barriers to learning: This refers to the preferred South African term for 'special needs' within the South African context. Barriers to learning "acknowledges that educational difficulties may be intrinsic or extrinsic to learners.....extrinsic factors are those factors which arise outside the learner but impact on his or her learning. They may arise from the family and its cultural, social and economic context...schools themselves may constitute barriers to learning when the learner's mother tongue is not used for teaching and learning" (Walton, Nel, Hugo & Muller, 2009:107). Extrinsic barriers to learning are considered for the purpose of this study; more specifically, those barriers pertaining to language proficiency and literacy acquisition.

The aforementioned sections have briefly outlined the research problem, the context of the research problem, the purpose, motivation and objectives. The following section outlines the research question, hypothesis, method, procedures and concludes with a synopsis of chapters and significant contributions and the research outcomes of this study.

1.7 Research question

Considering the main problem statement of the study, as described in 1.3, which indicates that RAN/PA masks a comprehension deficit (termed the HCD for the purposes of this study) in learners acquiring first time literacy, and whose home language differed from the language used in school, the main research question can be formulated as follows:

Can statistically significant differences be established between age appropriate reading, comprehension, vocabulary levels and RAN/PA skills in ELL'S (whose home language is other than English), during first time literacy acquisition, when English is the language used in school and the classroom, compared to monolingual learners, whose home language is English and who are acquiring first time literacy in English in an English only classroom/school which ELL learners attend as well?

1.8 Hypothesis

On the basis of the literature reviewed, the null and alternative hypotheses question, could be formally stated as,

H_{0m} :

There are no statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, comprehension, vocabulary levels and

RAN/PA skills and when learners are exposed to first time literacy acquisition in a school/classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis:

H_{1m} :

There are statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, comprehension, vocabulary levels and RAN/PA skills when learners are exposed to first time literacy acquisition in a school/classroom environment where English is the language of instruction.

The deficit will be investigated in ELL's of immigrant parents whose home language is other than English, and who acquire first time literacy exposure in English in Grades 1-3.

1.8.1. Sub hypothesis

The most effective way of evaluating the main hypothesis would be to split the main hypothesis into the four components of literacy ability and evaluate achievement on each aspect separately. To this effect sub hypothesis were formulated as follows:

Age appropriate reading, H_{01} :

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis, H_{11} :

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

For performance on vocabulary levels, the null hypothesis H_{02} states that,

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on vocabulary levels when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis, H_{12} :

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on and vocabulary levels when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

For RAN/PA skills evaluation, H_{03} :

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on RAN/PA skills when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis, H_{13} , that states that,

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on RAN/PA skills when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

The performance on English comprehension can be evaluated against the null hypothesis of, H_{04}

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on English comprehension when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative for this hypothesis, H₁₄, namely,

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on English comprehension when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

1.9 Research method

A comparative approach to the mixed model research design and a complementary mixed method approach to the mixed model research design encompassing a non- experimental quantitative and an interactive qualitative mode of enquiry were applied in this study.

Qualitative research can be “regarded as a study that describes and analyzes people’s individual and collective social actions, beliefs, thoughts and perceptions” (McMillan & Schumacher, 2001:395). This involves a process of understanding of a human phenomenon based on creating a complex, holistic, narrated perspective within a natural setting.

Qualitative research, encompassing constructivism and natural enquiry, are treated as foundational to most interactive quantitative research (Denzin & Lincoln, 2000:2) as is the case in this study. Qualitative research provided opportunity for verbal and observational analysis such as cultural and ethnic heritage, language production of parents and learner, anxiety levels and other feedback not satisfactorily captured in quantitative analysis alone. The qualitative perspective provides a holistic perspective and becomes useful as a “foundational underpinning to and is complementary to the Quantitative mode of enquiry when applied in tandem. The quantitative research on the other hand, adopts a positivist philosophy of knowing and emphasizing objectivity and quantification of phenomena. This led to a research design which maximises objectivity by using figures, statistics and structure. In this instance causal inferences are drawn through statistical analysis namely a comparison, forming the foreground to the quantitative enquiry.

1.9.1 Sampling

Purposeful sampling as used in this study is defined as “a strategy to choose small groups or individuals likely to be knowledgeable and informative about the phenomenon of interest.” (McMillan& Schumacher, 2001:598.) It can also be viewed as a selection procedure where the “researcher selects particular elements from the population that will be representative or

informative about the topic of interest” (McMillan & Schumacher, 2001:175). Information rich subjects (Patton, 1990:169) were selected to increase the utility from a small sample.

The following criteria were applied when selecting the sample group for this study:

1. Only learners who attended English medium schools in Metro Vancouver were selected.
2. The comparison group comprised sampled learners who are monolingual English speaking learners acquiring first time literacy in Grades 1, 2 and 3.
3. The experimental group comprised sampled learners who are ELL’s acquiring first time literacy in English, in Grades 1, 2 and 3.
4. The sample age range of the learners is six to nine years (boys and girls).
5. Parents or guardians of the learners aforementioned.
6. Participation in the research was voluntary and participants were not coerced to participate.
7. Interviews with parents or guardians of both the experimental and the comparison groups were conducted.
8. The learners for both groups were observed during the assessment process in order to comply with the behavioural observation obligations for this study.

Flyers were distributed in schools, colleges and libraries deemed to be information rich sites. Respondents were selected as subjects for both the comparison and the experimental group. Response to the flyers and participation in the study by learners and their parents were voluntary. A total of 18(n = 18) ELL subjects were selected as the experimental group; a total of 19(n=19) representative first language (FL) English learners (monolinguals) formed the comparison group. The sample range was from Grades 1-3 (boys and girls). The sample range age was six to nine years. A median age was identified. Permission to undertake the research was sought and granted from Capital College, Morris Allen Study Centre and the parents of subjects (Appendix A -1; A 1-1).

1.9.2 Research Instruments and Procedures

A structured questionnaire compiled by the researcher was administered to the experimental and comparison groups in the form of a closed form, semantic differential scale for young children (Appendix B-1) (Likert scale). The questionnaire was deemed an appropriate instrument to gather the necessary data and administered to the learners on a one- to- one basis with assistance provided by the researcher.

In addition, a questionnaire which required background information of parents and information about key language issues was also designed. The questionnaire was based and formulated upon input from various educational researchers (see 3.2.5) (Appendix A-2) and administered by the researcher with the help of translation services from the Multi Cultural Society of Vancouver.

The reading analysis, a quantitative, bivariate, non – experimental comparative study, was administered by the researcher. A comparative relationship of the mean was investigated using four variables, namely, comprehension, reading, receptive vocabulary and RAN/PA for each learner. The standardised scores were used to calculate the means (See tables in Appendix C-3 to C-5.1). The instruments utilized in the reading analysis: namely, the Neale Analysis of Reading Ability (NARA), Peabody Picture Vocabulary Test (PPVT), and the Rapid Automatic Naming Test (RAN/PA) are further described Chapter 4 (cf. Table 4.4).

Prior to and during the reading analysis, a structured observation instrument (Appendix B-2) was administered by the researcher to document observable behavioural variables.

1.9.3 Data analysis

Data refers to the result obtained by research from which interpretations and conclusions can be drawn. Pursuant to data collection is data analysis. Data analysis is the process of creating order, structure and meaning from the data collected. The purpose of this process is to search for general statements about relationships among categories of data (Gorman & Clayton, 1997:200).The proposed data analysis and interpretation is discussed within the tradition of a complementary mixed method study. For the purposes of this study, data was obtained through a complementary mixed method study. The proposed data analysis and interpretation is discussed within the tradition of a complimentary mixed method study.

The qualitative data analysis is primarily an inductive process, organising the data into categories and recognising patterns or relationships among the categories (McMillan & Schumacher, 2001:461) in so doing complimenting the quantitative study. Qualitative data for this study was collected from structured interviews, and observation and serves as a source of relevant information in identifying describing and exploring an –at risk –not –at –risk HCD educational minority. The qualitative analysis profiles two groups that differ with respect to social, cultural linguistic and affective characteristics. The qualitative study serves as complimentary to the quantitative study.

A quantitative research design, a deductive process, making use of numbers to describe or measure results (McMillan & Schumacher, 2001:598; Creswell, 2009:64) was used to collect data for this study. A reading/comprehension analysis, a vocabulary analysis and a questionnaire were used in the exploration, description and quantification of the at risk educational minority. The purpose of the quantitative data analysis is to evaluate the existence of the HCD difference between the two groups, namely the ELL group and the monolingual group.

The analyses aforementioned, was based on the research methodology which is outlined and motivated in Chapter 4.

Inference drawn from these results, including the subsequent deductions and recommendations are discussed in Chapter 5.

1.9.4 Validity and reliability

Aspects of validity and reliability are considered in the research methodology with the purpose of controlling and minimising experimental error.

Validity:

Validity for the purposes of this study is pursued by seeking compatibility between the realities of the world and the scientific explanation of the phenomenon. The profile of the ELL's biographical attributes is explored in the micro ethnographic qualitative design, while the evaluation of the scientific literacy phenomenon is pursued in the qualitative design.

Reliability:

Reliability is defined by McMillan and Schumacher (2001:599) as being the extent to which measures from a test are consistent. This study addresses issues of reliability by ensuring that interviews and questionnaire administration is consistent, ensuring a reliable and unbiased response measurement.

In addition, triangulation and its variants are considered in the qualitative research design with the purpose of developing knowledge to complement the validity and reliability aforementioned.

Triangulation:

McMillan and Schumacher (2001:603) define triangulation as "Qualitative cross – validation among multiple data sources, data collection strategies, time periods, and theoretical schemes". For the purposes of this study, triangulation is pursued by means of a multi method approach. The multi

method approach facilitates insight and adds credibility to the findings when isolating, identifying and specifying an at risk educational minority. McMillan and Schumacher (2001:166) define credibility as the “extent to which the results approximate reality and are judged to be trustworthy and reasonable”. Variants of triangulation namely, source triangulation by means of the parental questionnaire/interview and the learner structured observation, are used to enhance credibility and assure the accuracy of identifying the at risk educational minority.

1.10 Chapter overview

The dissertation has been organised as follows:

Chapter 1: Introduction to the study is concerned with the introduction and problem statement. It comprises of an overview of the study, rationale, problem statement, aims and objectives of the research, concept clarification and describes and substantiates the research methodology and choices made. The purpose of this chapter is to orientate the reader and give the study perspective.

Chapter 2: Literature review comprises of a review of the related literature, a conceptual framework and covers topics such as globalisation, first and second language acquisition. A review of the related literature pertaining to inclusive education and special needs from a Canadian and international perspective and in addition, a focus on the research and literature pertaining to literacy development, vocabulary, comprehension, culture and learning is presented.

Chapter 3: Literature review focuses on a discussion and exposition of meaning as it pertains to comprehension and the complexities of both meaning and comprehension relative to word recognition, vocabulary, language structure, language proficiency, context, background and domain knowledge.

Chapter 4: Research methodology and design sets out the research methodology and design. It deals with the demographics of the target group, unit analysis, subject participants and the population selection. The survey instruments and data collection methods are described as well as the methods of data analysis and the procedure phases of the research.

Chapter 5: Results of data analysis and findings, is concerned with the results of data analysis as well as findings and a discussion of the findings of the study.

Chapter 6: Summary conclusions recommendations and limitations, contains a summary of the research, the conclusions, the implications and limitations of this study, envisioned outcomes and recommendations.

1.11 Conclusion

This chapter provided an outline of the study and states the aims, objectives and motivation of the study. It began by delineating the research topic, modes of enquiry and provided a rationale for the research. The research design comprises of a comparative approach to the mixed model research design and a complimentary mixed method approach to the mixed model research design. The study designed to examine the statistical difference between reading, vocabulary, (RAN/PA/decoding) and comprehension when a child born of foreign parents whose home language is other than English, acquires literacy in Grades 1-3 in a school where English is the medium of instruction. The learner is perceived by the school as an English language speaker (i.e. first generation Canadian) but has limited English proficiency (LEP), and is not identified as an English as an ELL. These learners manifest a vocabulary deficit when compared to their first language peers, and as a result, ELL's are less able to comprehend text at grade level than their English only peers. The focus of this study then, was on children who acquire first time literacy in their second or third language, where that language is different from their first language or the language spoken in their homes. The objective of the study was to isolate and specify an at risk educational minority through the identification of the HCD. The HCD will become evident or not, through exploration of the statistical RAN/PA, vocabulary levels and comprehension as variables.

The limited research on first time literacy acquisition in a second language, comprehension, language structure and levels of vocabulary for ELL's, and the poor educational outcomes for immigrant learners in inclusive classrooms formed the motivation for this research.

The purpose of this research was to identify the HCD by isolating and highlighting, this previously unidentified multilingual and multicultural minority and their subsequent educational vulnerability in inclusive classrooms.

CHAPTER 2

GLOBALISATION, INCLUSION AND THE RESULTANT PHENOMENON OF FIRST TIME LITERACY ACQUISITION IN A SECOND LANGUAGE: A NORTH AMERICAN PERSPECTIVE

“The answer is always part of the road that is behind you. Only questions point to the future”

(Jostein Gaarder, Norway 1986)

2.1 Introduction

In chapter one it was stated that the primary objective of this study is to isolate and identify an educational minority through the identification of the HCD. It was also mentioned that in support of and in order to sustain the aim (see 1.2 and 1.2.1), the primary and general objectives will be addressed (See 1.5).

The second chapter presents a literature review pertaining to this study and provides a framework for the research while focusing on globalisation, inclusive education, FLA,SLA and literacy (inclusive of development, emergent literacy, vocabulary and comprehension), as they pertain to first time literacy acquisition in a second language. The literature review initially provides an overview of the context in which SLA occurs and therefore provides benchmarks for a connective study based on the findings of this research and available prior research.

In this chapter second language literacy development is considered within a multidimensional, dynamic framework taking into account globalisation, language, socialisation, culture, inclusion, FLA and SLA. SLA is reviewed from both the historic and modern perspectives creating a conduit for the subsequent comparative discussion between monolinguals and ELL, their language acquisition and ultimately, literacy acquisition. Against this background the reading process and its concomitant skills, RAN, coding and encoding, PA, language structure, vocabulary and specific comprehension levels (SCL) are reviewed, specifically how the aforementioned relate to and influence second language literacy acquisition and development. In addition, within this framework a ‘high risk’, educationally vulnerable ELL minority, acquiring first time literacy in English is identified and explored. The affective aspect of SLA is mentioned but not elaborated upon. Furthermore, exploration of a comparative investigation between reading, RAN/PA skills, vocabulary levels and comprehension will be considered against this multidimensional, dynamic and complex framework.

A discussion on the complexities of SLL and second language literacy development is not complete without considering the cause namely, global migration and more specifically, globalisation as it pertains to the North Americas.

2.2 Globalisation

Among several definitions of globalisation, the Levin Institute (2008) defined globalism as a:

...process of interaction and integration among people, companies and governments of different nations, a process driven by international trade and investment and aided by information and technology. This process has effects on the environment, on culture, on political systems, on economic development and prosperity, and on human physical well-being in societies around the world.

Over the past two decades, global migration has increased and continues to increase significantly bringing about rapid transformation of the affected societies and the education systems that function within these societies “Globalisation is ongoing rather than a completed process” (Harris, Leung & Rampton, 2001:31). Education and inclusion too are evolutionary processes. They speak to and support the needs of the rapidly transforming societies they serve.

Historically, education in the United States (US) and Commonwealth linked countries such as Canada, the United Kingdom (UK), Australia, and New Zealand (NZ) has focused on the needs of the English - speaking learner in the classroom. With the current globalisation phenomenon, learners and their diverse needs have altered dramatically.

2.2.1 Globalisation as it pertains to the North Americas

Marshal McLuhan’s insightful phrase ‘the global village’ (McLuhan, 1964:31), conceptualises the ramifications of globalisation on the North Americas and more specifically BC. In addition, the phenomenon of the ‘second generation learner’, their linguistic ability and academic outcomes are constantly being revisited as the consequences of the global village become more apparent.

This section outlines the changing demographic data and how it contributes to and pertains to the difficulties encountered by ELL’s in the North Americas in general and BC in particular resulting from globalisation.

The faces of learners, their families and classrooms are changing rapidly worldwide. Of particular relevance to this research are the North Americas and more specifically BC. Given the dramatic increase in globalisation, services (e.g. education, health and social services) which are culturally sensitive and educationally viable, offer an improved yet inadequate insight into both universal and culture-specific influences on learners' wellbeing. Inclusive education and its endless pursuit of parity, in both excellence and equity, are an example of this inadequacy. Interest in the children of immigrants is not a new phenomenon. Globalisation and the resultant 'second generation' learners, have been a salient concern for educators and psychologists since early 20th century immigration began. The primary goal of social planners and educators was and is the development and application of strategies that would expedite the socialisation and education of immigrant children and learners.

Worldwide, in the year 2000, approximately 175 million people lived outside their country of birth representing an increase since 1990 of 46 %. Although many countries have implemented various measures to contain immigration levels, international migration movements remain a topic of global significance (OECD, 2006).

Immigrant learners are among the fastest growing population in the US (AAP, 2005:115). According to demographic projections, foreign born Americans will exceed the 1910 record high of 15% of the population by 2025 and will approach 20% in 2050 (Roberts, 2008:A1). Latinos, the largest racial/ethnic group in the US, will grow from 47 million to 133 million by 2050 (ERIC Clearinghouse, 2001:162).

Canada, in comparison, has 6,186,950 immigrants; this is represented as one in five or 19.8% of the total population. This is the highest proportion in 75 years (Statistics Canada, 2006:7). Between 2001 and 2006, Canada's immigrant population increased by 13%, four times higher than the Canadian born population, which grew by 3.3% during the same period. The census estimates that 1,110,000 recent immigrants came to Canada between 1 January, 2001 and 16 May, 2006. These newcomers made up 17.9% of the total immigrant population and 3.6% of Canada's 31.2 million, general population. Asian immigrants make up the largest proportion of newcomers to Canada in 2006 at 58.3% (Statistics Canada, 2006:9). A majority of immigrants or foreign-born citizens reported a mother tongue other than English or French. Among these individuals, the largest proportion (18.6%) reported Chinese languages. In 2007 70.2% of immigrants or foreign-born reported a mother tongue other than English or French, an increase of 67.5% (Statistics Canada, 2006:18). The census enumerated 863,100 individuals or 2.8% of the population who reported a Canadian citizenship and

at least one other citizenship. Eighty point two percent were foreign-born. (Statistics Canada, 2006:18).

Canada is reliant on a steady flow of immigrants to maintain a viable workforce within an aging population. Immigrants generally hail from countries where English or French is not the mother tongue and settle largely in the Montreal, Toronto and Greater Vancouver (Statistics Canada 97-557XIE:2006:5).

The majority (81%) of immigrants who were eligible for Canadian citizenship in 2006 became naturalized (Statistics Canada, 2006:23). As a result many area schools comprise of predominantly or significantly of learners for whom the language of instruction is not one they speak at home. Over 50% of the Toronto District School Board population has a mother tongue other than English (Toronto School Board:2008:12;CCL,2008:2); this figure is approximately 37% in Greater Vancouver districts (Garnet, & Aman,2008); and approximately 34% in Montreal (Mc Andrew, Ledent, Murdoch & Ait Said 2008).

Given the role of schools as “major mediators of life’s opportunities” (CCL, 2008:1) and Canada’s resolute constitutional commitment to equality and multiculturalism, it is essential to develop and integrate appropriate support for these ELL’s to enable positive outcomes, both short and long term. However, the academic trajectories of these learners require ongoing research, with an in-depth investigation into the wide variations in outcomes for ELL’s (Garnett, 2008; Gunderson, 2007). The wide spectrum of outcomes for ELL’s in BC has recently highlighted the necessity for vigorous investigation of ELL’s and their varied outcomes (Garnett, 2008; Gunderson, 2007).

2.2.2 Globalisation: the language and education context

BC provides the framework for this aspect of the literature review. The review begins by summarising FL acquisition in the social domain, discusses delayed language, its consequences and concludes with the identification of a visible minority, ELL learner, and the necessity to engage adequately with the multilingual needs of these learners in an era of rapid globalization. The aforementioned is reviewed as it pertains to and influences first time literacy acquisition in a SL and ultimately informs the comparative study between monolinguals and ELL’S as they acquire literacy.

In every culture, all children master the complicated system of their FL unless severe deprivation or physical challenges intervene. In the early years, children’s home experiences are central to the

development of language and literacy (Snow, 1993; Whitehurst, Epstein, Angell, Payne, Crone & Fischel, 1994). Vygotsky (1978:57) posited a socio-cultural theory, namely language acquisition is anchored in the social domain, rather than in the mental domain (John-Steiner & Mahn, 1996:192). By the age of five or six, most children have mastered the basics of their first language. The average six year old has a vocabulary of 8,000 to 14,000 words, learning up to twenty words a day (Berger, 2003). Hart and Risley's (2003:7) extensive longitudinal study linked vocabulary growth and language structure measures at age three to vocabulary and language growth measures at age nine to ten, which in turn provided input for predictions of future school performance. Children who are delayed in these skills risk long-term negative outcomes, since school failure affects future well being and job market success (Keating & Herzman, 1999; Heckman & Lochner, 2000). Learners of immigrant parents who enter school for first time literacy acquisition in a SL, and who have a LEP, can be compared to learners whose language skills are delayed and therefore risk long term negative outcomes.

The communications skills and general knowledge scale of the Early Development Instrument (EDI), measures learners' ability to communicate their own needs and understand the needs of others in English. The scale prioritises English language skills and thereby highlights visible minority communities that have a high incidence of LEP and their subsequent vulnerability. Of note, 46 of the 56 districts in BC report vulnerability levels below 10% on this EDI scale. The implication is that vulnerability on this scale is concentrated in a relatively small number of areas in the province, primarily in the populous Lower Mainland area (HELP, 2001:46) and therefore large numbers of learners belong to a high risk educationally vulnerable minority in this area.

One in every five people in BC belongs to a visible minority (HELP, 2001:36). Urban districts in which the bulk of children live report the highest rates of visible minority status. In particular, roughly more than half the population of Richmond, Vancouver and Burnaby are members of a visible minority. (Richmond, Vancouver and Burnaby have a large Asian immigrant population).

In addition to measuring communication and general knowledge vulnerabilities, The EDI measures language and cognitive development vulnerabilities. Vulnerability rates are visibly higher in districts such as Richmond, Burnaby and Greater Vancouver, where roughly half or more of the population are members of visible minorities (HELP, 2001:42). Ten % or more of the population in these three districts immigrated to Canada between 1996 and 2001 (Statistics Canada, 2001:2). The urban districts in which the bulk of children live, report the highest rates of visible minority status. In

addition compared to the national average, BC has much greater diversity. More than 20% of the population belongs to a visible minority group, compared to 15% for the entire country. BC is prominent in that it reflects a population that enjoys an ethnic heritage linked to China and South Asia. Approximately one in six British Columbians belong to these groups. This is three times higher than the rest of Canada (HELP, 2001:18).

The EDI vulnerability measure focuses on young learners under the age of five, those poised to attend formal schooling and acquire literacy in the following year. It is apparent that learners who are deemed vulnerable through the EDI measures present with a clear deficit and quantifiable vulnerability. Fluency in English contributes significantly to social inclusion as well as success in early literacy acquisition and therefore positive educative outcomes in a formal school environment. A challenge in schools in diverse communities in BC is the number of mother tongues spoken by learners and their parents. It is not uncommon to find a classroom in Vancouver in which half the children do not speak English or French as their first language. The general population in BC supports a rate of 24% whose mother tongue is not English, well above the Canadian average of 17.6% (HELP, 2001:38).

From the concise discussion above, the overwhelming numbers of ELL's in BC and their educational vulnerability are central to this study. Research on SLA is comprehensive whilst research on first time literacy acquisition in a SL has generated far less research and little systematic research (Tabors & Snow, 2003:159). The intention of this discussion is to provide a clear and supportive framework of the prerequisite language skills for first time literacy acquisition in a FL and the comparative deficit in SL acquisition of first time literacy as the deficits emerge and develop in an inclusive classroom. In this light and emerging from the background of globalisation aforementioned, the context of socialisation, culture and literacy must be considered when exploring the focus and objective of this study. These factors are discussed in the context of their contribution to and relationship with successful first time literacy acquisition, more specifically first time literacy acquisition in a SL.

2.2.3 Globalisation: the social, cultural and literacy context

2.2.3.1 Globalisation: the social literacy link

All human beings are social, namely they are linked to and depend on one another for their existence. From birth human beings experience an ongoing process of social interaction. Through this ongoing process the skills needed to participate in society such as language are developed. This ongoing process is referred to as socialisation. Socialisation is concerned with how human beings,

specifically children develop the skills needed to facilitate the growth of social relationships and social behaviour “which encourages acceptable assimilation into society” (Van Aardweg & Van Aardweg, 1999:226).

The process of socialisation begins within the context of the family and extends to the school and society all of which provide a model for behaviour, social norms and values. Socialisation through the use of language and socialisation to use language (Schieffelin & Ochs, 1986:182) are the fundamental determinants of socialisation outcomes. “Wherever humans exist, language exists” (Fromkin & Rodman, 1983:26). The use of language to integrate children into society by defining their ‘social identity, their role within that society’ (Bernstein, 1996:16) and more specifically their ability to use language for communication and ultimately literacy acquisition are of particular relevance to this study. The familial socialisation and subsequent classroom and societal socialisation are divergent in nature for learners whose home language differs from the language in the classroom.

The outcome of socialisation is explained by the social sciences as all customs and social behaviour as effects of the socialization of children by the surrounding culture through a “system of words, images, stereotypes, role models and a system of reward and punishment” (Pinker, 2002:6). Almost all notions we consider to be quintessential to human beings, such as social interaction, emotions, and our worldview, are now said to have been “socially constructed” (Hacking, 1999:6). Language, an innate skill, facilitates the learning of customs such as rituals, marriage, beliefs, and so on. Literacy and language are inextricably connected to society and culture (Gee, 1987; Cairney, 2000). Language and ultimately literacy are fundamental to familial, social and classroom socialisation and the acquisition of culture. Ideas, beliefs and values may differ across cultures. Their acquisition through socialisation and language acquisition is, however, universal. These cultural features provide the bases by which we think and perceive. In addition, although “language differs across culturesthe deeper mechanisms of mental computation that generate them may be universal and innate” (Pinker, 2002:39).

In every culture, most children master the complicated system of their FL, with what appears to be apparent ease (Thiesen & Saffran, 2003:706). Neonates show preference for their native language indicating that aspects of their mother’s language are acquired prenatally (Moon, Cooper, & Fifer, 1993:494). In the early years, children’s home experiences are central to the development of language and literacy (Snow, 1993; Whitehurst et al., 1994). Language development is the quintessential ingredient for literacy acquisition. Language therefore defines the broad referential

framework used in this study between monolinguals and ELL's, their language structure and vocabulary levels.

The aforementioned (see 2.2.2) Vygotskian socio-cultural theory (1987:57), namely language acquisition is anchored in the social domain, rather than the mental domain(John-Steiner & Mahn, 1996:19), places language as a sub culture in that it is responsible for handing culture from generation to the next. "We adapt ways of thinking, acting, and using language as a means of gaining our identity and becoming members of a social network" (Gee 1987). Many ELL's born of immigrant parents hail from homes where languages other than English are spoken and where cultural practices differ from the community and the classroom. This diversity poses unprecedented opportunities and challenges for integrating and fostering the educational success of these learners. Acquiring first time literacy in a SL, with the attendant vocabulary levels, language structures, cultural literacy, domain knowledge and world knowledge deficit, creates an enormous challenge for the minority high risk learner.

Cummins (2000:20) posits, that what we think of as cognitive abilities are socio-culturally shaped. Reder (1994:40) maintains that literacy skills vary cross culturally, thus children are likely to "acquire knowledge, skills, and values associated with the specific literary practices of their home and other early social environments". Khami (2005:201-212), on the other hand, refers to the link between background knowledge and comprehension. Hirsch (2003:11) referred to "domain knowledge" being facilitated by parenting and the home environment. Socio-cultural cognitive abilities, varied cross cultural literacy skills, background knowledge and domain knowledge have all been investigated as being potentially associated with reading comprehension. Chall (1990), noted that "world knowledge" is an essential component of reading comprehension, in that every text takes for granted the reader's familiarity with a whole range of unspoken and unwritten facts about the cultural and natural worlds. The relationship between language skill, domain knowledge, world knowledge to which language refers and literacy is undeniable. Knowledge of a subject is accompanied by language use that represents that knowledge.

The above concise discussion clearly outlines the intricate relationship between socialisation and language and how ultimately family norms values and beliefs, translate into societal norms values and beliefs and how the societal norms, values and beliefs are replicated in the classroom. One of many consequences of globalisation and inclusion is the disconnect, when familial socialisation and language use are not compatible with the societal and classroom socialisation norms, in turn

creating a vulnerability for the ELL acquiring first time literacy. The models of language, behaviour and guidelines for everyday life learned at home are no longer viable or sustainable in the classroom. The socialisation determinants, namely socialisation through the use of language and socialisation to use language, become inadequate in the classroom as the linguistic and social competence of the ELL learners dilutes the effectiveness of the aforementioned determinants. The ELL is fundamentally at odds with the classroom's social and cultural requirements through their limited language and social competencies. Trower (cited by Barnhill 2001:260) posits that social behaviour is the most central and important characteristic of human beings. Given this assertion, ELL's are at a distinct disadvantage in addressing the challenges of the social milieu found in the classroom and ultimately first time literacy acquisition.

With regard to the socialisation and linguistic challenges of the ELL, an attendant perspective emerging from globalisation and inclusion and pertaining to socialisation and culture will be discussed. Whereas socialisation defines our feelings, thoughts and actions, it also generates cultural values and norms that define the principles and traditions transmitted from generation to generation.

2.2.3.2 Globalisation: the cultural literacy link

Having noted the intricate relationship between language and socialisation in the aforementioned section, it can be said culture is reflected through socialisation and transmitted by language. Culture can then be perceived as and defined as 'an umbrella' concept embracing all the accepted traditional customs, moral attributes and behaviours practised by a particular cultural group (Van Aardweg & Van Aardweg, 1999:59). Culture is therefore not innate but created by human beings and transmitted through human beings linguistically and socially from generation to generation. Language is the most prominent expression of cultural symbolism and the most important tool in the transmission of culture of both past, present and future generations. Fishman (1982:444) clearly indicates the intricate role language plays in the transmission of culture by relating language to culture in three ways:

- (1) Language itself is an expression of culture;
- (2) Every language provides an index of the culture it is so intricately connected to; and
- (3) Every language becomes symbolic of the culture to which it is so intimately connected.

As there is no real measure as to the effects of culture on learning to read and comprehend a particular text (Gunderson,1991:54),This section explores the linguistic socio cultural link, namely 'cultural discourse' and how it relates to and expresses the 'cultural community' (Snow, 2002:47) within the classroom context. In addition, and more specifically the ELL's disconnect with the discourse and community found in the classroom (see 2.2.3.1).

Reader variability is a consequence of the varied socio- cultural contexts learners bring to the classroom and the varied community and discourse found within the classrooms, in which they learn to read. Embedded in the socio- cultural context, within the classroom 'cultural community' is the specific and relevant 'cultural discourse', the tool responsible for transmitting culture, literacy and ultimately learning.

"Different cultures are like different schools of navigation designed to cope with different terrains and seas" (Fake, cited in Spradley, 1980:9), as is language. Learning and literacy are viewed as cultural activities in that they are acquired through social interaction and represent a specific cultural group or 'discourse community'. The classroom cultural community and the discourse community within the classroom influence the learners' interpretation of their world and form the socio cultural blueprint which brings meaning to their world. The primary 'discourse community' for ELL' s' embodies the mother tongue, background, home environment, cultural literacy, emergent literacy and world view, which are nurtured to function in culturally compatible classrooms and/or communities. Gee (1988) and Michaels (1991) referred to a 'cultural mismatch' when the cultural community and the discourse community are divergent.

In BC FL learners' cultural literacy, language, values and beliefs are all supported and nurtured within the inclusive classroom environment, therefore upholding and perpetuating the primary cultural discourse while sustaining the cultural compatibility. In contrast, ELL's' language, cultural background, home environment, cultural literacy and world view is not paralleled nor supported by the culture of the classroom. A 'cultural mismatch' (Hakuta, 2001:87) is evidenced, detracting from the learner's ability to assimilate and adapt to the classroom demands.

The dynamic and continual process of constructing a 'cultural model' (Gee & Green, 1998:119-169) as well as a linguistic level that is viable and compatible with home, teacher, classroom, curriculum and peers is one of the many challenges for the ELL acquiring first time literacy. Language,

socialisation, cultural literacy, domain knowledge and world knowledge feed into successful literacy acquisition of the ELL and more specifically, comprehension.

“Culture is the way of life of a people” (Hatch, 1985:178). It is embedded in family, society and mirrored in the classrooms. Culture consists of conventional patterns of thought and behaviour, including values and beliefs, rules of conduct, political organization economic activity, which are passed from one generation to the next by learning and not by biological inheritance. Culture then can be defined as all the activities and achievements of a society that individuals within that society transfer from one generation to the next. When classroom culture and discourse do not parallel those of the learners and the learners within that classroom community do not belong or relate to the mainstream, dissonance ensues. Most classrooms in a European and North American context reflect similar norms, such as raising your hand to ask a question. Learners who are not familiar with this norm, for example those of Asian descent typically, reflect a ‘top down’ norm where learners are not encouraged nor required to ask questions.

The socio cultural blueprint, in other words the discourse and cultural community of the classroom, should therefore be considered when exploring the ELL’s ability to relate to and derive meaning from the learning environment. In addition acquiring literacy, more specifically first time literacy, encompassing not only reading but meaningful comprehension should be viewed as intricately linked to the overarching, influential socio cultural umbrella.

Culturally diverse emergent literacy experiences, vocabulary levels, background knowledge, imagination, visualisation, cultural backgrounds on both the contextual and individual levels when applied to the meaning making process are a few of the complex factors evident in learners acquiring first time literacy in a second language. Learners’ self esteem, their perceived competence and their membership in a cultural community that is not mirrored in the classroom has a cumulative effect on reading and its meaning. Brooks, Tomasello, Dodson & Lewis (1999:1325 - 1399) posit that speech perception is constrained maturationally; language production appears to be constrained environmentally. A large component of culture is below the level of conscious awareness, for example, language referred to as a sub culture becomes the vehicle for transference of culture from one generation to the next, from teacher to learner and classroom to classroom (Gee, 1987).

Ethnic origin colours learners' culture and defines the language framework a learner brings to school. Cultural and linguistic differences in the classroom, in addition to LEP can adversely affect learners in their endeavour to acquire first time literacy in a second language. Hirsch (1987) describes cultural literacy as the possession of the basic information needed to thrive in the modern world and the only avenue for culturally disadvantaged children to escape social determinism. Cultural literacy reflects a culture's knowledge of significant ideas, events, values and the essence of that culture's identity. Cultural literacy is the function of information possessed by all competent readers belonging to a certain culture (Hirsch, 1987:pxiii) in other words 'a shared knowledge'. ELL's bring to the classroom the rich cultural literacy and cultural principles ingrained from their home environment and relatively few if any principles pertaining to the cultural literacy in the classroom. The interface between the cultural background of the ELL and the cultural reality of the classroom is not sufficient to promote cultural literacy described by Hirsch (1986:xiii), as being in possession of the "basic information needed to thrive" and in this instance the basic information needed to thrive within the cultural milieu of the classroom.

Assisting educators to respond ethically to cultural differences presents a challenge; the most obvious is the lack of "experience in educating for difference" (Johnston & Carson, 2000:76). Our classrooms and teaching practices are treated as cultural environments, embodying universal values. Teaching is a cultural practice, addressing the cultural needs of the mainstream in the community.

Related to and stemming from both socialisation and culture is the development of literacy. Gutierrez(1993:335-365) describes the process of "being socialised to literacy" and consequently developing behaviours such as knowing when to ask questions, how to hold a book or listen to a story and when and how to participate in the classroom, in other words, the "shared knowledge" or "cultural literacy" necessary to thrive within the grade one classroom. Literacy is seen as emerging in early childhood with children constructing meaning from infancy onwards based on environment, language, narratives, social and cultural exposure within the family unit.

ELL's come to the classroom ill equipped linguistically and culturally neither belonging to the classroom culture, the discourse culture, nor the teaching practice culture. They enter the classroom, with limited if any environmental exposure to the SL, the teaching model, curriculum and the mainstream culture. Their background knowledge, socio cultural cognitive ability, imaginary framework and narrative construction create a culturally biased understanding of their environment and comprehension of their texts. They are in essence 'outliers' with LEP, low vocabulary levels and

ingrained cultural principles which have little or no interface with the background knowledge of the monolinguals in the classroom. The principles necessary to create the 'chart' on which these at risk learners will navigate their academic outcome, lacks interface and therefore ability in comparison with the principles inherent in the monolingual. The instruments required to chart and navigate the complex journey of first time literacy acquisition in a SL should be addressed. A retooling is an essential requirement if comparability and compatibility with monolinguals and the present educative requirements are to be achieved.

There is a growing body of research on minority ethnic readers and how they bring their own cultural backgrounds to the meaning making process and more specifically, how these learners make sense of children's literature in English (Bromley, 1996; Laycock, 1998; Colledge, 2005; Walsh, 2000; Mines, 2000; Coulthard in Arzipe & Styles 2003; Arzipe, 2006). Bruner's work on language and culture reveals how 'culture making' is linked to narrative and construction of self. Through texts and narratives, we build our history while also looking to the future. This dialogue begins prior to school entry forming the very beginnings of self identity, familial identity and cultural identity. Giroux (1987:177) posits that each time a learner reads, listens to or views a text, he or she relates it to his or her "wider social and cultural formations and categories".

Children acquire new words without direct instruction by utilising various cues from the natural linguistic environment (Akhtar, Jipson & Callanan, 2001:418). Literacy too is acquired in a natural, dynamic cultural system (Hirsh, 1987). In comparison, monolingual peers enter the classroom having acquired their native languages' phonological system, an almost adult like understanding of the syntactical structures (Bates & Goodman, 1997:508) and can produce almost all the sounds of their native language (Graves, 1987:237). ELL's are required to become bilingual or multilingual and bicultural or multicultural. Their monolingual peers' values, beliefs and social and cultural norms are mirrored in the classroom and embodied by the teacher and curriculum. ELL's come to the classroom handicapped by language, background knowledge, cultural literacy, the curriculum and a teaching model that does not teach for difference but embodies universal values and practices. A functioning cognitive and linguistic system, nourished by cultural and social literacy, background knowledge and classroom/culture compatibility are crucial for the ongoing integration and scaffolding of information, which will connect the learner, to teacher, peers, classroom the community and in so doing facilitate the acquisition of literacy.

The challenge in assisting educators to respond ethically to cultural differences presents difficult issues for educators, the most obvious being “We lack experience in educating for difference” (Johnston & Christensen (2000:76). Our classrooms and the teaching practices are treated as cultural environments and practices respectively, embodying universal values. Teaching is a cultural practice, addressing the cultural needs of the mainstream in the community.

Considering the aforementioned discussion, it becomes evident that language, socialisation and culture are determinants in and factors of literacy acquisition and more specifically are fundamental in the development of the emergent skills required for literacy acquisition, broadly termed emergent literacy. This term was initiated by Clay (1996:4-8) and refers to children’s language, behaviour, concepts and skills that precede and develop into literacy which include reading, writing and a larger body of literary knowledge at later ages(Machado,2003:158).The National Literacy Panel (2004:25) identifies alphabet knowledge, phonological awareness, writing, oral language skills, and concepts about print in preschool children as predictors of later reading success in elementary learners indicating that emergent literacy skills or the lack thereof influence learners’ outcomes beyond initial literacy acquisition into the elementary years.

Emergent literacy skills for the purpose of this study refer to as the experience, skills and knowledge that the learner brings to the classroom, in other words, the social and cultural skills. This stresses their role as precursors to conventional literacy acquisition. Emergent literacy is addressed and further elaborated upon in 2.9.4.where it relates to and is central to first time literacy acquisition.

Globalisation and its linguistic, educational, social, cultural and literacy fallout, and more importantly its influence on language, language structure and vocabulary as they pertain to first time literacy acquisition in a second language inform the broad, referential framework of this study, culminating in a comparative discussion, which highlights the linguistic differences between monolinguals and ELL learners, as they acquire first time literacy.

Against this social and cultural background and in line with creating an informed framework for the focus of this study, no discussion would be complete without considering the ideology of inclusion. The curriculum, schools, classrooms and teaching are motivated by the principles of inclusion.

2.3 Inclusion: Addressing diversity

This section provides a brief overview of the literature on inclusion, more specifically what inclusion embodies in terms of education from a global perspective, the Canadian context, and its current trends and evolutionary but disparate ideals of “equity and excellence” (Lupart,1999:1). Furthermore, discussion covers how the overarching framework of inclusion supports or does not support literacy acquisition in both monolinguals and bilingual learners as they acquire first time literacy in a second language. Inclusion as an ideology is viewed in the light of Naylor’s (2005) vision: “inclusion is always a journey never a destination”.

Considering educationally vulnerable learners identified as ‘visible minority’ groups with an attendant LEP (see 2.2.2), the salient question is whether these learners served by the definition and goals of inclusion as stated in the ensuing section and, more importantly, in the context of the findings of this research. In this light, the definition of inclusion becomes pivotal to understanding and addressing the viable integration of visible minorities into the inclusive context specifically in the area of language, culture and literacy acquisition in the early years.

The Salamanca Statement in recognition of the uniqueness of each learner and his or her fundamental right to education states; “[I]nclusion and participation are essential to human dignity and to the exercise and enjoyment of human rights” (UNESCO, 1994:11). The statement is supported by a Framework for Action, which encourages schools to invest in a learner centred pedagogy thereby supporting all learners. This framework refers to education systems becoming inclusive by tending to the diversity and special needs of all learners and thereby creating opportunities for equity. It begins with the premise that differences are prevalent and learning should therefore be adapted to support these differences, as opposed to compliance to a perceived norm by learners. Governments are asked to adapt policies and legislation to support the principles of inclusivity. In the Canadian context, the Roeher report for the purposes of the Canadian National Summit inclusion defined inclusion (Crawford, 2005:6) as:

... arrangements that ensure that teachers have the instructional and other supports to:

- welcome and include all learners, in all of their diversity and exceptionalities, in the regular classroom, in the neighbourhood school with their age peers
- foster participation and fullest possible development of all learner’s potential: and
- foster the participation of all learners in socially valuing relationships with diverse peers and adults.

The conceptualisation and birth of an ideology is the blueprint for its eventual application or action. It is the application of inclusion and the resultant evolution of the ideology that ultimately indicates whether or not the diverse needs of learners are being met.

Canadian public schools are inclusive institutions and by law are required to ensure that all students receive free and appropriate education (Dworet & Bennett, 2002:22). It is the application or action that is of interest to this review, as it pertains to the visible minorities acquiring first time literacy in a SL and their concomitant diverse needs. However, it is not within the parameters of this review to describe the changes and reforms that have evolved in Canadian schools from a combined special educational needs and regular programme perspective. It is however, necessary to elaborate upon what precisely inclusion is and what it is not and how it relates to and addresses educating for diversity (Johnston & Carson, 2000) (See 2.2.3.2) and the ELL's acquiring first time literacy.

Inclusive education by definition does not mean dumping students with diverse needs into a stagnant general education, without support for teachers or learners. The primary goal of inclusion is therefore to serve all learners adequately creating a fluid and dynamic approach to the model of inclusion. This is a model where excellence and equity are the driving forces, thereby facilitating Naylor's (2005) dictum: "inclusion is always a journey, never a destination". Support should therefore be central and not peripheral to mainstream education, thus serving all learners, teachers and society.

Andrews and Lupart (2000), Lupart (1999), and Hutchinson (in Friend, Bursuck & Hutchinson, 1998), have addressed the notion of evolutionary inclusion of students with specific needs. They have, however, given limited attention to educational reform. On the other hand, Lupart and Webber (2002) raise the important distinction between regular education leaders who represent the means to attain excellence, while the special education leaders manifest the means to attain equity. The resulting dichotomy of changes within regular education such as improvements in professional development and raising performance standards, greatly reduce the possibility of equity and vice versa. As a result, schools favour one to the detriment of the other and overlook the possibility that both equity and excellence can and should be achieved in authentic inclusion. Skrtic (2005; 1996; 1994; 1991) provides an analysis of both culture and school organisations and concludes that educational equity cannot be achieved without educational excellence. It is this quest for both excellence and equity that inform the underlying overview.

ELL's and their vulnerabilities, more specifically the HCD, are presently unrecognised and unsupported in the inclusive classroom. In the quest for both equity and excellence, ELL's can become viable, positive and productive within the scope of the inclusive classroom. This will afford the ELL the respect and support required for positive educational outcomes and simultaneously honour the equity and excellence ideal embodied in inclusion. UNESCO (2001:1) clarifies support as including everything that enables learners to learn; however, defining support may not be an easy task, as it is amorphous in nature and not within the parameters of this study. Within the parameters of this study, however, and pertaining to the ELL and the goals of inclusion, support would include all those activities which increase the capacity of a school to respond to learner diversity (Booth, Ainscow, Black – Hawkins, Vaughn & Shaw, 2000:11). In this study, support includes the identification of a vulnerable educational minority by means of the HCD. This definition furthers a general aim of this study, creating a research platform where the guidelines for supporting these learners will be explored, clarified and implemented.

Globalisation and its attendant diversity demand that inclusion evolves into more than a model for the delivery of education. Diversity demands that inclusion evolves into a new paradigm of thinking and acting in ways that include all persons in a society where diversity is the norm rather than the exception (Skrtic, 1994:n.d.). The challenge then is to identify and support all learners' needs adequately within the diverse, multicultural and multilingual classrooms of today. In considering inclusion as an evolutionary journey, the ideology or theory requires the underpinning of an application or 'Framework of Action' that serves the ideology while encompassing the diverse effects of globalisation. The ideology is in place; the application or framework of Action now becomes critical, as equity and excellence vie for parity.

This holds true for the ELL's, whose literacy acquisition and future learning is compromised (see1.4). Further, it demands that inclusion caters not only to an ideal but to a framework of action, inclusive of diversity, support and insight and therefore underpins inclusion, its ideals and importantly, supports both equity and excellence for the ELL. This visible minority requires identification and recognition and the adaptation and improvement of the education system in order to address their diverse needs beyond the existing ELL programmes available at present. This educationally vulnerable minority requires an ideal and an application that is malleable, not a static delivery model, which blankets all ELL/LEP learners and is realised according to a perceived norm. Inclusion, the ideal, and the application, the framework of action presently and historically promotes a single system of education dedicated to ensuring that all learners have the right to access a learning

environment that values, respects and accommodates adversity and provides education appropriate to the learners needs within an integrated system (Bothma, Gravett & Swart, 2002:200; Stainback & Stainback,2000:3). The provision of education appropriate to the learners' needs, with particular reference to the ELL/LEP learner, speaks to the action framework explored by this study.

The overarching framework of inclusion is the parachute, which carries literacy acquisition in both monolinguals and bilinguals. Early identification of learners' literacy needs during literacy acquisition is crucial; it is an invaluable tool in identifying at risk learners and facilitates seamless literacy skills in SLL. Early identification, coupled with early intervention and stimulation of language, cultural and literacy skills, allows for more positive academic outcomes (Berninger, Abbott, Booksher, Lemos, Ogier, Zook, Mostaffapour, 2000:241; Catts,1997:86; Fey,1995:3-37; Torgeson,Wagner,Rose, Lindamood, Conway & Garvan, 1999:579), minimising, the destructive relationship between vocabulary and reading development and maximising the constructive relationship between reading development and vocabulary. First time literacy acquisition of ELL's of immigrant parents must be seen in this light as we explore inclusion and avoid a 'one size fits all' approach for monolinguals and bilinguals acquiring first time literacy. Furthermore provision of an action framework, which recognises ELL's and is both applicable and beneficial in the support of their diverse needs, becomes critical. The primary objective of this study is to identify the HCD, by isolating and highlighting this previously unidentified multilingual and multicultural minority and their subsequent vulnerability in inclusive classrooms. Their identification establishes a forum whereby an essential component for securing, nurturing and fulfilling the diverse educative needs of this group can be investigated, while simultaneously creating teacher and administrative awareness to further the evolutionary goals of inclusion, namely equity and excellence.

Inclusion limited to and considered from an educational and future perspective only provides a platform for educational institutions to reconsider their overall structure, teaching approaches and teacher support, learner groupings and the use they make of support systems. However, it is not within the parameters of this review to investigate inclusion in depth but merely to highlight a component essential to this study and thereby elicit further research in this area. With the identification of the HCD, a move away from the notion that 'one size fits all' can be explored. Fundamental changes founded on the differences between monolingual and ELL's of immigrant parents acquiring first time literacy can then be nurtured in the mainstream school and thereby support the ELL and the resultant needs, such as language structure, vocabulary and semantic

deficits. Florian (1998), posits that the most important considerations for the successful development of educational inclusion are:

- Involving learners in decision making;
- Engendering a positive attitude to all learners
- Developing teacher knowledge about the special educational needs and how to overcome them.

The ensuing teacher awareness is a secondary and not a primary focus of this study. The identification of this educationally vulnerable group, the primary objective will lead to further research and the building of a support structure (framework of action). This will encompass the diverse educational needs of this group, thus facilitating and maximising their potential for genuine equalisation of opportunity within the inclusive classroom. In this way Naylor's evolutionary vision of inclusion, pursuing excellence and equity, will be supported for both learners and schools. By seeking parity for ideology and application (frame of action) and by addressing diversity in a learner centred pedagogy, the salient question (Are learners served by the definition and goals of inclusion?) can be addressed.

The identification of this educationally vulnerable group is the primary aim of this research. In order to fulfill the aim and ensuing objectives, the following section therefore attempts to outline a comparative frame of reference between monolinguals and ELL's acquiring first time literacy. The theoretical discussion pursues SLA historically. Thereafter, how acquisition underpins the comparative references to vocabulary, language structure, fluency and comprehension and their ultimate effect on and link to first time literacy acquisition in a second language follows.

2.4 Second language acquisition: The literacy link

2.4.1 Introduction

FLA, discussed under the overarching FLA theoretical framework, both historically and to date, and the time rich framework of actual acquisition and presentation will serve as a frame of reference and comparison as they pertain to vocabulary, language structure, fluency, comprehension and exposure in SLA and first time literacy acquisition in a SL. In addition, the discussion reveals a body of research in its infancy, disparate in its evolution and searching for the compatibility in application in the diverse Grade 1, 2 and 3 classrooms of the globalised First World. Present research is top heavy at elementary and high school level with a glaring paucity regarding the early years, specifically Grade

1, 2 and 3 and even more so when learners are in the early stages of first time literacy acquisition in a SL. The objectives of this study obviate an in depth investigation into the multidimensional framework of SLA. Historic and current theories will be highlighted and thereby, a platform of reference will be created pertaining to FLA acquisition and the perspectives aforementioned.

2.4.2 Historic perspective

The early 1970's focused research on two aspects of SLA, defining SLA as an identifiable field: language acquisition processes and factors affecting language learners. More recently, researchers have been investigating both how acquisition occurs and how learner factors lead to differential learner success. The focus of the following section is a brief review of how acquisition occurs. It highlights specific learner factors and links them to the focus of this study, that is, a high risk cultural linguistic, educational minority acquiring first time literacy.

2.4.3 The beginnings: Contrastive analysis

Prior to the 1970's, contrastive analysis was the accepted norm in researching areas of divergence and convergence in ESL's, consistent with the prevalent behaviourist view of language acquisition of that time. Learners' errors, which could not have resulted from imitation of the target language (TL) substantiate Chomsky's proposal that acquisition was one of rule formation, not habit formation, directly identifying learners as being active participants in the language learning process.

Learners' errors became a major focus of study as the field of SLA grew. Error analysis was deemed incomplete (Schachter & Celce – Murcia, 1977:441-451), as it focussed on learners' errors, not their success. Equally, error analysis could not account for all errors, as frequently learners would not attempt difficult language structures (Schachter, 1974:205-214). Consequently, learners' performance then became the focus of enquiry. One of the earliest performance analyses was Brown's longitudinal morpheme study (Cook, 1978:73; Dulay & Burt, 1974:37-53), which claimed that an English morpheme order of acquisition was evident in both Spanish and Chinese speaking children. Dulay et al., (1982) refer to the SLA process as "creative construction". Learners work out the rules of their (TL) by using mental processes, such as generalisation.

This, however, does not account for the sophisticated grammar system learned in a short period. Error analysis, offered as an alternative to contrastive analysis, sets out to demonstrate that many learner errors are not due to the learner's mother tongue but reflect universal learning strategies. By

the late 1970's, error analysis had been largely superseded by studies of interlanguage and SLA (Richards et al., 1999:128).

2.4.4 Interlanguage

Interlanguage, that is, language produced by second and foreign language learners who are in the process of learning a language, is a concept proposed independently by Adjemian, (1976:297-320); Corder (1967:383); Nemser (1971:115-124) and Selinker (1972:209). Nemser (1971:115-124) confirms the discrepancy between comprehension and production; however, he did not use Selinker's term, interlanguage. The writers argued that a SLL's' language is systematic and that errors produced by learners do not consist of random mistakes but rather suggest rule-governed behaviour. Such observations led to the proposal that second language learners like native speakers represent the language that they acquire by means of a complex linguistic system. A major undertaking for the first language learner is to arrive at a language system which accounts for the input, enabling a child to understand and produce language.

2.4.5 Biological model

The biological model posited by Lennenberg (1967) is defined by Brown (2000:53) as "a biologically determined period of life when language can be acquired more easily and beyond which time, language is increasingly difficult to acquire." Central to Lennenberg's biological model are the critical hypothesis theory (CHP) and lateralisation. The CHP theory propounds that there is a period in child development during which language can be acquired more easily than at any other time. Lennenberg (1967) posits that the critical period is evident up to and complete by puberty. If this notion is correct, it would provide further support for the biological or nativist position that language development has unique biological properties. Lennenberg argues that language learning may be more difficult after puberty as the brain lacks the ability for adaptation. He argues that by puberty, lateralisation has established language functions in certain parts of the brain (Richards, et al., 1999:92), inhibiting the language learning function.

2.4.6 Rule governed behaviour

Lennenberg's (1967) biological view and prior to that, Humboldt and the Cartesian linguists (Pinker 2000:10) underpin Chomsky's nativistic view, namely that Universal Grammar (UG) is part of an innate biologically endowed faculty. UG has been proposed as part of an innate biologically endowed faculty (Chomsky, 1965; Pinker, 1981, 1984, 1994), which permits the first language learner to arrive at grammar on the basis of linguistic experience that is, exposure to input. UG

provides a genetic blueprint, determining in advance, which grammar is acceptable and which grammar is not. As Chomsky (1980:48) states, there is “a certain mental structure consisting of a system of rules and principles that generate and relate mental representation of various types”.

2.4.7 Interactionists

The interactionists viewed both innate and external processes as responsible for language acquisition (Bennet-Kastor, 1988). Language development and social development are associated and cannot be understood without the other. Interactionism focuses on the social aspect of language development and how the relationship between the language learner and the persons with whom the learner interacts influences language acquisition (Richards, et al., 1999: 185). Long (1983:126- 141) argues that modified interaction is a requirement for comprehensible input. “There are no cases of beginning level learners acquiring a SL from native- speaker talk which has not been modified in some way.” (Lightbown & Spada, 1999:43). His research shows that native speakers regularly modify their language when speaking to non native speakers during prolonged conversation. Speech data analysis was also being carried out at this time. Data were collected longitudinally, which enabled researchers to identify common developmental stages in the acquisition of certain structures.

2.4.8 Parallel Distributed Programming (PDP) Theorists

The learner’s performance was analysed in addition to the input experienced by the learner and this was termed discourse analysis (Larsen- Freeman, 1980). In contrast to Chomsky’s UG theory and still in their infancy are the parallel distributed programming (PDP)/connectionist models (Rumelhart, et al., 1986). Computer models are utilized based on what is known about the human cognitive brain. PDP theorists assume no innate ability. They maintain that the individual components of human information processing are highly interactive and that knowledge of events, concepts and language is represented diffusely in the cognitive system and distributed throughout the system. PDP theorists continue with this research. In contrast, the biological, cognitive and affective models posit theories based on innate biological endowment, age and acquisition of a second language.

2.4.9 Cognitive theorists

The cognitive model originates from psychology and claims that language learning is no different from other types of learning and is the result of the human brain building up networks of associations (schema or cognitive structures) on the basis of input. Piaget suggests that infants do not possess complex language structures at birth and therefore do not acquire language. It is the

constant interaction between the child's level of cognitive functioning and his/her linguistic/non linguistic environment that facilitates language. The sequence and quality of a child's cognitive development thus determines the sequence and quality of his/her language development. (Dednam, 1999:55). Piaget posits that thinking develops language and language serves as a medium whereby we express our thoughts (Burns, Roe & Ross, 1992:44-45).

2.4.10 Chomsky : Language Acquisition Device (LAD)

Emerging from Chomsky's UG as part of an innately endowed biological process, Chomsky's nativism theory suggests learning depends on an innate capacity, namely the language acquisition device (LAD) for language acquisition, dependent on the input received (Brown, 2000:24). The LAD contains the universal principles of all languages. Lightbown and Spada (1999:16) assert:

Once it is activated, the child is able to discover the structure of the language to be learned by matching the innate knowledge of basic grammatical relationships to the structures of the particular language in the environment.

From the brief overview on the historic perspective of SLA, the review now explores the underpinning of and the intricate relationship of the historic perspective as it pertains to the modern perspective of SLA and how SLA is coloured by globalisation, inclusion and culture. Furthermore, the exploration of the modern perspective of SLA informs the platform for the subsequent comparative discussion on monolinguals and ELL's as they acquire first time literacy in a SL.

2.5 Modern perspective

Having overviewed pertinent historic perspectives of second language acquisition in the foregoing section, the modern perspective and its relationship to FLA, literacy and the focus of this study, learners who acquire first time literacy in a SL that is not spoken at home, are explored. This is done with cognisance of the underlying representation of the historic perspective in the evolution of current theories. The continuum of language acquisition and the synchronicity between FL and SLA are explored as both evolve from the historic and modern perspectives.

Current theories of SL are complex and vast having evolved through extensive research in a variety of disciplines - psychology, sociology, anthropology, linguistics and neurolinguistics (Freeman & Freeman, 2001:71). The concept of learning a second language, which is predictable and sequential, in other words, development along a continuum, where a learner develops from no knowledge to a

competency that resembles the native language speaker (Tabors, 1997:7) is a theory widely supported across disciplines. This statement is supported by Chomsky, who elaborated upon Wilhelm von Humboldt's "infinite use of finite media" to realise his UG theory (in Pinker, 2000:10). Prior to Chomsky, Lennenberg influenced both Chomsky's LAD theory and Berko Gleeson's theory, namely the 'wug test' of a "rule forming mechanism in the mind of a child" (in Pinker, 2000:14). Chomsky's research too moves along the continuum, constantly generating evolving theories such as his Transformational Grammar (Chomsky 2003:3) to the modern perspective as he and others delve into the ever deepening mystery of language acquisition and more specifically, second language acquisition.

In order to address the modern day perspective, which is the focus of this research, it is necessary to identify the pertinent theories, more specifically those pertaining to the young ELL acquiring first time literacy. Again an overlap in theory, process and factors affecting second language acquisition will be apparent, prior to and beyond Humboldt's early beginnings to Lennenberg's CHP theory, to mention a few.

2.5.1 Factors affecting second language acquisition

As learning a second language develops along a continuum, so do the theories relating to the development of a second language as they encompass the complexities of the second language learner. The volume and complexity of the research precipitate a selection of the most pertinent theories applicable to this study.

The emotional well being of the learner, the age and how these factors relate to learning are brought centre stage by Krashen and his Monitor model, as well as the CHP theory posited by Lennenberg.

2.5.1.1 Krashen's Affective Filter Hypothesis Theory

The affective filter hypothesis, proposed by Krashen (1985) and widely accepted by both researchers and English language teachers (Krashen, 1982; Krashen & Terrell 1983) suggests that a learner's emotions may enhance or detract from acquiring a new language. Krashen's theory and subsequent method, the Natural Way (Richards and Rogers 2001;22) are associated with his monitor model of SLA and is based on the theory of an affective filter. This states that successful SLA depends on the learner's feelings. Negative attitudes, including lack of motivation, self confidence and anxiety are said to act as a filter, preventing the learner from making use of the language input and thus

hindering the success of language learning. An environment that is fully engaging, non- threatening and affirming of a learner's social and linguistic background and culturally compatible (See 2.2.3.2) boosts a learner's confidence, self esteem, motivation and ability to acquire literacy seamlessly. The corollary is true for second language learners in an English speaking classroom.

2.5.2 Social theorists

As discussed in (2.2.3.1) and reiterated by Dunbar(2004:113), human beings are social by nature, therefore a theory on language acquisition and the social connection is not entirely out of place and has been thoroughly explored by Vygotsky and more recently Bahktin.

Vygotsky although not necessarily considered in the modern perspective but clearly an overlap, conceptualised development inclusive of language as the "transformation of shared activities into internal processes" (John-Steiner & Mahn, 1996:192). Bakhtin (1986) extended this theory and concentrates on anchoring language socially. He extends his analysis beyond words and utterances to distinguishing between everyday communication, "primary genres" and more complex communication, "secondary genres". Gee (2007:17) posits that children acquire the "vernacular style" of native language to which they are exposed, which may be understood as the type of language used for face- to- face conversation and for everyday purposes. Primary genres, native language and everyday communication find their origin in the home and are the emergent skills required for successful literacy acquisition.(See 2.2.3 and 2.2.3.2). As the individual matures however, participation in different activities in the community brings about the requirement for additional communicative skills, which are defined through the socially situated contexts in which they give and receive meaning (Berko -Gleason, 2005:396; Finegan, 2004).

Having skimmed through the historic and modern perspectives of second language acquisition, the stages attendant to and evolving from these perspectives converge as the challenges faced by the ELL acquiring first time literacy are unravelled. The stages of second language acquisition in keeping with the continuum of language development are the culmination of the comprehensive and often overwhelming number of theories that have contributed to the theoretical framework for second language acquisition.

2.6 Stages of second language acquisition

The focus now shifts to the learners, their initial perception of language used within the classroom, and the adjustment to and development of the new language. Learners whose home language is other than English may continue to speak their home language in the English classroom. It may take time for these learners to realize that a new language is being used in the classroom setting which is different to the one used at home. Once learners realize that their home language is redundant within the classroom, they become silent and begin the first of the five stages associated with second language development. The five stages are explored in this section. In addition, these stages of SLA are related to FLA and it is indicated in turn how they influence first time literacy acquisition in a second language.

2.6.1 *The non verbal or pre production stage*

Learners begin this stage with a varied receptive vocabulary usually within the region of 500 words (depending on background) and an inability to communicate (talk) to their peers in an English-speaking classroom (Hakuta,1978 cited in Tabors, 2006:43). They enter what is called the 'silent stage' or the 'rejection period' (Itoh & Hatch, 1978: 77-88).This stage has been known to last for up to six months.

In comparison, the ELL's English- speaking peers in Grades 1, 2 and 3 have the precursors of reading, such as syntax, vocabulary and one to one correspondence with the letter/sound combination (Wolf, 2007:113)well established. The FL learner has a five year head start. The mute second language learner is not only at an academic disadvantage but a social disadvantage; they are treated like infants and are "ignored, as if they were invisible" (Tabors, 2006:49) by their peers. However, it is not within the parameters of this study to expand on self esteem and identity which impact literacy acquisition in both F and SL.

Krashen (1982, 1983) refers to 'intake' and quality of intake during this stage. This was elaborated upon by Krashen and Terrel (1983) in the approach named the Natural Way, where they too referred to the silent period, where quality of intake was the focus. During this non verbal stage, learners observe and engage in egocentric conversation, rehearsing in preparation for the next phase. In both first and SLA, a stimulating and rich linguistic environment will support language development. During this stage a receptive vocabulary is built by the second language learner (Tabors & Snow cited in Neuman & Dickenson, 2003:167).

2.6.2 The early productive stage

The silent stage, a consistent feature of second language acquisition, has an age related component to the length of time learners spend in this stage. The younger the child is, the longer the mute period. Tabors (2000:43) linked this to the cognitive development of the learner. It must however, be noted that the silent stage is peppered with non verbal communication such as gesticulation, not unlike the case of the FL infant. The beginnings of second language production consistently feature telegraphic and formulaic speech and can last for as long as six months (Tabors, 2006:49). Similarly, at eighteen months, the FL learner exhibits telegraphic speech usually comprising of a noun or verb and a modifier leading to formulaic speech where the toddler is able to formulate either a declarative, negative or imperative sentence (Weichers, 1994:19). By second half of the grade 1 year, the ELL's linguistic competence is comparable to that of an eighteen- month old toddler, placing the ELL at risk for positive literacy outcomes.

2.6.3 Productive use of the new language

During this stage, learners have accumulated 3000 words, are able to use short phrases and simple sentences. Learners are able to form sentences with a subject and a predicate and may produce longer sentences; however, these often lose their meaning through grammatical errors. An additional year is required prior to moving onto the next stage. The FL learner has reached the productive stage by age two and a half, again clearly indicating the language deficit manifested by the ELL acquiring literacy in a SL.

2.6.4 The intermediate language proficiency stage

SL learners present with a vocabulary of close to 6000 words at the intermediate stage, create complex sentences and are able to communicate at greater length and in more detail. The time frame usually noted for this stage is one year. The FL learner, on the other hand, enters school with a large vocabulary size in comparison with the ELL. Limbos and Geva (2001:138) substantiate this notion in a study conducted on FLL and SLL in Canada, where the SLL performed poorly compared to the FLL on measures of expressive, receptive vocabulary and sentence repetition.

2.6.5 The advanced language proficiency stage

At this stage learners have developed specialized content–area vocabulary and find the language demands of instruction at the corresponding age or grade level manageable (Woodcock–Munoz, 1992).

In sum, based on the five stages of SLA, the general time frame for 'manageable' linguistic competency is four years. In addition, to the five stages of SLA, an understanding of two important aspects of linguistic competency referenced in but not adequately elaborated upon in the five stages of second language acquisition are Cummins's two language abilities, Basic Interpersonal Communications Skills (BICS) and Cognitive Academic Language Proficiency (CALP).

2.6.6 Basic Interpersonal Communication Skills

Cummins (1979, 1994, 2000), argues that young learners typically develop informal "playground talk" or basic interpersonal communication skills (BICS). He argues that these skills develop sooner and more easily, than the cognitively demanding language, used to acquire cognitive academic language proficiencies (CALP). According to Cummins, learners who do not have CALP either in their first language or the new language may be at a special academic disadvantage. Cummins & Nakajima 1987, Collier, 1987; Cummins (1981) and Hakuta (2000:13) posit that four years are required for learners to attain grade norms in English academic skills. This substantiates the time reference in the aforementioned stages of SLA and applies to socio- economically disadvantaged students. In contrast, on average, SLL's usually require two years, a considerably shorter period to attain peer appropriate communicational skills (Cummins, 1984).

2.6.7 Cognitive Academic Language Proficiency

Cummins (in Ellis, 1997:153) states that CALP is the dimension of language proficiency required for and related to cognitive academic skills such as those encountered in the classroom. CALP enables learners to comprehend academic concepts and perform higher cognitive operations (Venzke, 2002:16).

Having considered the theories both historic and current theories, the stages and comparisons of both FL and SLA, a synthesis of all three follows prior to discussing the dynamic variables cognition, linguistics and the social variables which also influence first time literacy acquisition in a second language.

2.7 Cognitive and linguistic social variables

Second language learning is ubiquitous throughout the world, but varies according to the conditions under which the language is learned, its use and the social status of the language (Lightbown & Spada, 1993). SLA is a complex process, with multiple, dynamic variables. Language acquisition (LA) integrates cognitive and linguistic variables (Chomsky, 2002) and the social variables affect language

use and construct. Vygotsky (1978:57) posits, “[e]very function in the child’s cultural development appears twice: first, on the social level, and later on the individual level”. Age and the concomitant cognitive skills, intelligence, attitudes, and personality are additional variables when learning a second language. A general assumption, based on the “critical hypothesis period” (Lennenberg, 1967) is that young learners acquire a language far more rapidly and with a higher level of proficiency, than older learners.

However, the literature does not fully support this assumption (Bialystok & Hakuta, 1994; Collier, 1987; Epstein et al., 1996; Krashen, et al.,). A critical period for first language acquisition was first proposed by Penfield and Roberts (1959) and elaborated upon by Lennenberg (1967). Patowski (1980), on the other hand, used an alternative term when referring to the critical period hypothesis namely the Sensitive Period Hypothesis, which is often the term used when referring to SLA. However, this does not imply that there is a critical period for SLL. Mature learners generally progress more rapidly in acquiring the morphological, syntactic, and lexical aspects of SLL. This may simply reflect the general finding that initial acquisition is more rapid in older learners whose cognitive abilities are more mature. On the other hand, the cognitive demand for what young learners must learn is minimal, in that their language use will not be as sophisticated as the older learners. However, younger learners may be at an additional disadvantage, as their cognitive levels are not as developed as those of older learners. In addition, there seems “to be an inverse relationship between the age of the learner and the period spent in the non verbal phase” (Tabors, 2006:83), indicating that the younger the learner, the longer the silent period (see 2.6.1).

The above discussion further delineates the platform for the subsequent comparative study between the monolingual and the ELL acquiring first time literacy. To further and therefore broaden the discussion, the characteristics of literacy in a mother tongue as being advantageous will be explored below, bearing in mind, the ELL learner’s quest for first time literacy in a SL in Grades 1-3.

2.8 Benefits of first time literacy in a mother tongue

Brown (1994) states that learners already literate in their first languages will be familiar with the broad basic characteristics of written language and are able to transfer those skills more readily (Fitzgerald,1995:118). However, certain characteristics of English, specifically certain rhetorical conventions, may be so different from their primary language that reading efforts are blocked. In this context, research has been conducted in a broad range of substantive areas with an emphasis on the academic and social needs of ELL learners (Hakuta, 1986). Language is a fundamental

requirement in emergent literacy skills (see 2.9.4) which are known to predict later reading competence (Butler, Marsh, Sheppard & Sheppard, 1985). Equally language skills and literacy skills in a FL facilitate literacy in a SL. This is particularly true for reading comprehension as it lays the foundation for understanding concepts that are important for comprehending meaning in print (Whitehurst & Lonigan, 1998). What then becomes of the SL learner acquiring first time literacy in a second language? The ELL learner by definition presents with limited language skills, literacy skills in their infancy and as aforementioned certain characteristics of English, more specifically rhetorical conventions can block reading efforts, not to mention comprehension. A comprehensive discussion on comprehension is foundational to this study and ultimately informs the identification of an at risk minority through the identification of the HCD (see chapter 3).

This section has highlighted both the historic and modern perspectives of SLA and how language acquisition is embedded in the social and cultural variables. In addition, linguistic proficiency is linked to and fundamental to literacy acquisition. The centrality of language as it pertains to underlying successful literacy acquisition will now be outlined, further defining the platform for the comparative study between monolinguals and ELL's.

2.9 The role of linguistic proficiency as central to first time literacy acquisition in both a first and second language

2.9.1 Introduction

A comparative overview of the theoretical views of FLA and SLA and how age, exposure, motivation, affect, quality and the very hierarchical nature of language acquisition demonstrate two disparate and clear routes to fluency, a prerequisite critical for the ultimate realisation of language literacy. How these theories pertain to and ultimately affect the Grade 1, 2 and 3 learner acquiring first time literacy informs this aspect of the study. On entry to Grade 1, the FL learner has honed the prerequisite skills necessary for acquiring literacy over a five to six year period. The SLL on the other hand comes to the Grade 1 classroom with a five to six year English language deficit. The typical FL Grade 1 learner manifests with almost adult like language structures, vocabulary levels poised for literacy acquisition and the next developmental vocabulary burst that accompanies literacy.

Experience in Canadian schooling provides strong evidence for the time it takes ESL's to achieve linguistic parity with age- related peers who are native English speakers. ESL's who had 60 to 71 months of English, (five to six years) reached native speaker age norms (Klesmer, 1994:8-11). Fluency, in even the youngest learners and under the best circumstances, is not achieved in less than

two years and more than likely requires three to four years (Wong Fillmore, 1998:7) (see 2.6.6 and 2.6.7). For immigrant children who arrive in Canada and the US, a variety of programmes exist which are formulated and dictated by the theoretical framework and stages of SLA. In addition they are charged to receive these learners and facilitate a seamless entry into a new culture, language and school. However, immigrant children, who arrive prior to the age of six, have until now been largely ignored with no special attention paid to their learning environment (Snow, 1997: ix). These learners become the focus of this research as they enter the formal schooling environment and begin to acquire first time literacy in a second language.

It is in this light that the researcher considers and evaluates the acquisition of first and SLA as they pertain to the Grade 1 ELL learner, how FL and SLA link to literacy and the vulnerability of the ELL acquiring first time literacy.

2.9.2 First and second language acquisition relative to literacy

Chomsky maintains that, besides the LAD, children possess a UG system and UG principles may partially shape SL learner's grammar (Felix & Weigl, 1991). The PDP theorists suggest that the individual components of language learning are highly interactive and represented diffusely in the cognitive system (Richards et al., 1999: 263). The behaviourist/environmental perspective views the learner's experience as more important than innate ability. The Interactionists view both the innate ability and the external process as responsible for language acquisition (Bennett-Kastor, 1988), embracing elements of Lennenberg's biological model, Piaget's cognitive model and Krashen's affective model and the input/ output theory posited by Chomsky. Derived from and dependent upon the UG theory, Chomsky proposed his transformational generative grammar theory. It is an attempt to provide a description for all languages showing the system of rules, based on the knowledge of native speakers who utilize the rules in the formation of grammatical sentences (Chomsky, 2005:3). The model consists of four main aspects, namely the base component, generating syntactic structures, the transformational component which transforms the basic structures in "surface structure" sentences, the phonological component providing a phonological representation and the semantic component which provides meaning. The relationships of the four components are interdependent, each individually affecting the other and the semantic interpretation of the sentence.

The overarching theories of SLA although in their infancy, provide a theoretical reference upon which learning theories, their variables and conditions can be built. More specifically, the theories

support and underpin a framework for ELL's as they pursue the elementary school curriculum. Considering the complexities of the theoretical framework and, consequently, the stages of SLA, it is evident that acquiring a second language, more specifically a good working knowledge of the language, depends on duration of exposure and quality of exposure (Wong Fillmore, 1998:2). A working knowledge of the language is crucial in cultivating a relationship between linguistic knowledge, reading success, the school curriculum and ultimately a positive educational outcome (Crais, 1990:13-28; Landauer & Dumais, 1997:211-240).

Lennenberg's biological model, Chomsky's nativistic model, his UGS and LAD theories, Krashen's Monitor Model and Larson Freeman's discourse analysis underpin and encompass aspects of the input output theory in aiding the development of the blueprint for language acquisition. Input output requires active participation by the learner in a "prepared environment" (Standing, 1984:266) for the development of language over a period of time. ELL's born of immigrant parents have little opportunity to actively participate in SL learning prior to school entry and commensurate first time literacy acquisition. ELL's and their limitations are the focus and the aim of this study, how these limitations affect first time literacy acquisition and are instrumental in delineating a vulnerable education minority.

Acquiring a SL is not dissimilar to the innate process of acquiring a FL. Age, cognition and quality and quantity of exposure being the dependent variables in both circumstances. Learners exhibit the same process that is, receptive vocabulary building, naming, similar grammatical errors, telegraphic and formulaic speech and more importantly rely on input (Krashen, 1982, 1991). First language learners have exposure to rich language input during everyday conversations with parents and caregivers in their early years. Research indicates that this process enhances children's vocabulary as well as their cognitive and memory skills (Landry, Miller – Loncar, Smith & Swank, 2002). The various stages of second language acquisition demarcate distinct deficits in linguistic competence levels when compared to FL learners. Input of rich language at three has been linked to higher vocabulary development at four years of age and this, in turn, predicts higher reading comprehension skills at ten years of age (Dietrich, Assell, Swank, Smith, & Landry, 2006). The linguistic deficit of the SLL in Grade 1 continues and influences the emergent literacy skill deficit as the SLL attempts to keep pace with the FL learner linguistically and in addition acquire literacy in English. Persisting differences in vocabulary levels have been suggested to be the cause of the "fourth grade slump that many learners experience even after effective beginning reading instruction" (Beimiller, 1999). Given the importance of vocabulary knowledge and the role it plays in

reading comprehension, ELL's acquiring literacy for the first time have the capacity to succeed, yet they are at a distinct disadvantage in meeting their potential. In Beimiller's (1999:29) words:

It is rather like trying to climb a cliff at the base of a hill. If one has the pre requisite language, one is already at the top of the cliff and one can continue to go up the educational hill. But those missing the necessary language (mostly vocabulary) are at the bottom of the cliff. They try to scramble up while others continue to extend their knowledge.

FLA is complex, hierarchical and componential, originating *in utero*, progressing to neonates recognising their mother tongue, acquiring adult like syntax by three, vocabulary levels which support the prerequisite emergent literacy skills prior to school entry and the ultimate realisation of language reading or literacy acquisition. This is a progressive, ordered and interdependent process, with each skill dependent upon the preceding skill for continued progress to occur.

The ELL comes to the Grade 1, 2 and 3 classroom swaddled in the culture of his parents and having acquired the mother tongue or parental language. Typically the necessary prerequisite emergent literacy skills necessary for first time literacy acquisition are in the mother tongue. By default, the Grade 1 ELL learner who is at cultural and linguistic odds manifests a deficit from day one, a five year deficit. Input from home if any is via parents speaking a second language in the vernacular unique to the ethnic immigrant group to which they belong. Output based on input may or may not be present and if so limited and not in sync with the English used in the classroom, not to mention the aforementioned language developmental stages, which are dormant in a SL that is not yet functioning. With this deficit the Grade 1, 2 and 3 learner is challenged to acquire first time literacy in a state of 'language in deficit'. The first exposure to English for this learner is in the Grade 1 classroom accompanied by the attendant expectation that literacy acquisition in English is not only viable but the learner is expected to achieve literacy and later learning without the necessary hierarchical language building in place. The Grade 1 ELL's world view expands based on a length and quality of language exposure, thereby building networks and links which are influenced by culture, background knowledge and their association with the learner's cognitive structures. Piaget posits that learners do not possess complex language structures at birth; rather they develop in tandem with cognitive structures which are interdependent on the input output notion. Success breeds success an old dictum which feeds into the Grade 1 immigrant learner and enforces Krashen's affective model. Removing the essence of communication, language, the ensuing ability to comprehend, socialise and identify creates anxiety preventing the learner from maximising input and hindering both the language acquisition and literacy processes.

Considering the ordered, time honoured, hierarchical and complex path to FLA revealed in the research and supported by the familiarity of cultural compatibility, rich language input is accompanied by the concomitant cognitive schematic ordering and growth. SLA presents a fledgling, complex and varied if not disparate theoretical framework; a framework still in its infancy and relevant to learners literate in their first language. In addition, inclusive education's framework of action, which encourages schools, teachers and the curriculum to invest in a learner centred pedagogy supporting all learners, is in its infancy when considering the needs of the ELL acquiring first time literacy. Naylor's(2005) vision (Inclusion is always a journey, and never a destination) can be applied here as much needs to be done to support the ELL in the Grade 1 to 3 inclusive classroom (See 2.3).The above leaves the young Grade 1,2 and 3 ELL flailing about with an ill fitting research framework, an equally ill fitting application of the theory, an upending of the prerequisite necessity of language fluency and the prerequisite emergent literacy skills prior to literacy acquisition and a teaching pedagogy that is not as supportive as it could be. The ELL in Grade 1, 2 and 3 born of immigrant parents is left limping along, unsupported, unrecognised and results in a high risk, minority group with poor academic outcomes.

An analysis and comparison of the acquisition variables, vocabulary levels, language structure and comprehension pertaining to FL and SL acquisition and how they respectively contribute to literacy are addressed below against the framework of the theoretical language acquisition analysis previously described.

2.9.3 Literacy and its determinants

The basic framework for understanding emergent and literacy skills and their development derives from research conducted with monolinguals. Both emergent literacy and literacy acquisition is "cumulative and componential, influenced by individuals, contextual, and instructional factors"(Lesaux & Geva, 2006:53) and begins prior to school entry and continues into adulthood. Emergent literacy skills typically begin prior to school entry and comprise of oral language skills, familiarity with print, an understanding of the concepts of print, an understanding of text structures and the acquisition of contextual, cultural and background knowledge. Literacy acquisition upon formal school entry and the continued development and a more complex understanding of how speech is represented symbolically (graphically) require both the ability to analyse spoken language (as in recognising sounds, rhyme, alliteration etc) into smaller units and understanding the rules required for representing these units with graphemes . In addition to decoding and word building, learners need to attend to the process of understanding or reconstructing meaning from the writing.

Ultimately, reading and writing become the skills for future learning. It is critical for effective and seamless literacy acquisition to ensure that learners have the opportunity to develop and integrate the aforementioned pre literacy or emergent skills.

Learning disabilities are present in all groups regardless of age, race and background (Lyon, Shaywitz, & Shaywitz, 2003:2). Given the high proportion of minority language speakers who fall into this category, it is likely that many do not have learning disabilities (Samson & Lesaux, 2009:148-162) but language related difficulties. This exploration of emergent literacy and literacy development begins with the current research on monolinguals. It culminates in the current research (or lack thereof) on the development of emergent and literacy skills in language minority learners (visible minorities), thus highlighting the comparative linguistic deficits or academic risk that will ultimately influence developmental literacy and academic outcome trajectories. Linguistic risk is a broad term used to refer to the key elements required linguistically for literacy acquisition, such as, English proficiency, phonemic awareness, vocabulary and comprehension levels, background and domain knowledge and cultural narrative familiarity.

2.9.4 Emergent literacy and language

The process of socialisation and acculturation (see 2.2.3) are fundamental determinants in a learner's ability to use language for communication and ultimately literacy acquisition.

Learning to read is a complex task for the beginner. They must coordinate many cognitive processes to read accurately and fluently. Readers must be able to apply their alphabetic knowledge to decode unfamiliar words and to remember to read words they have read before. When reading connected text, they must construct sentence meanings out of word sequences, and retain them in memory as they move onto new sentences. At the same time, they must monitor their word recognition to make sure that the words activated in their minds fit with the meaning of the context. In addition, they must link new information to what they have already read, as well as to their background knowledge, and use this to anticipate forthcoming information (National Reading Panel, 2000).

Literacy is the ultimate realisation of language, in other words, the coming together or culmination of the experiences, skills and knowledge that accompany learners when they enter the Grade 1 classroom. It is evident that language, socialisation and culture are determinants in and factors of literacy acquisition and more specifically are fundamental in the development of the emergent skills required for literacy acquisition, broadly termed "emergent literacy" (see 2.9.4).

Kamiloff and Kamiloff-Smith (2001:17) posit that emergent literacy skills begin *in utero* and continue as neonates begin “the process of becoming literate”(Teale & Sulzby, 1986:xix; Yaden, Rowe & MacGillivray, 2000:425-454; Justice, 2006:1-6). On the other hand, Teale (1995 cited in Machado, 2003:158) describes literacy as emerging in early childhood with children constructing meaning from infancy onwards. Whitehurst and Lonigan (1998:848) posit that the” term ‘emergent literacy’ is used to denote that the acquisition of literacy is best conceptualised as a development continuum, with its origins in the life of a child rather than an all or none phenomenon that begins when children start school”.

The building blocks (emergent literacy skills) for literacy acquisition are acquired in the home environment. For ELL’s this occurs in a home where English is not the FL and often not spoken at all by the parents or caregivers. Early emergent literacy emerges coloured by the cultural overtones of language spoken at home, shared reading in that language and the alphabet linked to that language. For example, in an English-speaking home, the shared reading of Mother Goose is a ritualistic, nurturing and entertaining pastime which aids children in developing an awareness of phonemes. Embedded in “Hickory, Dickory, Dock, a mouse ran up the clock” and other rhymes are a myriad of latent building blocks to sound awareness – alliteration, assonance, rhyme, repetition. These alliterative and rhyming sounds, “teach the young ear” (Wolf, 2007:99) that words can have similar sounds because they share a first or last sound. This is the beginning of the seminal process of being able to hear each individual phoneme in a word, which facilitates reading (Wolf, 2007:99). Another crucial component in the seminal stages of emergent literacy is the symbolic nature of print and the sounds that are represented. In an alphabetic system, such as English, there is a systematic relationship between the letters of the alphabet and the phonemes of the language, whereas Mandarin or Cantonese make use of a character system with each character representing a word. In addition, emergent literacy is greatly influenced through social and cultural interaction, with young learners acquiring literacy from everyday experiences from more literate parents and adults (Morrow, 2001:253). Brodeur, et al., (2006:56 – 83) concur that young learners can and do benefit significantly from active involvement with supportive adults. Oral language, reading and writing develop simultaneously, beginning in early infancy and continue to develop throughout life (Morrow, 2001:253). Clearly, different aspects of the home literacy environment differentially affect the emergent literacy exposure and development of each learner.

Whitehurst and Lonigan (1998) proffered a notion that relates emergent literacy to literacy acquisition. The link between learners’ emergent literacy environments, development of emergent

literacy skills and its subsequent relation to literacy acquisition is reviewed. Whitehurst and Lonigan (2003:14-15) posit that emergent literacy consists of two distinct domains: 'inside-out' skills, namely P/A and letter knowledge and 'outside-in' skills, made up of language, conceptual and contextual knowledge. They go on to substantiate the social, cultural and emergent literacy link.

Becoming literate is an extension of language, socialisation and culture all contributing to the emergent literacy process and ultimately literacy. Most children acquire language and the pre requisite emergent literacy skills unconsciously within the family context, whereas literacy is not attained by all nor is it attained unconsciously. Literacy requires a shared body of understanding, much of which involves a common cultural and social exposure to oral and written material and a level of listening and speaking, reading and writing proficiency (Machado, 2003:158). What then becomes of the culturally, socially divergent ELL, whose emergent literacy skills do not reflect the common cultural and social exposure of the classroom nor support the shared body of understanding, language, vocabulary and comprehension required for successful literacy acquisition? In other words, the ELL'S outside- in skills are not in synch with the FL learner's outside -in skills nor are they compatible or able to meet the demands of an English speaking classroom and culture. Different aspects of the home literacy environment differentially affect the outside-in and inside-out skills, emergent literacy and ultimately, literacy.

More significantly, native language performance underlies the aforementioned predictors of reading success and predicts English literacy skills (Dickinson, McCabe, Clark, Chiarelli & Wolf, 2004:209-207). Emergent literacy is greatly influenced by social and cultural interactions, with learners acquiring literacy from everyday experiences from more literate peers and adults (Morrow, 2001:265). The common activities which take place in the home such as story reading, labelling, both the identifying and writing thereof and meaningful conversation with learners all nurture language and literacy growth (Ollila & Mayfield 1992). Longitudinal studies researching language and literacy development relate children's language and emergent literacy skills in the early years as strongly influencing the outcomes of long term success (Dickinson & Tabors, 2001; Scarborough, 2001:97; Tabors, Snow & Dickinson, 2001:313; Whitehurst & Lonigan, 1998:849;2001:314). Monolinguals entering formal schooling typically emerge from language rich environments where language development is supported not only biologically but socially, environmentally and culturally. For the purposes of this research, the socio economic standard (SES) variable although critical will not be addressed in detail other than for purposes of comparison. Building language and emergent literacy skills requires a planned systematic approach which occurs naturally during the preschool years in

the home and mother tongue. From the discussion, it is evident that language development, and emergent literacy skills have become critical factors in early education, influencing literacy acquisition.

2.9.5 Reading difficulties

In North American schools today, reading difficulties are prevalent in 40 % of fourth graders, with a disproportionate representation of learners from the lower end of the socio economic spectrum (SES) and those who belong to ethnic or racial minorities (National Assessment of Education Progress, 2005:25). In 1998 the National Research Council published *Preventing reading difficulties in young children* (Snow, Burns, & Griffin, 1998) which illuminated the importance of early education as the context in which solutions to these pressing difficulties are most likely to be effective. Early differences contribute significantly to long term outcomes in learners' reading success (Juel, Griffiths & Gough, 1986:243). As aforementioned, typical English -speaking learners have a vast linguistic and cultural knowledge and therefore skill reference base upon which to draw, when expected to participate in language analysis upon Grade 1 entry. Their vocabularies consist of several thousand words. They have some exposure to rhyme and alliteration, practice in writing their own names and 'reading' experimental print with additional input such as bedtime stories (Heath, 1999:170), technology and importantly, a contextual cultural base amongst many sources of linguistic information.

The research reviewed previously on monolinguals establishes a strong relationship of oral proficiency to literacy acquisition. The role of language proficiency in the domain of first time literacy acquisition in a SL (i.e. reading fluency and comprehension) is significant as there "is almost no research in this area" (Lesauz & Geva, 2006:68). In this light the current limited research on the role of English oral proficiency and limited vocabulary as ELL's acquire first time literacy is explored.

2.10 At risk learners

Research indicates that learners who acquire literacy skills in a first language transfer those skills to their second language (Fitzgerald, 1995:118; Garcia 1998) and that there is a great deal of evidence that learners acquire parity with their monolingual peers as soon as they have acquired English proficiency (Collier & Thomas, 1989:28). In addition, Garcia (2000:816) reports that there is substantial evidence purporting that learners' reading proficiency in their native language is a strong predictor of their ultimate reading performance in English. This supports the emergent literacy theory. In comparison, "when a child enters kindergarten or first grade with limited proficiency in

English, the school faces a serious dilemma" (Slavin,2005:249).Younger ELL's manifest long lasting negative effects on academic outcomes when associated with initial literacy instruction in English (Collier &Thomas (1989:30).Difficulties with ELL's, having "a [limited] awareness of discrete sounds and phonemes in a word" (Wolf,2007:98), "limited paralinguistic, kinetic and other non verbal cues that are highly sensitive to situation and context" (Hartley,1994:18)are added factors and are critical components of the emergent literacy skills required when learning to read. The development of literacy entails a cumulative, hierarchical process not unlike mathematics. Development is dynamic and relies on the learner's proficiency and exposure to and acquisition of emergent literacy skills, background knowledge and cultural synchronicity. The 2,000 days (from birth to year five)that prepare the young learners brain to synchronise all the complexities that go into literacy acquisition are critical in the cumulative and hierarchical development of the emergent literacy skills (Wolf, 2007:107). ELL's have emergent literacy skills in their mother tongues; their 2,000 days of preparation are in a language that is questionable in its support of literacy acquisition in English. The delay in the development of emergent literacy skills in a SL and language proficiency in that SL are fundamental and critical when considering long term outcomes. Key components embedded within this challenge are phonemic awareness, word reading, fluency, vocabulary, comprehension, contextual clues and a cultural linguistic diversity which reveals the essence of the SLL's educational vulnerability. Considering the intention of this study, the affective, social and emotional factors are not investigated in depth and are referred to briefly as they are fundamental in the portrait of educational vulnerability that is the ELL acquiring first time literacy. ELL's emergent literacy skills can be said to be skewed when acquiring first time literacy in a second language. An invaluable key to increasing literacy skills and therefore positive academic outcomes in ELL's is the identification of at risk learners early in their academic experiences. Early identification coupled with early stimulation of literacy skills allow for more positive outcomes (Berninger, et al., 2000:242); Torgeson, et al., 1999:580). Clearly learners' self esteem, sense of competence and their academic egos are adversely affected when required to acquire literacy as a high risk minority group in an English-speaking classroom.

What then happens to the ELL who enters formal schooling with a language, vocabulary and emergent literacy skill that is in deficit in comparison to monolinguals of the same age in the same classroom? Learner's status and knowledge at school entry is disparate and those from low income homes are significantly disadvantaged compared to their more affluent peers. Learners from a language background other than English homes are equally significantly disadvantaged. Their language and emergent literacy skills that predict long term literacy growth are in deficit. Hart and

Risley (2003:4) in reference to underprivileged learners refer to the “thirty million word gap”. In addition, research has confirmed that young learners commence their formal schooling with disparate understandings of the purposes and functions of written language (Meirs & Foster, 1999; Young, 2004:465), not to mention the cultural and background knowledge deficit when reading culturally unfamiliar text. Reading culturally familiar text improves comprehension (Droop & Verhoeven, 1998:254; Hannon & McNally, 1986:239).

Skill differences among children at the time of formal school entry are vast and critically important. These differences translate into the risk factors that contribute to what Beimiller (1999:4) refers to as the ‘fourth grade slump’. Given the importance of language and its intricate relationship with literacy acquisition, the “early identification of literacy needs” (Rieninger, et al., 2000), such as the HCD becomes an essential and invaluable tool in reducing the risk and increasing effective literacy acquisition. “Early identification coupled with early stimulation of literacy skills allow for more positive outcomes” (Reininger, et al., 2000; Torgeson et al., 1999; Snow, Burns & Griffin, 1998; Catts, 1997; Fey, et al., 1995).

2.11 Vocabulary

Vocabulary is defined by Richards & Platt (1999:400) as “a set of lexemes, including single words, compound words and idioms” known to an individual. Richards (1999:5) goes on to delineate between passive language (receptive vocabulary) where an individual is able to take meaning from the speech and writing of another as opposed to active language (expressive vocabulary) knowledge whereby an individual is able to actively produce their own speech. Tannenbaum, Torgenson, and Wagner (2005:283), on the other hand, refer to the dimensions of vocabulary knowledge termed the “breadth, depth and index depth” of vocabulary knowledge. The breadth of vocabulary knowledge refers to the size of the mental lexicon. An index of vocabulary is the number of words that have some meaning to an individual and the depth of vocabulary knowledge refers to the richness of meaning. Beck, McKeown and Kucan (2002) refer to the estimation of how well learners understand word meaning as the depth of vocabulary while the breadth is quite simply the number of words a learner knows. Measures of vocabulary utilize both domains, with researchers finding a strong correlation, between vocabulary and reading comprehension (Roth, Speece, & Cooper, 2002:261).

Effective literacy acquisition is dependent on attendant oral proficiency, vocabulary levels, cultural compatibility and domain knowledge. The learner is able to identify or read the printed words and to ascribe meaning to the text being read. Both identifying the printed word, ascribing meaning to the

words and building a lexicon are critical to literacy acquisition. It is the comprehending of language, underpinned by proficient vocabulary knowledge that forms the motivation for this study. In identifying the HCD and attendant vocabulary deficits, further research can address the teaching applications necessary to close the language, vocabulary and comprehension gap that presently exists between monolinguals and ELL's in first time literacy acquisition. In so doing, Beimiller's (1999) "fourth grade slump" can be addressed, thus alleviating the disproportionate number of ELL's who leave school prematurely and are denied positive academic outcomes. It is hoped by identifying the HCD, through the exploration of vocabulary deficits and their intricate relationship with literacy and comprehension, educators can begin the task of addressing what appears to be a systemic problem.

The 'pre literacy skills' critical to literacy acquisition include adequate vocabulary levels, an understanding of abstract knowledge of the sound and structure of language and a firm foundation in functional oral skills. An understanding of emergent literacy, abstract knowledge of sound and language structure begins prior to birth, progresses to neonate sensitivity toward the mother tongue, discrimination of speech sounds, phonological units and ultimately, production and vocabulary building. Vocabulary is a primary determinant of reading comprehension (Koda, 1989; Stanovich, 1986; Hart & Risley, 2003).

For many learners school success will involve increasing oral proficiency and vocabulary building in the early years. The gap between learners with advanced vocabulary and learners with restrictive vocabulary grows substantially during the elementary years (Beimiller, 1999:1). Anglin's (1993:58) study of growth vocabulary data of English -speaking learners from varied background found that between Grades 1 and 5, the average total vocabulary increases from 10,000 to 40,000 words. When vocabulary learning is restricted to idioms and root words such as one would find in ELL's the vocabulary increases from 3,200 words in Grade 1 to 5,200 words in Grade 3 and to a mere 10,000 root words and idioms in grade 5. To add vocabulary at a normal rate would require roughly 1,200 root words per year, that is 120 root words per day based on a 180 days per school year (Beimiller, 1999:9).

The ELL comes to the classroom with a divergent but equally complex language and vocabulary framework structured on the mother tongue or language spoken at home. As with monolinguals, there are prenatal and neonatal beginnings, sensitivities to sound and phonemes, vocabulary bursts culminating with an almost adult like understanding of syntactical constructions. The syntactical constructions and vocabulary burst form a lexical platform on which to add vocabulary gleamed

through exposure and experience. The aforementioned constructs are embedded in the mother tongue of the ELL. In this light, how vocabulary is acquired, the time frame necessary for vocabulary acquisition and the interdependent first time literacy acquisition in both monolinguals and ELL's are explored. In both monolinguals and ELL's there are, however, constitutional differences in learners themselves and differences in learner's experiences which have a substantial impact on the development of vocabulary, language structures and ultimately literacy.

There is evidence that variations in learner's environments are associated with marked differences in language and vocabulary development (McLoyd, 1998:186; Duncan, Brooks-Gunn & Klebanov, 1994:299; Hart & Risley, 2003:4). This is crucial when considering the fundamental variations in language, vocabulary and paralinguistics that the ELL and the monolinguals bring to the Grade 1 classroom and the application of these environments to first time literacy acquisition. The development of the syntactic structures and vocabulary necessary for effective first time literacy acquisition in a mother tongue is a linguistic task of almost incomprehensible importance and complexity. It begins in infancy, is facilitated through exposure, maturation and perceptual and cognitive abilities that focus attention to the critical aspects of language that are necessary for acquisition.

Vocabulary and its mastery are still, however, incomplete in the Grade 1 learner. Having established a sound linguistic foundation, the Grade 1 learner now begins the task of adding vocabulary and attending to the acquisition of literacy, a key and essential development in a literate society. Learners who learn to read early and seamlessly tend to be avid readers and build extensive vocabularies termed the 'Mathew effect' (Stanovich, 1986:360) while the opposite is true for learners who have difficulty in acquiring literacy. As a consequence, learners who experience difficulty with learning to read fail to acquire sufficient content knowledge, vocabulary and other language skills and continue to struggle with literacy and subsequent academic outcomes. Recent statistics from the National Assessment of Educational progress (U.S. Department of Education Institute of Education Sciences National Centre for Education Statistics, November 2003:059) indicate 32 % of fourth grade children in the US performed at or above the proficient level in reading; 37% performed below basic levels; and 31% scored at the basic level.

Beimiller and Slonin (2001:500) estimate vocabulary growth at 2.2 root words a day for children, ages one -seven years of age. Beck, McKeown and Kucan (2002), conclude that the most commonly cited word learning rate is seven new words a day, a figure gleamed as an average from both low

and high ability word learners. Although longitudinal estimates of word learning rates vary, a conservative estimate reveals the enormous number of words that infants and young children acquire.

Variations in home experience greatly affect the growth of learners' language and vocabulary (Hart & Risley, 2003:4). Vocabulary development and language structure are critically important emergent literacy skills that are known to predict later reading competence (Butler, Marsh, Shepard & Shepard, 1985:353). Language use and vocabulary lay the foundation for understanding concepts that are important for comprehending meaning from text (Whitehurst & Lonigan, 1998:849). Language development includes a broad and continued vocabulary development, comprehending of grammatically appropriate phrases and sentences (syntax) and using words to convey meaning (semantics). Parental support or caregiver support of children's language provides scaffolding for later reading competence. In the early years, input from parents is critical and facilitates how children learn about the natural links between objects, performatives (actions) and how to talk about past, current and future experiences (Smith, Landrey & Swank, 2000:147). This rich language environment, shared book reading, play and everyday communication exposes children to a broad spectrum of vocabulary and syntax and semantics. Parental use of rich language input at age three is linked to higher language development at age four and in turn is a predictor of higher reading comprehension skills at age ten (Dietrich, Assel, Swank, Smith, & Landry, 2006:481-494). Weizman and Snow (2001) describe the importance of language input for young children. A foundational and key aspect of input is labelling objects, understanding the links between objects and actions which in turn develops vocabulary and semantic knowledge.

The importance of different learning experiences in supporting the domains of emergent literacy, are described by Whitehurst and Lonigan (1998:353). They posit that children's language competence is highly influenced in the early years by exposure to language in the home environment and in addition phonological skills and alphabet knowledge are highly receptive to experiences found in the pre -K classroom experiences. From birth to six the average age of formal school entry, the monolingual has 2,190 days of rich language input from the environment, be it home and/or pre -K which will support all domains of emergent literacy including vocabulary. Anglin's (1993:58) findings based on a sample of English-speaking monolinguals from wide and varied backgrounds, suggest that between Grades 1 and 5, the average total vocabulary increases from 10,000 to 40,000 words. Dale and O' Rourke (1981:512-538) show that Grade 2 learners know

2,500 root words, rising to 5,000 by Grade 4. Beimiller, (1999:9) suggests that half of these words are known to disadvantaged learners.

Language ability is immensely diversified amongst learners upon formal school entry. It therefore follows that emergent literacy skills including vocabulary skills are equally disparate. Language continues to develop during the elementary school years, so too vocabulary. Vocabulary development attends to and energises comprehension. However the academic gap between monolinguals and ELL's continues to widen during the elementary years. Beimiiler (1999) referred to the gap between advantaged and disadvantaged learners widening during the elementary years.

The challenge of vocabulary for SLL's and more specifically those who enter Grades 1, 2, and 3 with limited, if any, English, is an almost insurmountable task. In sum, the monolingual has a five to six year head start on language development beginning with sensitivity to the mother tongue *in utero* and as a neonate (Moon, Cooper & Fifer, 1993:495; Kamiloff, Kamiloff –Smith, 201:17), differentiation of distinct phonemes, speech sounds sensitising the ear in preparation for reading, naming nouns and performatives, thereby building vocabulary, verbs and syntax strengthening language structure, alliteration and rhyming and most importantly filling in the cultural and contextual background through shared reading and language. Vocabulary is intricately linked to all aspects of language acquisition and literacy. Limited vocabulary levels combined with the HCD create a high risk educational minority, who is isolated by culture and language and is therefore predisposed to unfulfilled educational outcomes.

ELL's are left at the starting gate upon Grade 1 entry, while the monolinguals are five to six laps ahead. It clearly is an overwhelming task for the ELL to acquire sufficient language levels to support the English vocabulary platform necessary to not only acquire literacy but to perform well in both reading and writing. It is estimated that high school graduates need to know 75,000 words in English, in other words, acquiring 10 to 12 words every day between the ages of 2 and 17. ELL's who begin the acquisition process with a five year shortfall are in a word debt of 21,900 words in contrast to their monolingual peers. ELL's, face an enormous but perhaps not insoluble problem of vocabulary acquisition in a compressed time frame. In addition, the exposure or domains which build monolingual's vocabulary learning and therefore emergent literacy skills, such as, multiple exposures to sophisticated vocabulary rich in the syntax and semantic contexts, alliteration, rhyme and phoneme recognition and manipulation are in deficit. What becomes of learners who have a 5 to 6 year handicap and are beset by LEP and more importantly extensive vocabulary deficits while trying to realise literacy?

A cultural and linguistic minority who present with a vocabulary and language deficit are ultimately high risk learners from the outset. With the onset of literacy acquisition in the SL, they experience their first exposure to Beimiller's 'fourth grade slump'. Learning to read insidiously transforms into reading to learn. Casualties in high risk, linguistic minority groups balloon at this time contributing to the 'fourth grade slump' and ultimately negative academic outcomes. It takes ELL's four to seven years to achieve cognitive academic language proficiency (Cummins, 1999). (See 1.5.4 f and 2.6.7).

Table 2.1 diagrammatically represents the magical if not osmotic process of language acquisition, vocabulary and comprehension building and ultimately, literacy acquisition in monolinguals. Conversely, Table 2.2 represents the schismatic and discordant process ELL's face when acquiring first time literacy.

In addition to the fractured and discordant ELL's first time literature acquisition process, Cunningham (2005) argues that "typical text" is not "speech written down". Written and spoken language differs on many levels, therefore supporting the notion that there are many "beginning readers" who may have problems that are specific to reading. Written language for example, makes use of syntactic constructions and vocabulary which may not be familiar to children through their interpersonal communication skills (Cunningham, 2005; Garton & Pratt, 1989).

Although studies in the area of vocabulary knowledge and its relationship to reading are limited, the present data indicates that English vocabulary is a primary determinant of reading comprehension, specifically for English language learners (Garcia & Nagy, 1993). Comprehension of written and spoken language is dependent on knowledge of individual word meanings (McGregor, 2004). In discussing EEL's literacy acquisition, the process of literacy acquisition is buoyed through supportive language scaffolding and becomes high risk when this process is absent. The average five to six year old explodes with excitement and language. The Grade 1 ELL, on the other hand, is embedded in a foreign and paralyzing linguistic, cultural and social, environment, not conducive to successful literacy acquisition. Table 2.1 and 2.2 portray the diametrically opposed trajectories the ELL and monolinguals are on when acquiring literacy for the first time.

Table 2.1 A pyramidal representation of the literacy acquisition process in monolinguals

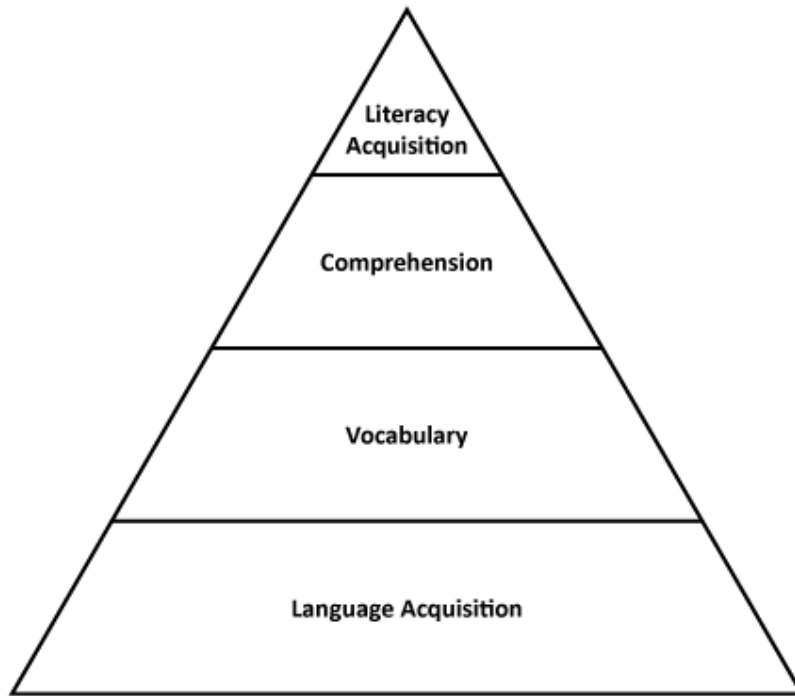
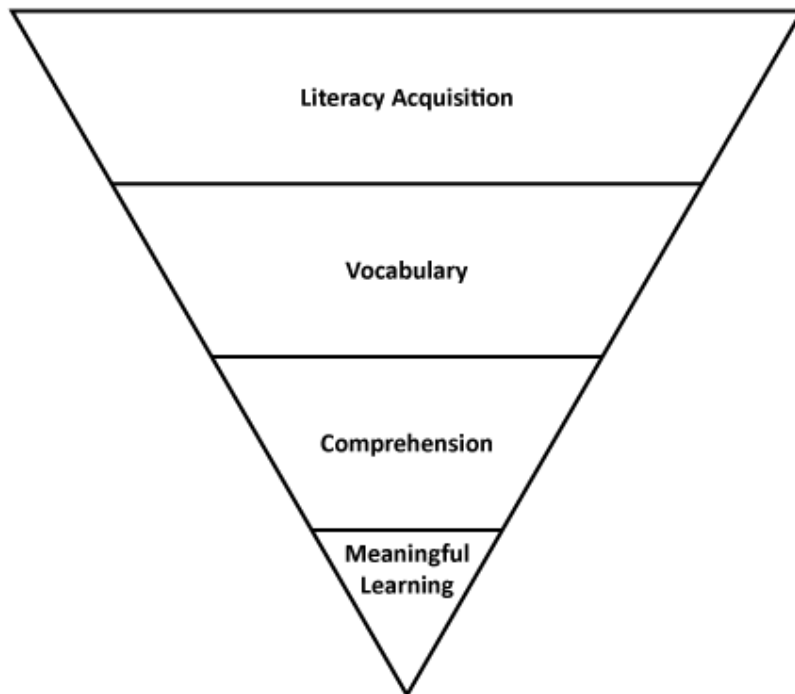


Table 2.2 A pyramidal representation of the literacy acquisition process of the ELL



The typical five year old talks constantly and will talk to anyone, while the six year old uses language aggressively; calls names, threatens, contradicts, argues and constantly asks questions (Gesell, Illg & Ames,1946:425). Birth to six years adequately provides the experience and practice for developing all the scaffolding necessary for seamless literacy acquisition. In contrast, The ELL entering the formal classroom will need to adjust to an entirely foreign social, cultural and linguistic environment. In addition, the process of language acquisition for the ELL begins upon entry to the classroom as opposed to the monolingual whose language acquisition process begins at birth. The ELL begins the inordinate process of SL acquisition in a social and culturally dissonant environment, while simultaneously acquiring literacy in a language that is not known or understood. The ELL immersed in a cultural and social enigma acquires language and literacy simultaneously, unlike the monolingual who acquires language and literacy sequentially while immersed in cultural harmony.

In order to substantiate the aforementioned, it is necessary to elaborate on the ELL and the attendant linguistic stages and deficits encountered at school entry. The ELL begins his formal school entry, with what is termed the non verbal or silent period (See.2.6.1). At this time, the ELL begins the overwhelming task of naming, and trying to create order in an extremely foreign environment. Receptive vocabulary is built during the non verbal or silent period, which may last for many months (Tabors, 2006:39). Production at this time, if any, is limited to parroting. Garnica (1983:241) refers to children in the silent period as omega children; ignored by their peers and socially ineffective during social interaction. Garnica goes on to describe the omega children as follows:

The emerging picture of the omega child seems to be one of a verbally neglected individual. Hardly any of the children appear intentionally to engage the omega child in conversations and the omega child only infrequently initiates verbal exchanges with other children.....in the light of these circumstances the omega child appears totally unrepresented in verbal activity

For the ELL it is a time of 'spectating', gathering data, and rehearsing through gesticulation. It is not within the parameters of this research to explore the obvious emotional disconnect incurred at this time. However it is pertinent to recall Krashen's Affective filter (See2.5.1.1) when considering the impact of simultaneous SLL and literacy acquisition. Once the SLL feels secure and sufficiently competent in the SL, usually with a receptive vocabulary in the region of 500 words they are able to go public with their newly acquired skills. Garnica goes on to posit that communicative incompetence may be a contributing factor in how the omega children are treated by their peers. Once the ELL begins to verbalise their newly acquired linguistic prowess, two consistent features are noted: the use of telegraphic and formulaic speech (Wong & Fillmore, 1979:204). In monolinguals

this is consistent with the linguistic development of an 18 month old toddler, usually using a noun, verb and a modifier (Wood, 1981:142).

When ELL sufficient vocabulary is acquired, ELL's are able to begin the process of productive language use: building their own sentences and not continuing to repeat formulaic phrases or names of objects, people and places. At this time that the ELL begins to analyse the SL with the view to constructing language and moving into the productive stage (see 2.6.3), a task perfected by the average three year old monolingual. This sequence once again demonstrates the overwhelming task the ELL faces upon formal school entry. Once vocabulary and the grammatical form are sufficiently developed, the ELL's may begin to express themselves in highly sophisticated ways. Suffice to say, the ELL will spend the first few months of formal school entry attending to language acquisition supported by vocabulary and subsequently, comprehension. The gap or time framework deficit moves beyond the first six years, eroding into the first and possibly the second school year, adding yet another 1,020 word deficit per year for the ELL, creating a total word deficit of 22,940 words. Cummins (1999) spoke of the four years to acquire CALP (see 2.6.7). Given that vocabulary is a key predictor and therefore pivotal to reading outcomes, the consequences of ELL, limited vocabulary and limited comprehension while acquiring first time literacy creates consequences which ultimately affect positive learning outcomes. The subsequent ripple effects, such as, negativity, loss of self esteem, confidence, motivation and ultimately academic failure affect both learner and society adversely. The relationship between vocabulary and comprehension is intricately linked and complex (Roth, Speece & Cooper, 2002:261). Vocabulary is dependent on quality and quantity of exposure to establish breadth and understanding or deepness of meaning to establish depth, drawing on word knowledge, domain knowledge and experience to establish an index depth. Comprehension is dependent on vocabulary development, cognitive efficiency, context, culture, experience and leads to meaningful learning which is dependent on both vocabulary and comprehension. Positive academic outcomes are dependent on learning to read and reading to learn.

2.12 Conclusion

The purpose of this chapter was to provide a review of the literature dealing with the areas of globalisation, inclusion and culture and how they pertain to first time literacy acquisition in ELL's of immigrant parents. In addition, a review of historic and modern SLA formed a platform for the subsequent comparative discussion on monolinguals and ELL's. It sought to create a broad referential framework between monolinguals, ELL's, SLA with the incumbent language structure and vocabulary levels. The affective component of language acquisition was mentioned but not elaborated upon. Comprehension and attribution of meaning and their critical link to learning and successful academic outcomes will be addressed in the following chapter.

CHAPTER 3

MEANING THE ESSENCE OF COMPREHENSION AND THE ULTIMATE REALISATION OF LITERACY

We read to understand, or to begin to understand.

(Manguel, 1997, cited in Cane & Oakhill 2007)

3.1 Introduction

Chapter two provided the background pertaining to visible minorities, high risk learners and more specifically identified a profile for young learners who possibly manifest a HCD. The various implications of globalisation, inclusion, first and second language acquisition from both the cultural and social perspectives and more specific to this study, the routes to fluency and literacy for both monolinguals and ELL learners were explored.

This chapter focuses on a discussion and exposition of meaning, its relation to comprehension and the complex layering of both meaning and comprehension relative to word recognition, vocabulary, language structure, language proficiency, context, background, and domain knowledge. The discussion elaborates on socialisation and culture which were introduced and amplified in chapter two (See 2.2.3). However, cultural and social influences are readdressed in this chapter as they pertain to and influence discourse, identity, meaning and learning. The discussion begins with comprehension, how it is understood and its relevance to meaning, which will lead to an exposition of language proficiency and its role in comprehending the written text, and how this can impact learning and academic success.

This discussion directs the research towards highlighting the factors that facilitate and exacerbate the HCD and thus raise an awareness of the Grade 1, 2 and 3 learners with a HCD. The ensuing insights are aimed at enhancing understanding of the learners' academic needs, which will further curriculum planners and teachers' opportunities to address these needs. Knowing what a learner knows and in what language is necessary before any informed curriculum or program decisions can be made (Munoz, Sandoval, Cummins, Alvarado, & Ruef, 1998).

Comprehension is not unlike first language and second language acquisition, in that it too is hierarchical and, develops along a continuum which is supported by time, quality and length of

exposure. However, unlike first and second language acquisition, it is also dependent on language proficiency on many levels inclusive of and not limited to vocabulary and language structure (see 2.11) which support continued development. Comprehension, that is the construction of a representation corresponding to the state of affairs described in the text, a mental model (Kintsch, 1998 cited in Cain & Oakhill 2007:xi) is the ultimate aim of literacy and a vital pre requisite for academic success. Comprehension facilitates effective communication, acquisition of new knowledge and successful academic outcomes for the learner (Cain & Oakhill, 2007: xi).

In this section, an overview of relevant and current research on comprehension is reviewed. An insight into meaning, its relation to comprehension and learning, its intricate tryst with language and the multifaceted and complex “strands” (Scarborough, cited in Neumann & Dickenson, 2003:98).

Which, ultimately induce comprehension and thus learning is previewed.

Skilled readers derive meaning from printed text accurately and efficiently coordinating the numerous strands or skills available to them. Concurring with Whitehurst and Lonigan’s theory (see 2.9.4) that literacy consists of two distinct domains: inside - out skills outside - in skills (Whitehurst & Lonigan, 1998:14-15), Scarborough draws the distinction between individual word recognition and decoding, and comprehension. These skills are explored in this chapter, with reference to Scarborough’s term strands used in its broadest sense. The strands, in addition to meaning, vocabulary, language structure, language proficiency, background and domain knowledge, discourse and its social languages and identity reference, reading and code cracking and how they ‘weave together’ facilitating skilled comprehension inform this chapter.

3.2 Comprehension and meaning

The meaning of comprehension is a complex layering of explanations and definitions. It is the intention of this section to expound the multifaceted and complex term, comprehension. Harris and Hodges (1995, cited in Snowball, Bolton, Harvey et al., 2005:1) proposed comprehension to be “intentional thinking” during reading. The RAND Reading Study Group Report (2002:11) refers to comprehension as the process of simultaneously extracting and constructing meaning while interacting with written text. A more comprehensive definition is posited by Kucer (2001, cited in Pardo,2004:272). He states that comprehension is a process whereby readers construct meaning through interaction with text utilizing a combination of previous experience, information drawn from the text and the stance the reader takes in relation to the text. Meaning, the attribution of purpose or significance to events, objects and people by an individual, (Aardweg & Aardweg,

1999:146) is the essence of comprehension. This is the focus of this chapter as both comprehension and meaning pertain to the reading and extracting meaning from text.

ELL readers in Grades 1, 2 and 3 with limited vocabulary, who are able to decode without the meaning or understanding of what it is they are decoding are not reading in its fullest sense; they are decoding and not necessarily able to extract the essence of meaning from the decoded words or text, therefore masking a HCD. Meaning in its literal sense and applied as a noun is defined as “what is meant” (Oxford dictionary, 2007:357). In the linguistic sense, it is defined as “what a language expresses about the world we live in or any possible imaginary world” (Richards, Platt & Platt, 1999:223). Richards, et al., (1999) goes on to state that the study of meaning is called semantics and is usually associated with the analyses of the meanings of words, sentences and texts. Meaning relative to comprehension is discussed in terms of what is meant by the decoded word. Learners with LEP have the intelligence to function in regular classrooms but are limited by their language proficiency skills and therefore have difficulties with meaning and understanding of the requirements of the classroom. More importantly however, reading for meaning and the construction of meaning from written text in a SL is more difficult, less motivating, less authentic and in the case of the LEP learner acquiring first time literacy, almost impossible. In addition, it carries with it the risk of long term reading problems (Snow et al., 1998) with the attendant academic challenges (See 2.9.2). If learners are to conceptualize that reading is about retrieving and constructing meaning, learning to read in a language in which they do not have proficiency and cannot access meaning or what is meant is inherently risky (Tabors & Snow in Neuman & Dickenson, 2003:174). In order for learners to become proficient readers, that is efficient decoders and meaning retrievers, they require accessible texts, which are meaningful and pleasurable.

More explicitly, texts that are linked to and relative to the learner’s expressive and receptive vocabulary levels are fundamental, thereby becoming instrumental in the retrieval process of relevant meaning from the text. Learners are unlikely to continue reading texts that they do not understand, are not linked to vocabulary proficiency and from which they are unable to extract meaning and pleasure. Continued and constant reading practice is what facilitates and drives reading fluency and in turn, the development of vocabulary (the ‘Mathew effect’ by Stanovich, 1986 cited in Cain & Oakhill, 2007:67) and ultimately knowledge. Learners, who extract little or no meaning from text read, are unlikely to participate in reading activities that promote either fluency or vocabulary building, both of which are critical for the Grade 1, 2 and 3 learners, where mastery of vocabulary is still incomplete.

ELL's may well be aware that their monolingual peers are more able in the classroom and begin to feel isolated, find fault with their abilities and in so doing damage their self esteem, confidence and further detract from their innate ability for successful literacy acquisition. Erosion of the affective balance required for SL acquisition and literacy speaks to Krashen's affective filter hypothesis, associated with his monitor model (See 2.5.1.1). The research indicates that SL acquisition requires comprehensible input and supportive affective filters for the L2 learner to succeed in the target language (Krashen & Terrel, 1983 cited in Morrow and Gambrel in Neuman & Dickenson, 2003:348). They go on to elaborate on comprehensible input as having meaning that is interesting to the learner and consists of language that is just beyond the learner's current level. Proficient and functional literacy at every stage and level of literacy acquisition provides a critical foundation for learner's academic success. Learners who read well, read more and as a result acquire more knowledge in numerous domains (Cunningham & Stanovich, 1998:934).

3.2.1 Decoding, code cracking and meaning

The relationship between the learner's language development and literacy is becoming more apparent and in particular, current research reveals the importance between the learner's phonological development and language (Goswami cited in Neumann & Dickenson, 2003:111). The learner's ability to rhyme, recognize and categorize various phonological units in spoken words, relating them to known vocabulary and finally to text is one of the many complex skills related to literacy and ultimately extracting meaning from what is decoded or read (See 2.9.4.). Toward this end, the text needs to be manageable in terms of content, vocabulary and sentence structure with few new words spaced intermittently throughout the passage to retain comprehension (Adams, in Neuman & Dickenson, 2007:77).

Word identification is important in predicting comprehension as are word meanings and grammatical knowledge (Muter et al., 2004:667). Muter elaborates on the need to distinguish word recognition skills from comprehension skills, as comprehension skills pertain to varying, complex underlying language skills. For the purposes of this study, word recognition skills /decoding and comprehension skills are identified and separated with comprehension based on language proficiency being the specific focus. It is however, necessary to mention but not explore decoding and word recognition within the comprehension process. Word recognition or decoding, is the beginning (inside – out) of a complex process the young learner embarks upon towards extracting meaning and ultimately, comprehension of a word and subsequently the written text. Meaningful

comprehension of all but the simplest of writing depends on knowledge that cannot be found in the word or sentence itself (Whitehurst & Lonigan in Neuman & Dickenson, 2003:14). Context is a requirement for the extraction of meaning and is underpinned by outside – in information which involves knowledge of the world, semantic knowledge and knowledge of written context in order to extracting meaning from the written text. Both the outside- in skills and inside- out skills work hand in hand and are essential for successful reading.

Oral language or linguistic proficiency as discussed in 2.9 is a strong predictor of not only reading but also reading comprehension, when considered in relation to both word recognition and decoding (Catts, et al., 1999:331). It is an essential tool for further progress. Tabors, Snow and Dickenson (2001:313) concur with Catts, et al. and found consistent and sound correlation between oral language, vocabulary levels in the home language and reading comprehension. Receptive vocabulary specifically was a strong predictor of reading comprehension (Tabors, et al., 2001:313). Decoding, word recognition and phonological awareness, skills that are acquired during the pre- school years, have been identified as robust predictors of later reading skills. Decoding has the opaque beginnings of extracting meaning from written text and underpins the additional comprehension skills or strands needed for extracting what it means from the written text.

The ELL learner acquiring first time literacy in grades 1 to 3 is challenged not only to master the decoding process, but also to attribute and extract meaning from the decoded text. Limited vocabulary levels, limited English proficiency and the inextricable link to a society and culture as discussed in 2.2.3 that is not mirrored in the classroom or the text are additional deficits which support the development of the posited HCD.

The following section details the complex layering of meaning and comprehension based on the strands as referenced in the introduction: vocabulary levels, meaning and language structure, discourse and identity.

3.2.2 Comprehension: vocabulary and meaning

Chapter two (see 2.11), explores vocabulary, its acquisition and how it relates to the monolingual and ELL and their quest for first time literacy. This section explores comprehension, its relationship to word meaning, meaning in the context of text comprehension, and how both vocabulary and meaning relate to language proficiency, functional literacy and first time literacy acquisition in the ELL.

Language encompasses both meaning and comprehension, in that it is a communication system used to express thoughts through a set of conventional arbitrary symbols used to derive certain rules to determine meaning (Titone & Danesi, cited in Landsberg, Dednam, & Nel, 1999:44). In section 3.2, meaning was described as the attribution of purpose or significance to events, objects and people. Similarly vocabulary development can be described as attributing significance or purpose to objects or events by naming the object, event or person. Young learners begin to label or name the salient parts of their world, beginning with the people who are their caregivers. Applying arbitrary symbols to objects and /or persons and events evince the beginnings of vocabulary development. The earliest beginnings of word knowledge, meaning and vocabulary development, is when the child attaches meaning to objects, people or events. The question then arises, what does it mean to know the meaning of a word and how do we quantify this knowledge?

Research has traditionally conceptualized word knowledge or meaning of a word in various ways ranging from, but not limited to dimensional word knowledge, stage like word knowledge, continuum based word knowledge and partial and comprehensive word knowledge (Wagner, Muse & Tannenbaum, 2007:8). Beck, et al. (2002 cited in Wagner, et al., 2007:8), however, posits that true word knowledge or meaning cannot be measured so simplistically. Pythian - Sence and Wagner (in Wagner, et al., 2007:11) conclude that word knowledge or meaning is not adequately represented by a “dichotomous indication” of whether or not a learner can reproduce an adequate dictionary definition of the word. Equally, the term word knowledge or meaning beyond the dictionary definition is not clear and a clarification of this term is called for from future vocabulary researchers. For the purposes of this section, the term word knowledge, meaning and or vocabulary will be limited to the recognition and generalised meaning of the word, from both the decoding and word recognition and meaning perspectives.

Meaning is a critical and essential component in Ausubel’s concept of Propositional Representational Equivalence, where arbitrary symbols are equated in meaning with their referents such as the naming of objects (see 2.11). For example, the proposition is the verbal label, ‘dog’; the equivalent would be the object the actual dog and the equivalent would be the symbol /d/o/g/, utilizing the verbal, visual and mental activities of the learner to facilitate the process of attributing meaning to the oral equivalent of the referent, from concrete to abstract. Vocabulary is initially receptive where auditory or visual stimuli are ordered into meaningful units. Learners create their own life world or “world of meaning” by assigning verbal and or written arbitrary symbols to objects, people and

events (Kokot, 1994:149), thereby acquiring the building blocks and vocabulary for later language proficiency and ultimately reading for meaning.

The equating of meaning to arbitrary symbols and their referents signifies, the beginnings of language, as vocabulary develops and major cognitive changes take place as the developing oral system connects to the cognitive system (Wolf, 2007:84). Both semantic knowledge, the meaning of words and text and syntactic knowledge, the understanding of the grammatical structure of language, serve as cues for the construction of meaning from the text (Cain & Oakhill, 2007:11). Semantic knowledge and syntactic knowledge are both underpinned by meaning and vocabulary, vocabulary being one of the best causal predictors of written text comprehension (Roth, et al., 2002:260).

Vocabulary is discussed in terms of depth and breadth (Beck, McKeown & Kucon, 2002). (See 2.11). Comprehension, in other words the extraction of meaning, is explored as the ultimate aim of reading and listening. The importance of vocabulary or word knowledge for extracting meaning from written text (comprehension) is one of the fundamental findings in education and is evidenced in correlation studies, readability research and experimental studies (Stahl, 1998:33). Tabors, Snow & Dickinson, (2001:318) propose a strong relationship between receptive vocabulary and later comprehension skills. On the other hand, Devine (1998:136) and Beimiller (2003) posit that SL proficiency places a 'ceiling' on extracting meaning from written text or reading comprehension. To succeed at reading, (see 1.5.5) a learner must be able to identify or read the printed word in order to understand the meaning of the word or text and as a prerequisite would require the necessary language proficiency to both identify the word and to induce the meaning of the word. The combined skill of the reading of the word or text and extracting meaning from the word or text are critical to reading success, more specifically, the ability to procure information, to experience and become acquainted with other worlds, to learn and to communicate effectively. Reading for meaning (comprehension) is the ability to deduce comprehensive understanding and extract meaning from the text as opposed to an understanding of individual words or sentences in isolation.

When comprehension is incomplete upon reading a text, that is, when the meaning of a sufficient number of words within the text is not known, background knowledge and /or domain knowledge may not be sufficient to interpret the text. Comprehension failure or failure to extract meaning from the text can be as simplistic as the reader is not being able to ascertain the main idea in a text, due to disparate vocabulary levels between reader and the text. A major determinant of reading

comprehension is vocabulary. Cunningham and Stanovich (1997:934) found that vocabulary assessed in the first grade predicted more than 30 % of reading comprehension variance in the eleventh grade. ELL in the English classroom are faced with the daunting task of learning to understand or extract meaning from a SL, in this instance English and acquire the SL, while simultaneously acquiring first time literacy in the SL with limited if any, word knowledge.

ELL are able to develop accurate and fluent word reading or decoding abilities as evidenced on various word reading analyses masking the CD. Decoding or 'cracking the code' is in essence learning by rote and detracts from and obscures the HCD. As text passages become more complex, vocabulary levels limit meaning creating a phenomenon that Hakuta et al., (2000) termed the "white space", as comprehension and meaning diminish and the gap between meaning and decoding becomes greater. Equally this is evidenced in the HCD when the ELL is requested to recall the information as was expected in the reading analysis of this research. Freebody and Luke (1990:7) refer to readers as "code breakers, meaning makers and text critics". When reader's vocabulary and ability to extract meaning from the text prohibit them from becoming 'readers' (see 1.5.5), the reading exercise becomes meaningless, thereby placing the ELL at risk, both academically and emotionally. Language skills, such as vocabulary development and literacy acquisition skills are, still developing and require opportunities to be practiced and consolidated if both language and reading are to become fluent and pleasurable. Successful literacy acquisition is dependent upon extracting meaning from the text, utilizing the decoding skills, an extensive vocabulary, language structure and both background and domain knowledge.

We have made enormous progress over the last 25 years in understanding how to teach aspects of reading. We know about the role of phonological awareness in cracking alphabetic code, the value of explicit instruction in sound-letter relationships, and the importance of reading practice in producing fluency....The fruits of that progress will be lost unless we also attend to issues of comprehension. Comprehension is, after all the point of reading (Sweet & Snow, 2003: xxii).

In comparison with their monolingual peers, ELL's language proficiency deficit inhibits classroom participation and limits, if not depletes the pleasure gleamed from reading, while providing a fertile environment for the development of the HCD, which comprises a 'ceiling' on reading success and positive academic achievement. The vocabulary deficit in the ELL resulting in the inability to extract meaning from text can be compared to the dyslexic learner, who experiencing difficulties extracting relative equivalency' from the written symbol and disabling reading. Learners who exhibit reading skill deficits, both decoding and comprehension, receive less practice in reading than fluent

readers(Allington,1984).They are not exposed to positive reading experiences that facilitate comprehension strategy development (Brown, Palinscar & Purcell, 1986). Vocabulary levels that do not compliment the text, a HCD and a LEP place the text read beyond the language and reading skills of the learner resulting in negative attitudes toward reading itself (Oka & Paris, 1987). This scenario represents what Stanovich (1986) terms the ‘Mathew effect’, where the rich get richer and poor get poorer, leaving the LEP learners to fall further and further behind their monolingual peers and in other academic fields(Chall, Jacobs & Baldwin, 1990). Whitehurst and Lonigan (2003) concur, based on a broad body of research evidence that indicates that learning to read is linked to the “foundation skills of phonological processing, print awareness and oral language”.

Deficits in vocabulary and language proficiency relate to and support difficulties in extracting word meaning and meaning from the context of text comprehension in the ELL. These deficits impair the learner on the social, academic and emotional level, thus further limiting the chances of first time literacy acquisition and ultimately functional literacy in these vulnerable young learners. The ELL in Grades 1 to 3, with a limited vocabulary and language proficiency and who has difficulty in extracting meaning from words and latent text comprehension deficits support the development of the HCD posited in ELL’s acquiring first time literacy.

Related to and dependent upon the vocabulary and code cracking strands that influence meaning is language structure and language proficiency. These are explored in the following section.

3.2.3 Comprehension, language structure and meaning

With regard to language, the terms language structure and syntax are defined as the “study of how words combine to form sentences and the rules which govern the formation of sentences” (Richards, Platt & Platt, 1999:371).This definition will be referred to in the context of this study and in this section, their relationship to meaning and comprehension.

Language structure plays a role in comprehension. Skilled readers use syntactic information unconsciously to create a more efficient reading process, for example, by targeting rich information items in the text (Rayner & Pollatsek,1989).This is reinforced by Grabe (1991:375) who indicates evidence that language structure plays a role in reading and therefore understanding in a SL. Furthermore, word order variation, relative clause formation, complex noun phrases and other complex structural differences between languages can mislead the ELL when reading, specifically in the early stages. Bernhardt (1987:35) found that information rich items differ from language to

language. Thus, this method when used to read in a SL can lead to inefficient focusing habits which may cause a disruption of fluency, hindering comprehension. However, Cain and Oakhill (2007:20) conclude that syntactic skills play a lesser role than vocabulary does in comprehension development. However, they (2000:20) state that relations between phonological and working memory skills may mediate the role between syntactic skills and comprehension. The references aforementioned pertain to typically developing monolinguals.

Language structure and meaning as it pertains to the ELL acquiring first time literacy and first time SL acquisition is the focus of this concluding paragraph. Considering the ELL and the relevant stage of second language acquisition (see 2.6), more specifically the first two stages (non verbal and the early productive stage), it becomes apparent that the ELL's language structure during first time literacy acquisition is in deficit when compared to the typical monolingual in Grades 1, 2 and 3. Traditionally, it was thought that a typical learner's semantic development was complete by the age of five years. More recent research suggests that syntax continues to develop beyond five years although far more subtly (Cain & Oakhill, 2007:14). It can therefore be stated that a substantial syntactical knowledge exists in the average five year old but not that of the ELL of similar age. Considering that both vocabulary and syntactical skills inform meaning, one can conclude that the ELL extracts limited meaning from both the classroom environment and texts read. This inability to attain meaning is supported by the comparison of the monolingual and the SLL at grade 1 entry. The SLL when entering the Grade 1 classroom is at the early productive stage (See 2.6.2) of SL acquisition. The early productive stage can be equated with and related to the typical eighteen- month old toddler whose production is mostly telegraphic and formulaic at this time.

With the emergence of naming or vocabulary development, morphological awareness and semantic development or the ability to string words together in a grammatically correct and rule based manner becomes apparent. Sentences are formed deploying the rule based patterns, usually consisting of a subject, verb, and object. There are no rules relating to word combination, but there are fixed rules relating to syntactical patterns which give meaning to the sentence. Both the growth of vocabulary and syntactic knowledge contribute to an ever increasing understanding of the meaning of words which fuels the engine of all language growth (Wolf, 2007:84). The grammatical relationship within language allows the development of an understanding of the more complex sentences found in text books or early readers. This knowledge allows the learner to comprehend how word order alters meaning. For example "The cat bit the dog" differs from "The dog bit the cat". Written text consists of a number of connected sentences and it is therefore not unexpected that

learners with text comprehension difficulties have poor syntactic knowledge (Nation & Snowling 1999:81). Variation in syntactical structure and vocabulary from home to classroom to text may further complicate the understanding of reading (Cunningham, 2005:48; Garton & Pratt, 1998).

The ELL learner acquiring first time literacy presents with inherently poor syntactic structures supported by limited vocabulary both supporting the posited development of the HCD present in the ELL learner acquiring first time literacy while simultaneously acquiring a SL.

Dependent on and resultant from vocabulary development, morphological awareness and syntactical development is language proficiency. The discussion now turns to language proficiency and how it affects meaning.

3.2.4 Comprehension, language proficiency and meaning

Language proficiency is defined as a person's skill in using a language for a specific purpose (Richards, *et al.* 1999:204). In the context of this study, the language proficiency of the learners is referred to as being of limited scope and the term LEP as detailed in key terms and concepts (see 1.5.1) is used when referring to the learner's proficiency in English.

Cummin's (1981) precedent setting research explored BICS and CALP (see 2.6.6 and 2.6.7 respectively) stating that it can take up to ten years for a learner to become fully proficient in English, that is fully competitive in the academic use of English when compared to their age equivalent English speaking peers. Hirsch (2003:12) posits three principles that subsume a number of others that have useful implications for learners' reading comprehension and ultimately learning. The principles are all founded within the broad term language proficiency.

- Fluency allows the mind to concentrate on comprehension
- Breadth and depth of vocabulary increases comprehension and facilitates further learning;
and
- Domain knowledge, the most recently understood principle, increases fluency, broadens vocabulary and enables deeper comprehension.

Fluency or proficiency is dependent on the length and breadth of vocabulary (see 2.11) and domain knowledge. Comprehension or extracting meaning from text is dependent on fluency and the attendant vocabulary, syntax and domain knowledge.

- Fluency is defined by Richards and Platt (1999) as “the features which give speech the qualities of being natural and normal, including native like use of pausing, rhythm, intonation” They(1999:141)go on to say, that “I[i]n second language teaching fluency describes a level of proficiency in communication, which includes:
 - The ability to produce spoken language with ease
 - The ability to speak with a good but not necessarily perfect command of intonation, vocabulary and grammar (syntax or structure) etc.”

On the other hand, language proficiency is described as “a person’s skill in using a language for a specific purpose” (Richards & Platt, 199:204). Both fluency and proficiency speak to the learners’ ability to extract meaning from both verbal and written communication and this forms the focus of this section. Vocabulary and grammar mentioned above do not fall within the parameters of this section but have been explored in 3.2.2 and 3.2.3. Both vocabulary and grammar are relative to and critical in the development of language proficiency.

Ludwig Wittgenstein emphasised the necessity of language proficiency when he wrote “The limits of my language means the limits of my world” as one of the propositions in *Tractus Logico Philosophicus*. The ELLs’ world is defined initially by their first language and then the second language as they gradually become more proficient in the second language. Bilingualism is an add-on and a broadening of the learner’s world view. However the ELL’s acquiring first time literacy begins to define the classroom, the text books and social experiences with a limited language proficiency in the SL, thereby limiting the continued and natural process of the defining of their world as it pertains to literacy acquisition and the social norms of the English-speaking classroom. Language proficiency is critical to literacy acquisition for both decoding and comprehension. In addition, a cultural compatibility with the classroom and family, fostering and supporting background knowledge, domain knowledge and ultimately a *sympatico* worldview enhances language proficiency and therefore literacy acquisition. The paucity of English proficiency, both verbal and contextual, that the ELL brings to Grade 1 entry exacerbates the vulnerability of this linguistic minority group, elevating the risk exposure for negative academic outcomes. Language proficiency as determined through standardized proficiency tests, such as the Idea Proficiency Test (IPT) is a fundamental requirement for literacy acquisition and adequate comprehension of written text. Meaning and comprehension are in themselves reliant and dependent on language proficiency as is learning. Cane and Oakhill (2004:155) substantiate the aforementioned. They found that a number of higher- order discourse

skills likely contribute to the development of reading comprehension skills, including inference and understanding of text structure.

Contextual knowledge, background knowledge and topic or domain knowledge are comprehension strands, which are instrumental and crucial tools for the Grade 1 to 3 learner when, extracting meaning from written text and obtaining complete comprehension. In this regard, they are discussed in the subsequent section.

3.2.5 Comprehension, context, background knowledge, domain knowledge and meaning

Learners emerge from varied backgrounds, cultures and social domains which influence perceptions, construction of meaning and understanding pertaining to their surroundings. Individual perspectives are constructed to induce meaning, based on the world and coloured by the world around them, a notion based on Piaget's theories of cognitive development (Hakuta, 2001:87). Learners vary in Knowledge, domain knowledge, cognitive development, skills, socialization, culture, bias and the purpose they bring to reading (Narvaez, 2002). Hirsch (2003:17) posited "if we do not know the domain, (topic) we can't construct a meaningful mental model of what is being read". Hirsch goes on to state that more than vocabulary is needed to understand the text and that in order to make constructive use of vocabulary, a "threshold level of domain knowledge" is needed.

Viable comprehension is the construction of a representation corresponding to the written text described by Johnson - Laird (1986) and Gernsbacher (1990) as the mental model, which requires the formation of meaning based representation to be drawn from the text and more recently by Kintsch(1998), as the situational model. As the name situation model suggests, it accounts for causal relationships between events, characters and spatial and temporal information pertaining to the narrative (Zaan & Radvansky, 1998:162).Anderson and Freebody (1981:73) similarly advanced the knowledge hypothesis: essentially word meanings themselves do not cause understanding of written text, rather an understanding of words reflects a knowledge of the topic and it is this knowledge that supports comprehension. The Knowledge hypothesis states that vocabulary knowledge is linked to topic knowledge, which in turn is linked to reading comprehension.

The National Reading panel (NRP) (2000:4.39) elaborates and builds on developments in comprehension research.

Reading comprehension was not seen as a passive, receptive process but came to be seen as intentional thinking during which meaning is constructed through interactions with text and reader (Durkin, 1993).

According to this view, “a reader reads a text to understand what is read, to construct memory representations of what is understood, and to put this understanding to use” (NRP 2000:4.39). The drawing of background knowledge, that is, domain knowledge, together with vocabulary and language structure becomes integral to comprehending text. Limited word knowledge (vocabulary), domain knowledge and background knowledge as manifested in the ELL, impede reading comprehension specifically for the ELL or LEP (Hakuta, Butler & DeWitt, 2000).

3.2.6 Comprehension, discourse, identity and meaning

Discourse, always involves language. Furthermore, social languages are embedded within discourse and express relevance, identity and meaning (Neuman & Dickenson, 2007:32). Gee (1996,1999) refers to social languages whilst Halliday (1996) refers to registers as the most common terms used to describe the varieties of social language. Social languages are associated with specific identities, socially situated activities essentially reflecting and constructing the who and what and therefore meaning of language (Weider & Pratt, 1990:45). On the other hand, discourse is described as various ways of speaking, listening, acting, interacting, believing, valuing, symbols, images and tools, all in the service of producing meaning. Discourse then is intricately linked to language and ways of combining words, values, thoughts, deeds objects and tools enabling the learner to recognize specific socially situated identities and activities. Social languages are not innate; they are a product of history and culture, are learned over time as is literacy.

Discourse and the embedded social languages or registers (combinations of ways with words that have become routine within a discourse) and cultural models all influence relevance and meaning. Discourse within the English speaking classroom is an additional challenge to meaning for the ELL acquiring first time literacy. Consider the many idioms in the English language. The ELL’s FL and FL discourse is culturally rooted in the home language with the attendant social language or registers embedded within that discourse. The language and discourse in the classroom too are culturally rooted; however, they are not aligned with the home language and discourse which takes place in the home (Gee cited in Neuman & Dickenson, 2007:41). In order to extricate meaning from the classroom activities, the teaching process and literacy acquisition, the ELL is faced with the added challenge of identifying and extracting meaning from social registers in a language that is unfamiliar and a culture that is unfamiliar.

The next section continues to focus on learners who learn to read at school in a second or third language, which is different from the language spoken at home. The study converges on a visible minority group (identified 1.1) who present with limited language proficiency, a marked ability in decoding which masks a HCD that ultimately inhibits the full realisation of literacy acquisition and reading for meaning. Subsequently the learners' ability to learn efficiently and effectively is dampened. The goal of literacy acquisition is to facilitate the learners' ability to engage with a wide range of texts and to use their literacy skills to enhance their understanding and enjoyment of the world and their capacity for action (Hudelson, 1994:129) and academic goals.

3.3 Comprehension: language proficiency, functional literacy and learning

Having overviewed comprehension and meaning in the aforementioned sections, reading and the importance of extracting meaning from the text is discussed. Reading entails the process of constructing meaning from a written text (Day & Brumfit, 1998:12). Mattingly (1972) proposed that "reading is parasitic on speech" (1972:397). In a broad sense "reading is parasitic to language" (Snowling & Hulme, 2005:397). More specifically, speech, vocabulary development, language structure, semantics, emergent literacy, literacy and ultimately learning are interlinked and dependent on a symbiotic relationship, fed by and dependent on each prerequisite skill. (Reading in this discussion continues to make the distinction between decoding or RAN/PA skills and comprehension, the adequacy with which text is understood). The notion that the innate sequence of language acquisition can be re arranged or more precisely upended as is expected of the ELL acquiring first time literacy, does not come without risk and possible negative academic outcomes, both in the short and long term. This is indicated by the overrepresentation of language minority learners among those learners underachieving academically (Hakuta, 2001:53). Hakuta et al.'s (2000) 'white space' (see 3.2.2) continues to manifest and is marked by grade 5, causing considerable concern. The 'white Space', and over representation of ELL's underachieving academically illustrates the daunting task facing ELL learners. In addition, the negative outcomes for learners who not only have to acquire oral and academic English proficiency but simultaneously acquire first time literacy in a second language. Compounding the inordinate task of literacy acquisition in a second language, ELL's are expected to keep pace with their English -speaking peers in content learning subjects, such as Mathematics.

Literacy is dependent on language proficiency. Learning is dependent on but not limited to both language proficiency, extracting relevant meaning and functional literacy. The next section explores the relationship both language and reading with learning and positive academic outcomes.

3.4 Comprehension and meaning relative to academic success

The term reading comprehension has several definitions. Most experts agree that reading comprehension is the meaning gained from words written in a text; the source of the meaning is not as clearly defined. The most common models of comprehension are the bottom- up, top- down and interactive models (Shanker & Ekwall, 1989:153). The top- down model, requires the reader to be concept driven, suggesting that the reader has some prior knowledge or shema (construct) about what is being read. This concurs with Ausubel's meaningful learning model. Vocabulary is fundamental, while language structure, background knowledge and culture build a workable framework built on existing schema to extract and secure new knowledge or meaning. Using prior knowledge, the reader makes predictions to facilitate comprehension of the text. Two main factors affect comprehension. The first factor comprises the skills the ELL brings to the Grade 1 classroom, such as, decoding ability, sight word ability and language skills (Whitehurst and Lonigan's inside-out skills and the outside- in skills). Context, background knowledge and concepts, which directly relate to the extraction of meaning from the written word, are additional skills and ultimately determine the level of the ELL's comprehension. This is a major tenet of the interactive model. The second factor, however, relates to the material read, such as the number of unfamiliar words, the length of sentences and whether the syntax is familiar or not. The aforementioned all influence the extraction of meaning from the text.

Young SL learners have not mastered the necessary comprehension monitoring strategies nor the skills or the recognition that strategies need to be applied to remedy comprehension failure. For these learners, poor comprehension not only limits meaningful learning but stunts the growth of future knowledge. As a consequence, the learner with a comprehension deficit becomes high risk for academic success.

Oral language facilitates the acquisition of literacy related skills, including comprehension and success in formal education (Watson, cited in Neuman & Dickenson, 2007:43). The ELL is a 'kindergarten or grade 1 dropout' whose manifestation is evidenced three years later in Beimiller's fourth grade slump (see 2.11). Four valuable years of learning have been lost. The ELL limps along with the attending language and behavioural difficulties until ultimately he or she drops out of school. As a consequence, positive academic outcomes become compromised and employment opportunities are reduced in the long term. These negative outcomes underpin this research. The ELL acquiring first time literacy becomes a high risk educational minority, presenting with deficits in

vocabulary levels, language structure, topic knowledge, comprehension monitoring skills, creating a gap between the skills available and the skills required for the successful acquisition of literacy , learning and academic success. Cain and Oakhill (2007: xiv) infer that key skill impairments are causally implicated in comprehension failure which subsequently impedes learning and therefore positive academic outcomes.

3.5 Conclusion

Chapter three began with a selective discussion on comprehension, the multifaceted aspects of comprehension and how they in turn relate to and contribute to extracting meaning from written text. Scarborough's strands of comprehension were identified and explored as were Whitehurst and Lonigan's outside –in and inside out skills specifically as they pertain to and contribute to meaning. Hakuta et al.'s 'white space' was discussed and its contribution to limited meaning and comprehension when reading text passages. In conclusion, an overview of the ELL acquiring first time literacy in a second language and the effects of comprehension and meaning on learning and academic outcomes were briefly addressed.

The exploration of comprehension and the prerequisite language skills as they pertain to monolinguals and the ELL, have not been investigated nor the involvement of parents. The need for parental language skills and abilities to aid the ELL ensure that the ELL during the crucial early years highlights an additional area of deficit for the ELL.

In this light, the exploration of the posited HCD of ELL acquiring literacy for the first time is critical, if the unfair expectation placed on the young ELL is to be addressed. If the goal of literacy acquisition (see 3.2.6) is for the enhancement of learners' enjoyment and understanding of the world through retrieval of meaning from written text, the goal is not being realised amongst the ELL's acquiring first time literacy. LEP learners are not without comparability to learners with Autism (ASD) on the high functioning end of the spectrum, who have severe language comprehension impairments (Cain & Oakhill, 2007:104). I have outlined the nature and severity of ELL s' difficulties and deficits when compared to their monolingual peers, concluding with a need to rethink the enormous burden placed on the ELL which 'dilutes' the ELL's potential with the expectation of first time literacy acquisition in a SL.

The purpose of this chapter was to provide a review of current research on comprehension as it relates to vocabulary levels and development and more particularly, the disabling effect of ELL on

first time literacy acquisition in English. It also sought to highlight the disparity between monolingual learners and ELL's as they acquire first time literacy. Chapters two and three have presented a literature review showing that the ultimate realisation of literacy, comprehension of the written text, requires more than the ability to decode words. The literature review has brought together current research on early language acquisition, language structure, vocabulary development and its intrinsic underpinning of comprehension in both monolinguals and ELL's providing the theoretical framework for the comparative data analysis (Chapter five).

Chapter four will describe the research methodology, the design type and the instruments as well as subjects and data collection. In addition, the measuring instruments will be discussed and their reliability and validity for assessing specific variables will be established. The techniques used to collect basic data and the method of data analysis will also be discussed in Chapter four.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

This chapter describes the research methodology, the design type and procedures applied in this study. The aforementioned are all designed to complement the literature study undertaken in chapters two and three. The research methodology addresses the primary objective of the study (see 1.5), speaks to the problem statement (see 1.3), the research question (see 1.7), the hypothesis and the sub hypothesis (1.8 & 1.8.1). The chapter details information on validity and reliability, subjects, subject selection, the research instruments, materials, data collection procedures and the methods of data analysis. The objectives (see 1.5) are met via a comparative complementary study (see 5.5 & 6.2.2) between English monolinguals and English secondary language learner respondents consisting of back-ground profiles, and the evaluation of their first time literacy acquisition. Literacy acquisition is evaluated against the following variables identified in Chapter 1 namely:

- Reading-decoding
- Comprehension
- Receptive vocabulary
- RAN/PA

A literature review (see Ch. 2 & Ch. 3) was followed by research guided by evidence gained from systematic research methods rather than opinions (McMillan & Schumacher, 2000:12), in other words empirical research. The general purpose of a literature review is to gain insight and understanding of the current theories and findings about a selected research topic (Johnson, 2000:41). The literature was gathered, reviewed and analysed not as a summary but rather as an integration of reviews and sources pertaining to particular trends (Glesne, 1998:21) providing a framework for the research data collection. Research on FL acquisition, vocabulary levels, language development, comprehension and their relationship to first time literacy acquisition in monolinguals was analysed creating a comparative framework upon which to compare SL acquisition, vocabulary levels, language structure, comprehension and their relationship to first time literacy acquisition in a second or third language. The framework provided a theoretical background for the research methodology, design and evaluation of the empirical study.

The primary objective of the study as aforementioned (see 1.5) was to describe, isolate and specify through the analysis of data collected from LEP learners, an at risk educational minority who present with a HCD. To achieve the research objective the research question was formulated (see 1.7) which called for a mixed method mode of enquiry (see 1.9), a combination of both qualitative and quantitative techniques and/or data analysis within different phases of the research (Tashakkori & Teddlie, 1998:17; McMillan & Schumacher, 2000:594). Tashakkori and Teddlie argue that the term mixed model is more appropriate than mixed method for research where different approaches are being applied at any or all of the stages during the research process. Their point is that the mixing often extends beyond just the methods used in research. However for the purposes of this research the term mixed method will be used within a broad quantitative and qualitative sense in that each method has been kept true to its own “paradigmatic and design requirements” (Bazeley, 2002:1-11). The qualitative mode of enquiry substantiates the linguistic background of the ELL group, thereby complementing the quantitative study, speaking to a complementary mixed method of enquiry.

The quantitative mode of enquiry as adopted for this study is defined by Creswell (2009:233) as

Quantitative research is a means for testing objective theories by examining the relationship among variables. These variables can be measured, typically on instruments, so that the numbered data can be analyzed using statistical procedures. The final written report has a set structure consisting of introduction, literature and theory, methods, results and discussion.

The qualitative mode of enquiry seeks to understand and contextualize a specific social phenomenon in a natural setting, providing context and substance for the quantitative research. The objectives of the qualitative study for the purposes of this research are to identify, describe and organise the complexities of a common phenomenon through observation and involvement in the research setting, thereby complementing the quantitative study. Common phenomena can reveal remarkable levels of complexity (Gormon & Clayton, 1997:177) which underpin the quantitative mode of enquiry. The fundamental difference between quantitative and qualitative modes of enquiry is that the former uses numbers to describe data while the latter uses narrative descriptions (McMillan & Schumacher, 2000:39-40).

The qualitative mode of enquiry for this research, namely, a micro –ethnographic study focusing on immigrants and their children as learners from an educational perspective, creates the context and background for the quantitative study complementing the quantitative study. The quantitative mode of enquiry, namely a comparative assessment and a demonstration of the comprehension gap

postulated between monolinguals and ELL's, describes, ascertains and verifies the existence of the HCD in ELL's acquiring first time literacy.

Furthermore, in the context of this study the qualitative study is complementary, speaking to the diversity of the study and thereby facilitating a greater understanding of the phenomenon being investigated. The complementary mixed method approach substantiates and interprets the effect of the background profile (narrative) of learner respondents on first time literacy acquisition and in addition elaborates, enhances, illustrates and clarifies the numerical data of the empirical study.

The following section details the problem statement, the specific research question, the hypothesis and the sub hypothesis.

4.2 The problem statement, specific research question, hypothesis and sub hypothesis

The specific research question formulated from the literature review and supported by the problem statement, inform the hypothesis and sub hypothesis. The aforementioned are listed below.

4.2.1 The specific research question

Considering the main problem statement of the study, as described in Section 1.3 in Chapter 1, which indicates that RAN/PA masks a HCD in learners acquiring first time literacy, and whose home language differs from the language used in school, the main research question can be formulated as follows:

Can statistically significant differences be established between age appropriate reading, comprehension, vocabulary levels and RAN/PA skills in ELL'S (whose home language is other than English), during first time literacy acquisition, when English is the language used in school and the classroom, compared to monolingual learners, whose home language is English and who are acquiring first time literacy in English in an English only classroom/school which ELL's attend as well?

4.2.2 Hypothesis

The null and alternative hypotheses, which can be formulated from the main research question, could be formally stated as:

H_{0m} :

There are no statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, comprehension, vocabulary levels and RAN/PA skills when learners are exposed to first time literacy acquisition in a school/classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis:

H_{1m} :

There are statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, comprehension, vocabulary levels and RAN/PA skills when learners are exposed to first time literacy acquisition in a school/classroom environment where English is the language of instruction.

The deficit will be investigated in ELL's of immigrant parents whose home language is other than English, and who acquire first time literacy exposure in English in Grades 1-3.

4.2.3 Sub hypothesis

The most effective way of evaluating the main hypothesis would be to split the main hypothesis into the four components of literacy ability and evaluate achievement on each aspect separately. To this effect sub hypothesis were formulated as follows:

Age appropriate reading,

H_{01} :

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis,

H_{11} :

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

For performance on vocabulary levels, the null hypothesis H_{02} states that,

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on vocabulary levels when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis,

H_{12} :

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on vocabulary levels when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

For RAN/PA skills evaluation,

H_{03} :

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on RAN/PA skills when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis, H_{13} , that states that,

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on RAN/PA skills when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

The performance on English comprehension can be evaluated against the null hypothesis of, H_{04}

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on English comprehension when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative for this hypothesis, H_{14} , namely,

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on English comprehension when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

4.3 Ethical measures

4.3.1 Informed consent

Ethical aspects of research were addressed by informing learner respondents' parents of the purpose of the research, namely investigation of the HCD phenomenon on ELL's as well as obtaining their consent and participation to include their children and themselves in the research.

An example of the consent form is attached in Appendix A-1 (English) and A- 1.1. (Mandarin).

4.3.2 Voluntary participation

Participants in this study participated voluntarily. Once informed of the purpose of the research they were given the opportunity to withdraw if so desired.

4.3.3 Anonymity and confidentiality

A declaration of confidentiality was embedded into the consent form and distributed to all participants.

The following section elaborates on both the quantitative and the qualitative modes of enquiry.

4.4 Modes of enquiry

A mode of enquiry refers to the collection or body of research based on a general set of assumptions and involves methodological preferences, philosophical and ideological beliefs, research questions and feasibility issues (McMillan & Schumacher, 2001:594). The mode of enquiry informs the research design which describes the conditions and procedures for collecting and analyzing the data (McMillan & Schumacher, 2001:599) for the study. A multidisciplinary enquiry encapsulating both a quantitative, non experimental and a qualitative interactive mode of enquiry are drawn upon to inform the research design (see table 4.1). A multidisciplinary enquiry enables different disciplines “to do their best” (Kanbar, 2002:477-486) in creating a richer and more useful dialogue and synthesis of results. The ethnographic data in this study provides essential background information about the immigrant population, their children as learners and how they interact with the educational expectations in the BC community and classroom. Data from participant observation during the interviews and reading analyses provided the researcher with information on subject behaviour within the context of their environment thus addressing validity and responsible research regarding a culturally diverse population. Without insight into parents and learners’ background and circumstances a meaningful and insightful understanding of the quantitative data underpinned by the social reality is lost.

Table 4.1 Modes of enquiry

Quantitative	Qualitative
<i>Non experimental</i>	<i>Interactive</i>
comparative Survey	micro ethnography

4.5 Design type

Similar to the mode of enquiry the research design type can be classified as either quantitative or qualitative as indicated in table 4.2. Again, similar to the modes of enquiry, the quantitative design type is concerned with numerical data (which can either be categorical or continuous) which is analysed statistically while the qualitative design type or technique uses narrative description/ or observation.

The design type for this study includes both quantitative (descriptive and non- experimental) and qualitative (interactive micro ethnography) research approaches which constitute a comparative approach to the mixed model research design type. Utilizing a complementary mixed method approach to the comparative mixed model research design facilitated the scrutiny of emerging linguistic themes or trends in ELL's' backgrounds qualitatively, while further exploring and quantifying the phenomenon quantitatively. The aforementioned speaks to the results of one method, used to "elaborate, enhance, illustrate or clarify the results from another method" (McMillan & Schumacher, 2001:543), referred to for the purposes of this study as a "complementary mixed method". The complementary mixed method approach ensures a diverse perspective leading to a more comprehensive investigation and therefore understanding of the phenomenon at hand (Creswell & Plano Clark, 2011: 7).

The design type – which was decided upon to best address the research question – reflects the nature of the study. This is also reflected in the choice of sampling techniques, sampled population and the research sites. The comparative analysis approach followed in the study uses an open ended questionnaire, a structured closed – ended semantic differential scale questionnaire (in which the Likert scale is represented by smiley faces), and a structured observation.

A. Qualitative research

As mentioned in Chapter 1, a qualitative mode of enquiry, as an aspect of the complementary mixed model design, was chosen to assist the researcher in order to ascertain an in depth understanding of, and background to the particular social phenomenon that pertains to the ELL acquiring first time literacy in an English speaking classroom.

Qualitative research, in other words, constructivism and natural enquiry, are treated as foundational to most interactive quantitative research (Denzin & Lincoln,2000:2) as is the case in this study (see 1.9), where a qualitative mode of enquiry calls for and informs an interactive micro – ethnographic enquiry complementing the qualitative enquiry to follow. Qualitative research is an in depth enquiry using face to face techniques to collect data from the subjects in their natural setting. Qualitative researchers build a complex, holistic picture with detailed description of informants' perspectives while building an understanding of a particular social phenomenon in its natural setting.

Interactive researchers describe the context of the study, illustrate different perspectives of the phenomena and continually revise questions from their experience in the field (McMillan & Schumacher, 2001:36).

The micro- ethnographic enquiry / or biological attributes probed in the current study focused on the background of the society and culture of the target population, as represented on the one hand by immigrants to Canada and their children and on the other hand by (English) monolingual Canadians - by birth. Schwandt, (1997:2), describes an exhaustive examination of a very specific activity, or of a very small unit or organisation as ethno - methodology. In this study the focus of the micro- ethnographic enquiry is based on patterns of language, background and lifestyle of a small proportion of the immigrant population of BC, more specifically Richmond, Burnaby and Surrey. Structured participation observation and an open – ended biographical questionnaire were administered to the sampled subjects (or respondents) of a shared group activity that consisted of learners who were acquiring first time literacy in a SL and their parents.

B. Quantitative research

Quantitative research, as the second aspect of the complementary mixed model design type, on the other hand adopts a positivist philosophy of knowing and emphasizing objectivity and quantification of phenomena. This approach strengthens research and maximises objectivity by introducing objective numeric measurement and structures of perceptions and attributes into the investigation.

In this instance a comparative analyses methodology was followed which explored the relationship between reading, comprehension, vocabulary levels and RAN/PA skills in ELL's and monolinguals.

The ELL variables identified in Chapter one and utilised for the comparative study (See 1.7) include:

- Reading – decoding
- Comprehension
- Vocabulary
- RAN/PA

The comparative analysis strategy followed in the study investigated the relationship between measurements of the literacy phenomenon between two sampled groups of the target population. Measurements of the literacy acquisition in the present study are represented by reading, comprehension, vocabulary levels and RAN/PA skills and the two sampled groups of the target population by ELL's and monolinguals. The above mentioned relationships are expressed in terms of the significance of differences in group means (for the two sampled groups) for literacy measures

calculated. More specifically, the relationship is an expression of the hypothesised gap in literacy comprehension between ELL subjects and the monolingual subjects.

A structured closed ended questionnaire for young learners on a semantic differential scale (a seven - point Likert attitude rating scale that has two bipolar adjectives at each end) to evaluate attitude to reading, (See appendix B.1) was designed by the researcher. Respondents chose between smiley face response options and the questionnaire was administered to the learners assisted by the researcher on a one to one basis. The researcher presented the Likert scale to the learner, requesting the learner to mark with an x, or point to the relevant smiley face in response to the questions asked by the researcher. McMillan describes a true Likert scale as being “one in which the stem includes a value or direction and the respondent indicates agreement or disagreement with the statement” (McMillan & Schumacher, 2001:262).

The design of the questionnaire was based on the research question formulated in Section 1.7. This attitude questionnaire evaluated anxiety levels experienced by first time literacy acquisition learners. If research and sampling is meticulously planned and executed, the analysis results of such a survey can be generalised to the greater population as defined. Reichardt and Cook (1979 in Nunan, 1992:3) described quantitative research as being obtrusive and objective with the ability to be highly controlled. Thus, if the results of the quantitative research prove to be reliable and valid, generalisations are more readily accepted.

Table 4.2 Design type

<i>Quantitative</i>	<i>Qualitative</i>
<ul style="list-style-type: none"> • Structured close ended semantic differential scale for young children • Standardised instruments 	<ul style="list-style-type: none"> • Structured questionnaire/interview • Structured observation

4.6 Reliability and validity

There are two important statistical principles which have to be considered when deciding on a research design, planning the research methodology, conducting the research and evaluating or measuring aspects which pertain to the research, and conducting the statistical analyses, namely, reliability and validity. Reliability and validity as they pertain to this study are discussed below.

4.6.1 Reliability

Reliability applies to the concept of consistency in the sense of obtaining equivalent/ comparable results on repeated application of a measuring instrument to the same subjects on several occasions. More specifically reliability refers to the consistency of a measuring instrument and its ability to yield consistent successive results. Reliability is concerned with the test's precision as a measuring instrument (Cohen, 1991:496).

Furthermore, a test is not reliable if external influences/ or variables affect the way in which respondents react to measurement. External influences could, for example, manifest in test-administrator behaviour if during the test-administration test-instructions are not conveyed uniformly over every test session administrator-bias affects respondents' interpretation of what is expected of them during test administration (Kilfoil & Vander Walt, 1997:285).

Reliability is further subject to extraneous variables such as learner's anxiety, fatigue, blood sugar levels and general sense of security and comfort, which all add to or detract from performance. In addition, the environment may promote or demote the performance of the subject with light, temperature or noise factors affecting concentration. Additional effects may also include issues such as the subjective marking or scoring of a test/instrument which may contribute to the unreliability of an instrument. The importance of homogeneous/ constant environmental conditions are thus of utmost importance.

Reliability must furthermore be evaluated against the issues of applicability and relevance. An analysis that reveals consistent results does not necessarily mean that it conforms to a theory or content or analyses what it set out to analyse. The above arguments indicate that reliability also touches on the field of validity: does the instrument measure what it is purported to measure? And are these results relevant to the aim of the study?

Considering all arguments made in the preceding paragraphs, and, in order to maximize reliability, the following measures were taken.

Consistency; administration of instruments:

The administration of the questionnaire, structured observation, NARA, PPVT, and RAN/PA were undertaken and evaluated under consistent conditions by the researcher, ensuring the integrity of the data captured. In addition, the “accent bias” in the administration of the PPVT was reduced by using both the American and English pronunciation of “vase” speaking to the consistency of measurement necessary for reliability. The aforementioned applies to and addresses the capturing of equivalent/comparable results on repeated application, addressing the consistency of the measuring instruments and their ability to yield consistent successive results. Experience gained in the pilot run of the NARA and PPVT assessments assisted in sorting out any glitches which might occur during administration of the tests in the main study and which could prevent the researcher from maintaining uniform test – administration conditions (thus ensuring reliable data).

External influences:

(a.) *Environment:* Environmental issues were kept constant by ensuring that the testing room was well ventilated, well lit and appealing to the young learner. Parents were seated across the hallway, not in direct line of sight but easily accessible as the door to the testing room remained open at all times. Parents arriving and leaving were met by the administration officer and apprised of the testing protocol which kept noise levels to a minimum. The administration officer provided the parents with a copy of the Mandarin / Cantonese translation of the consent and requested that they read it while waiting for their appointment. Some noise from across the hallway was encouraged, as opposed to absolute silence. This added to the comfort of the learner as classroom noise levels were mimicked.

(b.) *Scoring procedures:* The questionnaire, NARA, PPVT and RAN/PA were scored by the researcher to ensure constant assessment and increase reliability of the data.

(c.) *Counterbalancing:* Learners were given a choice as to which “fun game” they would like to begin with.

(d.) *Time:* The time taken to complete the questionnaire, NARA PPVT and RAN/PA was limited to thirty minutes, giving consideration to the fatigue and concentration levels of the young learners.

Applicability and relevance:

The instruments administered were age, reading and language level appropriate and objective specific.

Aforementioned selected aspects of reliability were noted and in so doing provided a “necessary condition” for validity (McMillan & Schumacher, 2001:250) discussed below.

4.6.2 Validity:

Validity in the current study is described in terms of the instruments used within the framework of the complementary mixed method approach to evaluate ELL literacy performance. Validity as such is concerned with the issue of whether a particular measuring instrument used in the study measures what it purports to measure. But, in general, various factors affect validity in research: adherence to the statistical principles that underlie quantitative and qualitative research methods, correct and appropriate selection of measuring instruments, appropriate analysis techniques in quantitative analysis, controlling and minimising of experimental error in quantitative analysis strategies, correct sampling techniques, uniform conditions under which research is conducted and selection of respondent-appropriate measuring instruments to name but a few.

The complementary mixed method design as research design in this study was selected to enrich understanding of the phenomenon being researched through confirmation of conclusions, diversifying knowledge and introducing new perceptions on the research subject. “Mixed methods are inherently neither, more, nor less valid than specific approaches to research”(Bezely, 2002:9). Validity stems from the appropriateness, effectiveness and thoroughness with which these methods (and principles) are applied and of the care taken in the evaluation of the evidence and the adherence to the rules pertaining to that particular approach (or tradition).

Broadly speaking, validity is pursued by seeking a match between the realities of the world and the scientific explanation of the phenomenon (McMillan & Schumacher, 2001:603) of HCD experienced in literacy acquisition. In the paragraphs which follow, validity is discussed in terms of pairing background reality with the scientific explanation, internal validity, external validity and content validity.

a. *Validity in terms of real world and scientific blending.*

A complementary mixed method enhances and facilitates the blending/ pairing of world realities in support of and complimentary to the scientific explanation as is seen in this study. The realities (see 1.4) of the ELL learner – as explained by the learner profile via biographical attributes - are explicated in the qualitative design; the evaluation of the scientific literacy phenomenon, the HCD, is pursued in the quantitative design type. Validity in this respect has been addressed in the current study as the link between learner profile (the reality) and HCD (the scientific explanation) has been researched widely as the literacy study indicated.

b. *Internal and external validity*

In isolation, both the quantitative and qualitative methods have limitations in assessing literacy abilities and ethnographical characteristics. The use of a complimentary mixed method design addresses these limitations by integrating knowledge from both components, and adds to the internal and external validity of the design which is integral to this study (Tashakkori & Teddlie, 1998:26). Internal and external validity is addressed in that care is taken to pair appropriate components of ELL literacy abilities with ethnological properties, and to measure those characteristics and abilities that pertain to HCD and literacy.

c. *Content Validity:*

Content validity refers to the extent to which an instrument measures a representative sample of subject matter content from the research field, in this instance, linguistic background, attitude, behaviour and age appropriate reading, comprehension and vocabulary skills. Content validity is discussed from a qualitative, quantitative and complementary mixed method perspective.

1. *Qualitative method:*

The researcher ensured that the literacy aspects emanating from the literature review (see Chapters 2 and 3) were represented in the questionnaire (see 5.2.1.1) and a structured observation (5.2.2.1) of the learners. Sections of the questionnaire, namely questions 3, 6, 18.1, 18.2, 19, 20, 21, and 25, specifically probed language properties of the learners that are regarded in literature as crucial potential HCD at-risk indicators. The structured observation served the purpose of collecting and describing learner behaviour during the reading process, whilst the reading assessment provided the researcher with the background knowledge on reading ability. The knowledge informs the quantitative component of the study, namely the levels of reading ability of monolingual learners and the ELL's. Behaviour towards reading and reading ability could thus be linked.

2. Quantitative method:

Validity in the quantitative component of the research was addressed in ensuring that the most recent (and best evaluated) version of the various measuring instruments was used in the study. For example, the 1988 version of the NARA reading assessment was replaced with the 1997 NARA instrument of reading analysis. Oakhill (1997:312) describes the 1997 NARA as having a “number of attractive properties”. Turner (1993:12) refers to it as “the Rolls Royce of individual reading testing”. Nation and Snowling (1997:359) found the NARA to be more effective in a comparative study using a closed passage technique.

3. Complementary mixed method:

The complementary mixed method approach enhanced the extent to which the instruments measured a representative sector of subject matter content from the field of research and matched the realities of the ELL (background) world with the scientific explanation of the phenomenon. In this way the validity of the research was also addressed.

4.6.3 Pilot study

It seems appropriate at this stage to mention that a major additional stimulus for addressing various external factors which could introduce bias into the present study came from literature review on two pilot studies, namely an initial pilot study in Singapore and a micro pilot study at the Oxford Learning Centre in North Vancouver, Canada (Please refer to Table 4.3, columns 2 and 3 in this regard). These studies illustrated the effect of cultural bias, accent bias and adequacy and relevance of measuring instruments.

The pilot study in Singapore was administered to learners and refined for internal consistency reliability of the instrument at the Morris Allen Study Centre from 1993 – 1998. The Neale Analysis of Reading ability (NARA) was the only instrument tested in this pilot study. During the pilot study it was noted that a cultural bias pertaining to aspects of the vocabulary became evident in some learners and therefore brought the question of validity to bear on the reliability in this study. No test can be “culture free” but test developers can do a great deal to reduce unfair bias in test content (DfEE, 2000:62).

The mini pilot study in Canada was administered to learners and refined for internal consistency reliability only. The PPVT was the only instrument tested in this study. It was noted that an “accent bias” pertaining to aspects of pronunciation by the researcher were evident.

Against this background of factors that could affect the validity of research, and informed suggestions from the literature review undertaken for this study, it was decided that a single test could not cover the challenges posed by the current study. More importantly, both individual tests and observations tend to be less reliable in populations with monolingual and ELL’s. Literature indicates that the performance of ELL’s is exceptionally variable across numerous settings. It was therefore important to look for multiple sources of evidence (in the form of assessment and observation data) wherever possible and document learners’ behaviour and performance in different roles and different environments.

Table 4.3 Home language distribution of experimental and comparison groups of the study
(column 4 & 5)

Home language	School A Singapore Pilot study (refer to 4.9)	School B Canada Pilot study (ref to 4.9)	College Richmond Experimental Group	Library Community/care centre Comparison Group
Mandarin	1,000	50	17	0
Malay	392		0	
Punjabi	0		0	
Cantonese	0		1	
Japanese	8	4	0	
Togalog		10		
English	0	10		19
Total	1,400	74	18	19

4.7 Sampling

4.7.1 Sampling technique, respondents as sampling units and sampling description (unit analysis of subjects)

Purposeful sampling, a non probabilistic sampling technique, was used to select sampling units/or respondents/or English first literacy acquisition learners from the target population of English first literacy acquisition learners in Canada. Purposive or purposeful sampling is “a strategy to choose small groups or individuals likely to be knowledgeable and informative about the phenomenon of interest” (McMillan & Schumacher, 2001:598). Reference to the general concept of non probability sampling refers to a selection procedure in which “the probability of selecting elements from the population is not known”, but selected with the aim of the research in mind (McMillan & Schumacher, 2001:595.).

The study is based on data collected from 18 (n =18) English SL learners and 19 (n= 19) FL English learners (monolinguals). The first mentioned group represents the experimental group and the second group the comparison group in the study. These learners jointly represent the sampling units or respondents sampled from the target population. The educational level of the sampled learners ranged from Grades 1 – 3, and included learners from both genders (boys and girls). The age distribution varied between six and nine years with a median age of seven years and four months.

4.7.2 Target population and practical sampling (Population selected)

For the purpose of the study the target population was regarded as English first literacy acquisition learners in Grades 1 to 3 in the Surrey, Richmond and Burnaby area of Vancouver (see 1.4). They were either monolingual learners born from Canadian parents or ESL born from immigrant parents. The Richmond, Surrey, Burnaby area of Vancouver is dominated by an Asian immigrant population with Mandarin and Cantonese as their first language, spoken exclusively at home by learners, siblings and parents. (Refer to the last two columns of table 4.3 in this regard.)

At the time of the data collection in August 2009, Capital College, a college registered as an ECE/Montessori training College in Richmond B.C., had a student body of 800 college age SL students. Access to the college and students was facilitated through the researcher’s professional relationship with the college and therefore easy access to the student body, their families and social networks existed. To reach the target population in the specific area of Vancouver, an informative research flyer was distributed to the student body at Capital College. The students in turn distributed the flyers to their own homes (if applicable according to target population criteria) or to applicable

homes and families in the Richmond, Surrey and Burnaby areas. Flyers were also distributed at the community library, community centre and after school care centre in the area. Learners, via their parents, who responded to the flyers and satisfied the criteria of the target population, were included into the research sample (thus purposeful sampling). Sampled learners (in Grades 1 to 3) were assigned to the experimental group if they were ESL from immigrant parents (and were acquiring (English) literacy for the first time and they were assigned to the comparison group if they were EFL speakers (monolingual) born to Canadian English speaking parents. Letters of permission were obtained from Capital College and parents respectively.

4.8 Analysis methodology, a comparative approach

The main objective of this study is to identify and profile sampled learners who experience HCD during first time English literacy acquisition. Profiling describes the subset of sampled learners (previously unidentified) experiencing HCD who are educationally vulnerable in inclusive classrooms (see 1.1). It is hypothesised that this subset of sampled learners will constitute a minority group within society.

In the literacy review emphasis fell strongly on two aspects of first time literacy acquisition, namely the comparative nature of the study of monolinguals' first time language acquisition as a baseline for comparison. Particularly relevant to this study is present well documented research on monolinguals, their literacy acquisition and its intricate relationship with language proficiency, vocabulary growth, language structure, and how it affects reading performance and comprehension (see 1.1). An overview of literacy acquisition in monolinguals was thus chosen to form the comparative baseline for this study as it explores first time literacy acquisition in ELL's in a SL. On the other hand, research on first time literacy acquisition in ELL's is a relatively new, exciting field and is in its infancy as the many "fallout" aspects of globalisation become more apparent. Of specific interest to this study is the emergence of a high risk (hypothesised) educational minority that manifest with a HCD while acquiring first time literacy. It is against this background that the hypothesis, sub hypotheses and the null hypothesis were formulated (see 1.8 and 1.8.1)

The study firstly describes research from literature on monolinguals as the baseline of comparison in the present study (see 2.2) and secondly proceeds to compare monolinguals and ELL. Their acquisition of language and more specifically their reading, comprehension, vocabulary and RAN/PA, skills are the phenomena evaluated to determine the differences between the two groups as they acquire first time literacy.

4.9 Measuring instruments

An analysis of literature strongly suggests that a single test can not cover the challenges posed by this proposed research. Individual assessment tests as well as observational assessment tend to be less reliable in studies on performance with children from different areas and cultural backgrounds and learning in a second language. It is therefore important to look for various evaluation methodologies to document learners' behaviour, background and performance in different environments. Thus, the answer to the research question will not be reliable in a single simple battery of assessment materials but a multifaceted qualitative and quantitative strategy for assessment was deemed necessary, in other words a complementary mixed method.

In support of the above, a battery of qualitative instruments to collect basic information was selected, designed and administered by the researcher in addition to the standardised quantitative instruments specified in table 4.4. Checklists prepared by numerous authors were compared in the compilation of both the quantitative and qualitative instruments in an attempt to be culturally neutral. (Frederickson & Kline, 1990; Graf, 1992:184-189; Hall, 1995; Siraj-Blatchford, 1994; Veasey, 1999). Their recommendations regarding the basic information that should be collected represented a high degree of consensus and are referenced in the compilation of the qualitative recommendations listed below and the quantitative instruments listed in table 4.4.

The basic recommendations for the qualitative research fall under the following headings:

1. Cultural background
 - Cultural factors affecting dress
 - Social and cultural background
2. Family details and history
 - Details of family members
 - Recent or past separations from family
3. Language history including current usage of L1 and L2
 - Language(s) spoken at home
 - Reading/writing skills in home language
 - Experience/competence in English
 - Any other languages spoken at home or in the community
 - BICS/CALP
 - Extra English tuition

4. School history

Child's familiarity with learning and teaching styles

5. Family details

Trauma ensuing from experience of a new cultural/ educational background

Extent to which the family has support within the community and is not isolated.

In the present research every effort was made by the researcher to eliminate cultural bias pertaining to all aspects of the study.

4.9.1 Qualitative assessment methods / instruments

Instruments used in the study included:

4.9.1.1 A structured questionnaire

A structured questionnaire designed and based on the references of the five authors listed

Above was completed for each ELL who participated in the reading analysis. The background information was retrieved from the teacher/ parent/translator by the researcher. (The Cultural society of Vancouver provided translation services when necessary as did Capital College.)

The design of the questionnaire:

Section A (Questions 1-5) was designed to gather information on the respondents' background.

Section B (Questions 6-10) was designed to gather information on the family details and whether or not older siblings were able to speak, read or write in English.

Section C (Questions 11- 14) focused on the socioeconomic details of the family.

Section D (Question 16) focused on cultural background while Section E. (Questions 18-21) focused on subject's parents language history including current usage of L1 and L2, language(s) spoken at home, reading/writing skills in home language and experience/competence in English.

Section F (Questions 23-27) focused on the family's history, trauma, reasons for leaving the country of origin, learning difficulties and the learner's interaction with English speaking peers within the school and community.

Section G (Questions 28- 33) focused on any other languages spoken at home or in the community, availability of community/school support and the extent to which the family is or perceives to be isolated if at all.

4.9.1.2 Structured observation

A structured Observation instrument was used for the observation of behavioural attributes prior to, during and after the reading analysis. The behavioural attributes recorded included: reluctance to read, anxiety, rubbing eyes, fidgeting, pulling at the reader, twisting the pages, and difficulty beginning to read. The observation was carried out by the administrator of the reading analysis namely the researcher. The findings will be presented as a (composite) frequency Table with the recorded number of times the following attitudes towards reading was observed, namely, reluctance to read, anxiety, rubbing eyes, fidgeting, pulling at the reader, twisting the pages, and difficulty to begin reading was observed. The frequency distribution will distinguish between ELL's and monolingual learners.

4.9.2 Quantitative assessment instruments

Quantitative assessment instruments applied to data information on learner attitudes and competencies included:

4.9.2.1 A structured close ended semantic differential scale for young children

A structured closed ended semantic differential scale for young children to evaluate anxiety experienced during first time literacy acquisition as described in section 4.5.

4.9.2.2. Reading assessment tests

In this study, a reading analysis, a quantitative, bivariate, non experimental comparative study, was used to obtain the variables (RAN/PA, vocabulary, reading and comprehension). The evaluation in each test represented the research data captured.

4.9.2.3 Instruments utilised

Table 4.4 lists the instruments that were utilized in the reading analysis. The aforementioned is followed by a brief overview of background information and test administration procedures. The tests used are summarized according to their properties in Table 4.4.

Table 4.4 Measuring instruments used for reading assessment

Instrument	<i>Neale Analysis of Reading ability</i>	<i>Phonological Abilities test</i>	<i>RAN/RAS Rapid automatic naming/Rapid automatic response</i>	<i>PPVT-4 Picture Vocabulary Assessment</i>
Designer	Neale, Christophers & Wetton 1997	Mute, Hulme & Snowling, 1987	Denkla & Wolf, 2006	Dunn 2006
Type of instrument	Individual	Individual	Individual	Individual
Age range	Six to twelve years	Five to seven years	Five to eighteen years	Two years six months to ninety years
Stated objectives	Test's oral reading of passages through measures of accuracy, comprehension and speed	To identify children who are at risk of reading difficulties and to assess the nature and extent of phonological weakness diagnostically	Rate of naming, rate of accuracy	Tests picture vocabulary
Skills tested	Tests oral reading, oral reading accuracy and oral reading comprehension	Examines four aspects of phonological awareness, speech rate, and letter knowledge	Tests rapid automatic naming of numbers, letters, colours and objects	Tests picture vocabulary

4.9.3 Background information and test administration

4.9.3.1 Reading and comprehension in ELL's and monolinguals - NARA

The Neale Analysis of Reading Ability (NARA) was administered to both the ELL (subjects) and monolinguals (comparison group), in other words to both the subjects and the comparison group. The aim of this analysis is an investigation into the reading and comprehension abilities of both the comparison group and the subjects in this study for comparative purposes. The passages are graded and learners tested for rate, accuracy and comprehension. The NARA is used for both diagnostic and attainment and is therefore used to assess reading progress objectively in addition to obtaining structured diagnostic observations of reading behaviour. It is the diagnostic component of the NARA that has been applied in this comparative study as it investigates reading and comprehension. Normal caution however should be exercised when accepting any test of skill as complex as reading. Nevertheless, the foregoing results should enable user confidence for the NARA, when used with the population for which it was designed, as a valid measure of accuracy, comprehension and rate of oral reading ability.

Within the framework of this study, the diagnostic comparison of reading and comprehension speaks to the objectives of the study (See 1.5).

Each learner was given a practice sheet by the researcher allowing for the reading set and the response strategy to be well established prior to the actual assessment. The time taken for each assessment was approximately fifteen minutes including the practice passages. The analysis is administered individually.

4.9.3.2 Receptive vocabulary - The Peabody Picture Vocabulary Test (PPVT)

The PPVT instrument evaluates comprehension of the spoken word in Standard English and is thus a measure of the learner's vocabulary acquisition. It is a norm referenced, untimed instrument that is individually administered. The learner selects the picture that best illustrates the meaning of the stimulus word and the time taken is approximately fifteen minutes. The primary reason for the administration of this assessment is to ascertain the receptive vocabulary levels of both the comparison group and the subjects in an attempt to relate a vocabulary deficit to the HCD. Vocabulary is strongly related to reading comprehension ability, as the learner must understand the meaning of the words in order to grasp the meaning of the text (Wagner, Muse & Tannenbaum, 2007:288). The PPVT assessment speaks to both the primary and general objectives of this study (see 1.5).

4.9.3.3 The Rapid Automized Naming and Rapid Stimulus Test (RAN/RAS)

The Rapid Automized Naming and Rapid Alternating Stimulus Test (RAN/RAS) measures the learner's ability to perceive a visual symbol such as a letter and in this instance a sound and retrieve it accurately and rapidly. This is commonly termed naming speed or decoding. The results of this analysis indicate how fast the brain can integrate the visual and the language processes.

The visual, verbal and retrieval processes that underlie rapid naming or decoding are integral to retrieving information from the written text. Thus, naming speed analyses present a clear indication and overall understanding of the learners' reading performance. Naming speed tests, particularly for letters and numbers, provide one of the best means of differentiating good and poor readers (Denckla & Rudela, 1976a, 1976b; Wolf & Bowers, 1999).

The RAN/PA was individually administered by the researcher. The RAN/PA letters comprise of five high frequency stimuli that randomly repeat ten times in an array of five rows with a total of fifty stimulus items. The learner was asked to name the stimulus item as quickly as possible. The scoring is based on the time taken to name all the items on the list. The test takes five minutes to administer depending on the learners age, language status and reading ability. The five minutes included the giving of directions and practice time.

4.10 Recording and electronic capturing of data

4.10.1 Qualitative data recording

Qualitative data was collected in the form of field notes, recorded by the researcher and based on observation of learner, parents and teachers and in- depth interviews.

4.10.2 Quantitative data recording and capturing

Responses to the semantic differential scale (Likert) were electronically recorded as numeric rating scale values (1-6) according to a rating value guide assigned to the smiley faces. The results of the various reading analysis tests were furthermore electronically captured. These data sets represented the quantitative data collected in the study.

4.11 Statistical analysis strategy

In the analysis strategy, the following statistical analyses were performed:

1. Categorization
2. Frequency tables
3. Bar graphs
4. Measures of central tendency
5. Box plots graphical presentation
6. Measures of spread variability
7. t- tests
8. Correlation

The details of each strategy performed, is defined, described and discussed.

1. *Categorization:*

Categorical variables are variables used to group subjects, objects or entities into two or more groups (McMillan & Schumacher, 2001:585), thus organizing data for analysis, interpretation and presentation purposes. In this instance subject responses were categorized, in other words responses to the linguistic background of the ELL (probed via a questionnaire), the observational responses on attitude towards reading (observed by the researcher) and responses to a semantic differential Likert scale on feelings towards reading was collected. The coded data could then be analyzed and interpreted as discussed in Chapter 5. In order to quantify the coded responses, the frequency of occurrence of each coded category was calculated for the questionnaire in a frequency count. The same applied to the coded information of the behavioural observation chart and the semantic differential scale.

2. *Frequency tables:*

One way frequency distribution Table is defined by McMillan and Schumacher (2001:210) as “a display of a set of scores by the number of times each score was obtained.” In this study the categorically coded data collected for the structured parental questionnaire/interview and the behavioural attitude towards reading analyses were transformed and presented as one way frequency distribution Tables.

The linguistic background information of the ELL and the monolingual learners, captured as the eight most crucial language issues addressed in the structured parental interview questionnaire is presented in eight one- way frequency Tables in Chapter 5.

The parental questionnaire in turn probed cultural/linguistic and societal aspects of the participating learners as one of a number of response- category options. The information was also captured in one way frequency Tables. The response data of the interview/ questionnaire, which consisted of thirty questions (on an agreement rating scale) were also presented as one-way frequency distributions in a single composite Table (see 5.1) responses to each question was categorised and noted as a rank order distribution, dependent upon the number of times each score was obtained. The scores were then transformed into a one way frequency distribution Table (see Table 5.1).

The behavioural response data set or attitude to reading data was recorded by means of an observation chart. Eight aspects of behaviour were evaluated via tabulation for each learner. A frequency distribution for each aspect was calculated and reflected in a composite frequency Table in Chapter 5 (see 5.2).

Two -way frequency Tables refer to the presentation of shared frequencies within each category combination of two categorical variables. For example, a two-way frequency Table of gender (male/female) and ELL status (ELL/ monolingual) would include the number of respondents that shared the four categories of male/ELL, male/monolingual, female/ELL and female monolingual. In other words: the total row and total column report the marginal frequencies or marginal distribution, while the body of the table reports the joint frequencies of two concurring events (Freund & Wilson, 2003: 39).

In the study, the responses of learners to the semantic differential Likert rating scale for young children was presented in a two-way frequency distribution Table to assess the attitudes of the learner towards reading (refer to Table 5.3). The rating scale used in the Table was represented as a six point agreement rating scale portrayed as happy (1), okay (2), don't care (3), bored (4), sad (5), and scared (6).

3. *Bar graphs:*

Bar graphs are used to display frequency distribution Tables. In other words, bar graphs are a “graphical presentation of frequency nominal Tables” (McMillan & Schumacher, 2001:584). The frequency distributions of the parental questionnaire/interview and behavioural attitudes towards reading were depicted as bar graphs (see fig. 5.1 and 5.2).

The vertical axis of the graph displays the frequencies of the scores while the horizontal axis displays the categories/or classes of the categorical variables. Each bar in the graph therefore represents a category of the variable depicted. The height of the bar represents the frequency count for the particular category of the categorical variable. The response frequency of the parental questionnaire/interview is represented as a bar graph in Figure 5.1 (see Chapter 5). Similarly, Figure 5.2 in Chapter 5 illustrates the frequency distributions of observed learner behavioural patterns.

4. *Measures of central tendency:*

Measures of central tendency are employed to attain a general notion of the typical or average location of an observation from the dataset. McMillan and Schumacher (2001:594) define measures of central tendency “as summary indices of a set of scores that represent the typical score in a distribution”. The indices used in measures of central tendency are namely the mean, the median and the mode.

The mean as a measure of central tendency is defined by McMillan and Schumacher (2001:594), “as the arithmetical average of the scores” and symbolised by \bar{X} or M . In other words in order to calculate the mean, the scores are tallied and then divided by the number of scores realising the mean.

The median as a measure of central tendency on the other hand is defined “as the point or score in a distribution that is the midpoint” (McMillan & Schumacher, 2001:594). In other words, the median is the point which divides a rank ordered distribution in half, each half having an equal number of scores. Thus fifty percent of the scores fall above the median and fifty percent of the scores fall below the median.

The mode as a measure of central tendency is simply the score that occurs most frequently in a distribution and is defined as ‘the most frequently occurring score’ (McMillan & Schumacher,

2001:594). The median and mode were not utilized in this study but are included for additional background information.

The three measures of central tendency used in this study, present scores to which measures of central tendency are applied. More specifically, the scores in a distribution in all three instruments were added with the sum being divided by the number of scores to obtain the statistical average namely the mean. (The mean as aforementioned is a measure of central tendency, in other words the arithmetical average of the scores.)

The mean, as a measure of central tendency, was used to summarise literacy assessment, (NARA assessment, PPVT assessment and the RAN/PA assessment) and attitude towards reading data of the research. The mean and other summary statistics are discussed and presented in Chapter 5.

5. *Box plots graphical presentation:*

Box plots are ideally suited to illustrate the measures of central location and spread of the measured literacy attributes or variables of the study. The box plot of a measured literacy attribute is displayed as a square box, with a centre point and whiskers. The 'centre point' in the box represents the mean value of the literacy attribute (thus a measure of spread). The upper and lower boundaries of the box represent the 25th and 75th percentile (thus a measure of spread). The 'whiskers' attached to the box indicate the magnitude of outliers, which is also the largest and smallest observation recorded on the attribute. The endpoints of the whiskers therefore indicate the range of the observed responses (thus another measure of spread). The median (measure of location) is also indicated in the box. The box plot therefore displays the measures of central tendency and spread in combination and links the two measures very neatly. By presenting box plots for ELL's and monolingual learners on the same plot for each measured literacy attribute, comparison between groups are presented graphically as well.

6. *Measures of spread variability:*

In addition to the measures of central tendency, measures of spread or variation describe a further property of a variable which might distinguish it from another variable. Measures of variability are concerned with the spread of the variables over the domain of variable values. Measures of spread include the range, percentiles, variation and standard deviation.

The measure of range is defined as the difference between the highest and lowest score in a distribution (McMillan & Schumacher, 2001:599) and represents the simplest measure of spread. The measure is unstable, and, therefore never used in isolation.

The most commonly used measure of spread is the standard deviation, which is derived from the variance. The variance is defined as the mean of the sum of squared differences from the mean. McMillan and Schumacher (2001:603) define the variance as, “generically the degree of spread or dispersion of scores; mathematically the square of the standard deviation”. The standard deviation, which is calculated as the square root of the variance is, according to McMillan and Schumacher (2001:601), “a measure of variability; a numerical index that indicates dispersion or spread of scores around the mean”.

Percentiles are also regarded as measures of spread, since they determine the various values on the value domain of a variable at or below which 10% or 20% or 30%...or 90% of the ordered values of a specific fall. With reference to the study a measured variable could be represented by reading assessment scores of learners.

The aforementioned discussion dealt with descriptive statistics, namely measures of central tendency and spread. These summary statistics are commonly used in the discussion results presented in Chapter 5. These statistics summarise information regarding location and dispersion of measured variables.

7. *The two-sample t-test:*

The literacy performance of ELL’s and monolingual learners were compared by means of parametric two-sample t-tests. The two-sample t-test determines whether a statistically significant difference exists between the means of a measured attribute of two groups (ELL and monolingual learners) from the same population (Grade 1 to 3 learners in schools in BC).

The t-test, as defined in McMillan and Schumacher (2001:602), is “[a]n inferential statistical procedure for determining the probability level of rejecting the null hypothesis that the two means are the same”. The definition applies to the null hypothesis that states the two group attribute means are the same, as opposed to the alternative hypothesis that either states the two groups means differ statistically significantly from one another, or, the one group mean is statistically significantly greater than the other, or, the one group mean is statistically

significantly smaller than the other group mean. In other words, that there is either statistically significant, or, no statistically significant differences between mean comprehension performance-levels, mean vocabulary levels and decoding levels of the monolingual and the ELL's. The three performance areas were addressed in three separate t-tests.

Of particular importance to this study, as indicated in the previous sentence, was the (i) comprehension component of the NARA assessment; (ii) the vocabulary component of the PPVT assessment; and (iii) the decoding abilities of the RAN/PA assessment. The performance levels of monolingual and ELL's were therefore further investigated using three independent t –tests which evaluated whether the mean values of any of these variables indicated that the performance level of the monolingual group differed statistically significantly from the performance level of the same variable of the ELL group.

The t-statistic of the two sample t-test can be calculated according to the two formulae listed below, depending on whether the group sizes are equal or not:

(a) The *t* statistic to test whether the group means are different (and when the two groups have an equal number of observations) can be calculated as follows:

$$t = \frac{X_1 - X_2}{S_{X_1X_2} \cdot \sqrt{\frac{2}{n}}}, \text{ where } S_{X_1X_2} = \sqrt{\frac{S_{X_1}^2 + S_{X_2}^2}{2}} \text{ and}$$

t is the t test statistic,

X_1 is the mean of one group,

X_2 is the mean of the second group,

and $S_{X_1X_2}$ is the pooled standard deviation of the two groups (group 1 for example the ELL learners and group 2 the monolingual learners). The degrees of freedom for the test is $2n-2$, where n is the number of participants in each group. The 5% level of significance is assumed for the test unless otherwise stated.

(b) The *t* statistic to test whether the group means are different (when the two groups have an unequal number of observations) can be calculated as follows:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S_{X_1X_2} \cdot \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}, \text{ where } S_{X_1X_2} = \sqrt{\frac{(n_1 - 1)S_{X_1}^2 + (n_2 - 1)S_{X_2}^2}{n_1 + n_2 - 2}}.$$

In this instance $S_{X_1X_2}$ is an estimator of the common standard deviation of the two samples. The degrees of freedom of the t-test is, n_1+n_2-2 , and the general 5% level of significance will be accepted unless otherwise stated.

8. *The Spearman Rank Correlation Coefficient (r ranks or Spearman rho)*

The reading and comprehension performance of ELL's and monolingual learners was correlated by means of the Spearman Rank Correlation. The Spearman Rank Correlation is a relationship technique that evaluates the strength and direction of relationship between two variables, in this instance, for example, the relationship between the ELL's and monolingual learners' reading and comprehension ability. This type of correlation is calculated when either or both the variables being correlated is/are measured on a discreet scale. The Spearman correlation coefficient therefore indicates the degree to which the values of the one variable increase (or decrease) as the other variable increases in value. If the correlation coefficient is positive, it indicates that the one variable increases in value when the second variable increases in value. If the correlation coefficient is negative, the value of the first variable will decrease when the value of the second variable increases, and visa versa (McMillan & Schumacher, 2002:614). The Spearman rho is for example used when ranks (listings of scores from highest to lowest) are available on each of the two variables. This was the case for the reading and comprehension scores- the scores were ranked and the ranks were analysed to determine type of relationship between the ranks of each variable.

The Spearman rho can be calculated according to the formula listed below:

- Step 1. Rank both sets of data X_s and Y_s from highest to lowest, (check for ties, all scores that are tied receive the average of the ranks involved).
- Step 2. Pair the ranked X_s and Y_s .
- Step 3. Calculate the difference in ranks for each pair.
- Step 4. Square each difference.
- Step 5. Sum the squared differences.
- Step 6. Substitute calculated values into the formula.

The formula is:

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

Where

$P = R$ (rho)

N = the paired ranks

D = the difference between the paired ranks

If the R's value is -1 , there is a perfect negative correlation. If it falls between -1 and -0.5 , there is a strong negative correlation and between -0.5 and somewhat below 0 , there is a weak negative correlation and if it falls in the region of 0 there is no correlation. Alternatively, if it falls above 0 and 0.5 there is a weak positive correlation between 0.5 and 1 , there is a strong positive correlation and it falls on 1 there is a perfect correlation between the two sets of data. If the R's value is in the region of 0 , the null can be accepted. If not it is rejected.

<http://www.angelfire.com/ga2/ibgeography/spearmans.html>

4.12 Phases of research

- Phase 1: Planning – analysing problem statement and research questions.
Select design and research methodology.
Obtain parental permission for research
- Phase 2: Capture data
- Phase 3: Correlate and analyse data
- Phase 4: Present data
- Phase 5: Discussion
- Phase 6: Conclusion

4.13 Conclusion

This chapter described the research methodology, research design, measuring instruments, research subjects, target population and sample method. The aspects of reliability and validity of the measuring instruments were also discussed. The analysis strategy used in the research was also provided. Chapter five presents a detailed discussion of the results, findings and deductions that could be derived from the analyses.

CHAPTER 5

PRESENTATION OF ANALYSES AND FINDINGS

5.1 Introduction

Chapter five presents the results of the qualitative and quantitative components of the complementary mixed model design which were performed on the research data collected in the survey. Qualitative data was collected from structured interviews and observation and the quantitative data, by means of a reading /comprehension test, a vocabulary test and a questionnaire. The analyses described in this chapter were based on the research methodology and analysis outlined and motivated in Chapter 4.

Inferences drawn from these results, including the subsequent deductions and recommendations, are described.

The qualitative results reported in this chapter guided the profiling of at – risk and not –at- risk HCD communities of learners. These results are discussed in section 5.2 of the chapter. Furthermore, the quantitative analyses results and deductions described in sections 5.3 to 5.4 of this chapter addresses the research objectives and answers the research question outlined in Chapter 1 and 4. Therefore, the research question is pertinent to Chapter 5 and is briefly recapped below.

The research objectives and research question stated in Chapter 1 , are collectively addressed in the main hypothesis stated in Chapter 4, namely:

H_{0m} :

There are no statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, comprehension, vocabulary levels and RAN/PA skills English when learners are exposed to first time literacy acquisition in a school/classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis:

H_{1m}:

There are statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, comprehension, vocabulary levels and RAN/PA skills when learners are exposed to first time literacy acquisition in a school /classroom environment where English is the language of instruction.

The objective underlying the basic research question is the evaluation of age appropriate English reading and comprehension, RAN/PA skills, receptive vocabulary levels in English first time literacy acquisition learners in order to compare, identify and profile an educational sub – community of learners who are at risk of experiencing a HCD.

Apart from the evaluation of the above mentioned literacy skills, the social, cultural, cognitive and attitude properties of the learner community analysed in the research – and presented in this chapter – assist in profiling the first time English literacy – acquisition learner population in more detail. This includes profiles on both the subset of HCD at – risk and not at risk learners.

The main hypothesis, sub hypothesis, their alternative findings will be linked and analysis deductions and findings will be linked and elaborated upon in a detailed discussion in Chapter 6.

5.2 Analysis and presentation of qualitative data

The qualitative analyses results reported below serve as a source of relevant information in identifying, describing and exploring an at -risk and not- at- risk HCD educational minority and in so doing complement the qualitative study to follow. The research objectives pertaining to the qualitative investigation are stated, elaborated upon and then realised. To this end, they support the primary aim of this study (see 1.2.1) and in addition the primary objective, which is to isolate and specify an at risk educational minority through the identification of the hidden comprehension deficit (HCD).

5.2.1 The identification of a “high risk” educationally vulnerable ELL population acquiring first time literacy (A research objective)

The main objective of the qualitative data collected in the study was to assist in profiling the HCD at –risk and not at – risk sub communities of ELL's with regard to their attitudinal, cultural and social

backgrounds. To this end background (cultural, social and linguistic) information was collected from parents of participating learners via interview questionnaires. The qualitative interview and observational responses were recorded as response categories and summarised as frequency distribution Tables. The biographical and attitudinal information is presented in a frequency Table and bar graph in sections 5.2.1.1.and 5.2.2.1.

5.2.1.1 Cultural and biographical background: Structured Parental Questionnaire Interview

Structured interview - questionnaire data was collected from the parents of the ELL's at the College. An interpreter from the College and or the Multi cultural services assisted the researcher during the interview. In addition data was collected from the parents of the monolingual learners at the local library, local community centre and local day care centre.

As described in Chapter 4, the parent - interview-questionnaire probed cultural/linguistic and societal aspects of participating learners. Please refer to Appendix A-2 for the complete questionnaire. The interview questionnaire consisted of thirty questions, and responses to each question were directly recorded by the researcher as one of a number of response-category options. The information collected was summarised in a composite frequency Table to describe and profile the monolingual and ESL cultural and social backgrounds of the participating learners according to the 30 biographical properties probed. Please refer to Appendix C-1 for the complete frequency table.

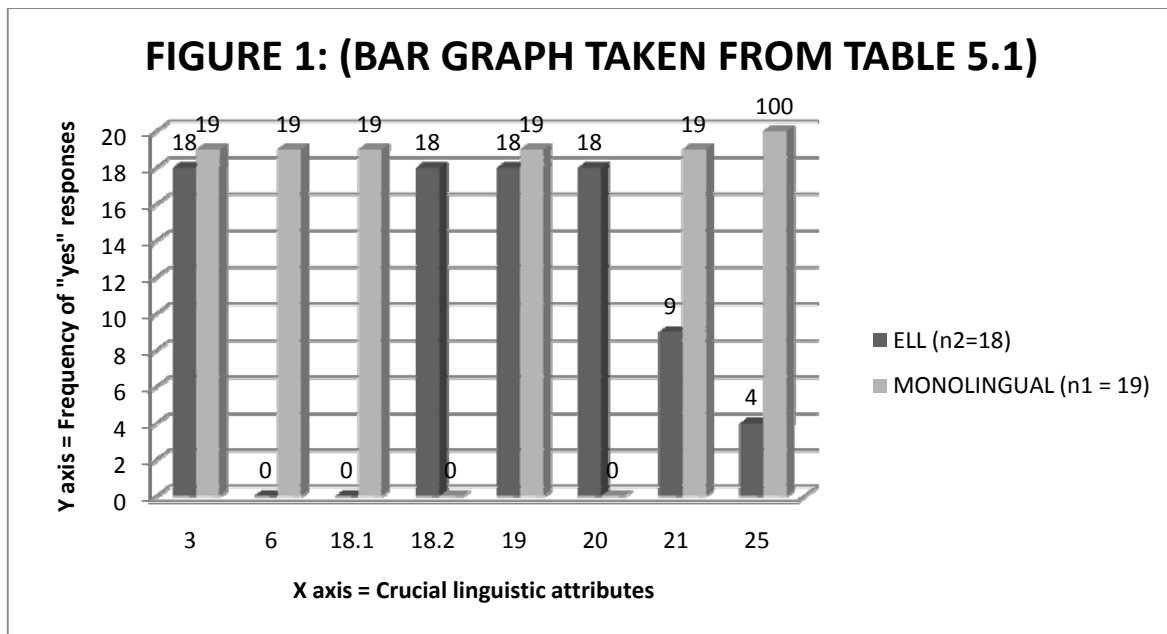
Questions 3, 6, 18.1, 18.2, 19, 20, 21 and 25 specifically described language properties of the sampled learner population and were regarded as crucial potential HCD at- risk indicators in further analyses. It was argued that the biological attributes pertaining to the cultural background of learners represented in (q 3) by 'place of birth' and 'residency', addressed in (q 6); English as 'mother tongue', or first language (q 18.1 and q 18.2); and proficiency in English and exposure to English (q 19, q 20, q 21, and q 25), acted as sound distinguishing indicators of English monolingual learners and ELL. Literature supports this assumption (see 2.2.2).They best portray the comparative background between the ELL learner, their families, the monolingual learner and their familial background. The questions selected are highlighted with an * on the questionnaire itself and the tabulated data (see Appendix A-2 and Appendix C- 1; C 1.1 for details).

The seven crucial attributes are listed in the condensed composite one-way frequency Table, Table 5.1 presented below. Table 5.1 furthermore illustrates the biographical trends underlying the condensed frequency distributions of Table 5.1.

Quest. no	Question	Monolingual (n ₁ =19)		ELL (n ₂ =18)	
		Frequency ('yes' response)	%	Frequency ('yes' response)	%
Q 3	Was learner born in Canada?	19	100	18	100
Q 6	Have parents resided in Canada their entire lives?	19	100	0	0
Q 18.1	English, as mother tongue, spoken at home?	19	100	0	0
Q 18.2	Mandarin, as mother tongue, spoken at home?	0	0	18	100
Q 19	Can you read /write in your mother tongue?	19	100	18	100
Q 20	Do you as a parent receive English tuition?	0	0	18	100
Q 21	Are you, the parent, able to read & write in English?	19	100	9	50
Q 25	Is your child exposed to English via friends?	19	100	4	22

The frequency distributions between English monolingual and ELL's on linguistic characteristics are illustrated in a bar graph plot presented in Figure 5.1

Figure 5.1 Bar graph - Linguistic Characteristics



5.2.1.2 Deductions from the structured interview-questionnaire analysis results

Table 5.1 indicates that all learners (both ELL's and monolingual learners) are born in Canada (q3). Monolinguals parents were born in Canada and have resided in Canada since birth. The ELL's parents were not born in Canada. They immigrated to Canada as adults and have therefore not resided in Canada for their entire lives. All the monolinguals spoke English at home while 0% of the ELL's spoke English at home (q 18.1). The home language of all ELL's spoken at home was Mandarin (q 18.2). Both monolinguals and ELL's parents were all able to read and write in their mother tongues (q 19), in other words, 100% literacy in the home language. However, only 50% of the ELL's parents were able to read and write in English (q 21) with the fathers being over represented in this group. This is not presented in the bar graph but is presented in the tabulated data (see C-1 and C1.1). Monolingual parents did not receive English tuition whereas 100% of the ELL's parents had participated in English tuition classes (q 20). Finally, the ELL's exposure to English through friendship was 22% where as the monolingual was 100% (q 23).

These findings on the biographical attributes indicate that ESL and English monolingual learner groups differed from one another with respect to parental residency in Canada, parent tuition in English, parent's ability to read and write English and learners' exposure to English through friendship with peers. Once the significance of differences of the two groups regarding HCD is validated and discussed in section 5.3, the profile of the two groups established in this section can be used to describe the at-risk educational minority within the BC education system. The same applies to the inference drawn from the observed reading attitude of learners discussed in the following two sections.

5.2.2 Exploration and description of ELL's acquiring first time literacy (A research objective)

As stated previously, the main objective of the qualitative data collected in the study, was to assist in profiling the HCD at-risk and not at-risk sub communities of ELL's with regard to their attitudinal, cultural and social backgrounds. To this end, information regarding reader attitude of participating learners was collected through structured observation of the learners by the researcher. The observational responses were recorded as response categories and summarised in a frequency distribution Table. The attitudinal information is presented in a frequency Table and bar graph in sections 5.2.2.1 to 5.2.2.2 which follow.

5.2.2.1 Background on attitude towards reading: Observation data

As mentioned in 5.1, ELL's' behaviour was observed during and after administration of the quantitative reading analysis which is discussed in section 5.3. The purpose of structured observation by the researcher during this period was to collect data on learners' attitude towards reading. The observational data was recorded by means of an observation chart. Eight aspects of attitude towards behaviour were evaluated namely;

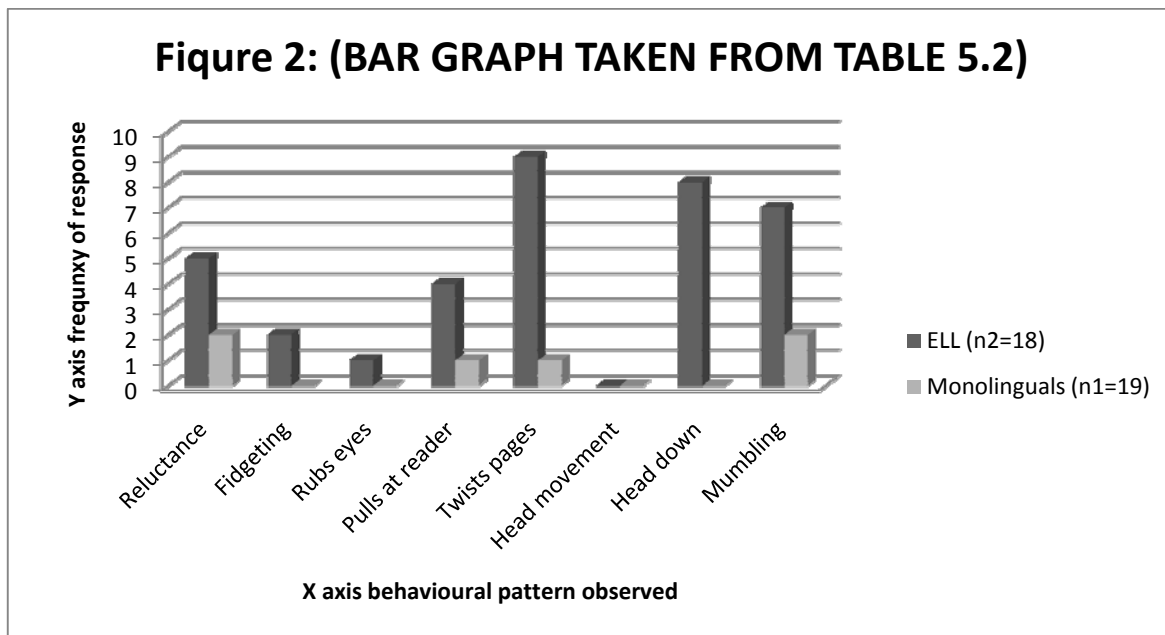
1. Reluctance to read
2. Fidgeting
3. Rubbing eyes
4. Pulling at the reader
5. Twisting of pages
6. Head movement
7. Head down
8. Mumbling.

The occurrence of these behavioural patterns during sessions were recorded for each child and are summarised in the frequency distribution presented in Table 5.2

No	Behavioural pattern observed	Monolingual (n ₁ =19)		ELL (n ₂ =18)	
		Frequency (occurrence)	%	Frequency (Occurrence)	%
1	Reluctance	2	10.5	5	27
2	Fidgeting	0	0	2	11
3	Rubs eyes	0	0	1	5.5
4	Pulls at reader	1	5.2	4	22.2
5	Twists pages	1	5.2	9	50
6	Head movement	0	0	0	0
7	Head down	0	0	8	44
8	Mumbles	2	10.5	7	38

The frequency distributions between English monolingual and ELL's on the eight behavioural patterns are illustrated in a bar graph plot presented in Figure 5.2

Figure 5.2 Bar graph – Behavioural Patterns



5.2.2.2 Deductions from reading attitude observational data analyses

The frequency distribution and bar graphs describing reader attitude indicate 27% of the ELL's were reluctant in beginning to read while 10.5% of the monolinguals were reluctant to begin reading. Eleven percent of ELL's fidgeted during the reading analysis while the monolinguals did not. Eye rubbing did not occur in the monolinguals; 5.5 % of ELL's were observed to rub their eyes. The pulling of the reader was observed in 22% of the ELL's while 5.2% of monolinguals were observed pulling at the reader. Fifty percent of ELL's' twisted the pages during the reading analysis while this was evident in 5.2% of monolinguals. Head down during the reading analysis was not recorded for the monolingual but was noted at 44% for the ELL's. In the observation category, it was noted that 38% of ELL's mumbled during the reading analysis while 10.5% of monolinguals were noted to have mumbled. These findings indicate that the ELL's tend to exhibit more negative reading patterns than monolingual learners.

The use of a parent interview-questionnaire and reading attitude observation chart has provided the researcher with comprehensive information on differences in the two learner groups' reading attitude and cultural/linguistic and environmental backgrounds.

5.3 Analysis and presentation of quantitative data

5.3.1 Introduction: Assessment of the Hidden Comprehension Deficit (A research objective)

The quantitative analyses results discussed below serve as confirmation in the exploration, description and quantification of the at -risk educational minority. The relevant research objectives are stated, elaborated upon and then realised in support of the second aspect of the primary objective which is to identify learners (or the group of learners) with the HCD.

As mentioned in 5.2 the primary objective of this study is to identify and profile an at -risk educational learner group experiencing HCD in BC. The qualitative analysis in the preceding two sections profiled two groups that differ with respect to social, cultural, linguistic and affective (pertaining to reading) attributes – the one of which the study hypothesises (ELL's) to experience HCD to a greater extent than the other. The purpose of section 5.3 in this chapter is to evaluate the existence of a significant HCD difference between these groups (English monolinguals and ELL's) and thereby confirm the research hypothesis and in so doing reject the null hypothesis. Once established, the profile of ELL's – as established in the qualitative analyses – can be attributed to ELL's experiencing a HCD.

5.3.2 Identifying, describing and quantifying the HCD associated with ELL's acquiring first time literacy in a second or third language (A research objective)

To this end (assessment of HCD) learner comprehension assessment data was collected on individual respondents via tests which were commented on in chapter 4, namely:

1. Likert semantic differential scale for young children -learners attitude to reading
2. Reading and comprehension – NEALE Reading Analysis (NARA)
3. A measure of the learners receptive vocabulary – The Peabody Picture Vocabulary Test (PPVT)
4. Rapid Automatic Naming- Phonemic awareness (RAN/PA)

5.3.2.1 Analysis results of the Likert semantic differential scale for young children – learners' attitude to reading

A semantic differential Likert rating scale questionnaire for young children was used to assess the attitudes of the learner toward reading (see Appendix B-1 and 4.9.2.1).The Likert scale consists of a six point agreement rating scale with agreement levels portrayed as happy, okay, bored don't care,

sad to scared smiley faces to accommodate the young respondents. The learner was asked to mark the face best expressing how they felt about reading with an X or pointing with a finger. Agreement level frequency distributions on feelings towards reading for both monolinguals and ELL respondents are reported in Table 5.3

Levels of agreement rating	ELL's		Monolinguals	
	Frequency	%ages	Frequency	%ages
Happy	8	44.4	4	21
Okay	6	27.7	8	42.1
Don't care	0	0	6	26.3
Bored	4	22.2	1	5.2
Sad	0	0	0	0
Scared	0	0	0	0
TOTAL	18	100	19	100

5.3.2.2 Analysis of the findings for the Semantic differential Likert scale

The levels of agreement on the reading attitude test ranges from the most positive reading experience ('happy') to the most negative experience ('scared'). If the frequency proportion of a more pleasant reading experience ('happy and okay') between monolinguals and ELL's is compared ($14/18 = 0.78$; and $12/19 = 0.63$), indications are that the two groups are more or less equally satisfied to read (with ELL's seemingly somewhat more satisfied). The ratio of ELL's who indicated that they were ('bored') when reading, namely $4/18 = 0.22$, implies a more negative reading experience. The 'bored' level indicated by the ELL 's may signify that these readers are simply not comprehending the text and are simply bored with the process of reading, an indicator of a more negative reading experience than 'don't care' which is in itself ambivalent. The frequency proportions of 'not pleasant' ('bored', 'sad', 'scared') reading experiences between monolingual and ELL respondents were thus calculated as 0.00 to $4/18 = 0.22$; which also indicated that substantially more ELL respondents did not have pleasant reading experiences.

The cultural differences between monolinguals and ELL's might have caused hidden bias in the assessment of reading attitude in this particular assessment, thus, loading the positive responses of ELL's somewhat to the positive side: Considering the Asian culture (ELL respondents come from Asian origins) where learners are told to behave, smile and not ask questions, the test question

might be loaded as Asian learners are expected to answer positively and therefore their responses might be misplaced.

With regard to the proportion of ELL respondents that exhibited an apathetic attitude ('bored') towards reading, namely 22.2%, literature mentions apathy as a cause for concern based on the argument that follows. Reading tuition strives to create an overall concept of the affairs described, rather than retrieving the meaning of individual words. This goal is reflected in a factor common to all significant theories of reading comprehension. Reading comprehension requires the construction of a representation corresponding to the state of affairs described in the text (Cain & Oakhill, 2007: xi). Research has indicated that a lack of reading comprehension is linked to behaviour disorder (apathy). Tomblin, Zhong, Buckwalter and Catts (2000) have posited a strong relationship between language impairment and the subsequent risk of developing a behavioural disorder. Their findings indicate that 29% of language impaired learners manifest and or present with a behavioural disorder. In the present study behaviour disorder manifests as apathy. The 22.2 percent reported in the current study appears to be on a par with Tomblin, Zhong, Buckwater and Catts.

I 'don't care' on the other hand (indicated by monolingual respondents in Table 5.3) is not defined as a behavioural disorder. Table 5.3 however, indicates a 22.2 percent boredom level amongst ELL's which also substantiates Cain and Oakhill's notion that meaning is an essential component to the reading process. ELL's by default have lower vocabulary levels than their monolingual peers. Therefore, they are unable to extract greater meaning from the text at hand thus increasing their boredom factor; they are unable to grasp the meaning of the reading lesson as efficiently as their monolingual compatriots.

In conclusion, it can be stated that notwithstanding external factors such as cultural bias, indications of more negative reading experiences were recorded for the ELL group.

In the following sections, assessment data and analyses results are presented for the three literacy comprehension tests: Neale Analysis of Reading Ability (NARA), Receptive Vocabulary test (PPVT) and the Rapid Automatic naming test- Phonetic awareness (RAN/PA)

5.3.2.3 Analysis results of the reading and comprehension assessment on ELL's and monolinguals – NARA

As indicated in chapter four, the Neale Analysis of Reading ability (NARA) was administered to all participating learner respondents. The aim of the NARA assessment was to evaluate the reading and comprehension abilities of both the comparison group (monolingual English learners) and the experimental group (ELL's). Table 5.4 and 5.5 present the assessment results on reading and comprehension ability of learners.

The chronological age (CR/Age), reading age (R/Age), comprehension age (C/Age), raw reading and comprehension assessment score (Raw/R, R/C) and standardised reading and comprehension score (Stand/R, Stand/C) and percentiles (R/%, C/%) on the NARA test is recorded for each respondent. Since standardisation ensures that measures are uniform (measures for standardised variables are interpreted exactly the same for each variable), comparison over variables is possible and valid. For this reason, the standardised scores for both reading and comprehension were thus the scores ultimately used for the comparative study.

The 'uniform' standardised scores were calculated as the raw scores divided by the standard deviation. Neale (Neale, 1997:25) observes that in educational research 15 raw scale points (divided by the standard deviation) converts to one standard deviation on the standardized scale. The standard deviation of a normal standardised scale has the property that 68% of respondents usually fall within one standard deviation of the standardised mean value of zero.

The implication of the previous paragraph is that approximately 68 % of learners, irrespective of the type of test (NARA, PPVT or RAN), taken from a national sample will have a standardised score within one standard deviation of the average and about 95 % will have a standardised score within two standard deviations of the average. Usually, tests are standardised so that the average standardised score automatically presents as 10, creating a constant and readily identifiable reference when gauging whether a learner is above or below average. Standardised scores unlike raw scores or %ages are more readily understandable and comparable over tests when looking at summary statistics of the various tests. The standardised comprehension scores are highlighted in the Table 5.4 and 5.5 respectively.

Results of the t-test for independent samples, calculated on the standardised reading and comprehension scores, as discussed in chapter 4, are presented in Table 5.5.1. The test was

executed to determine whether the monolingual and ELL's differ significantly from one another with respect to their reading comprehension assessment means as measured on the NARA comprehension assessment. (Refer to sub hypothesis 1, section 4.2.3 of chapter 4).

The NARA Questionnaire was administered to twenty ELL's and twenty monolingual learners. However, once the test scores were collected and analysed it became apparent that two ELL's (subject number 2 and no 10) and one monolingual learner's (subject number 1) assessment scores fell outside the 2 standard deviation criterion. Speaking to reliability and validity, the researcher recalled the learners, their parents and in the case of the ELL's a translator. Further questioning revealed that one ELL did not fall within the age limit as he was under six. There was apparently some confusion re the Chinese birth date which is calculated from conception as opposed to date of birth referred to in the questionnaire. The second ELL whose results indicated considerable disparity between her and her ELL peers raising alarm bells for the researcher was disclosed to be a special needs student after the recall interview. This had not been revealed in the questionnaire and was only revealed once a phone call was made to the classroom teacher (with the parent's permission). The monolingual learner removed from the study was of interest in that the NARA assessment placed his/her comprehension outside the 2 standard deviation criterion, again raising alarm bells. A call was placed to the mother. After additional questioning, it was noted that the learner was attending a French Immersion school and not an English speaking school. She had acquired literacy in French, a SL. In addition, both parents were fluent in English and French. Based on the above and in the interests of reliability and validity as described in chapter 4 (See 4.6), the researcher made the decision to remove the subject from the study. The total number of ELL and monolingual learners came to 19 and 18 respectively.

Appendix C-3 and C-3.1 shows the tabulation inclusive of the outliers. These Tables are included for reference purposes only and are not taken into consideration in the brief analysis below nor are they considered in the detailed discussion in chapter 6. Subjects number 2 and number 10 were removed from the ELL group with subject number 1, removed from the monolingual group. The outliers are indicated with "removed" in the standardised comprehension score column for easy reference.

Table 5.4 Reading and comprehension in ELL's (subjects) -
Neale Analysis of Reading Ability (NARA)

NARA ELL		(Subjects)							
Subject	C/Age	R / Age	C / Age	Raw/R	Raw/C	Stand/R	Stand/C	R / %	C / %
1	7.11	11.2	6.1	74	9	122	87	93	20
2	5.1	6.5	4	20	0		removed	60	1
3	8.7	9.1	8.1	62	16	108	94	70	34
4	7.5	8.1	6.1	42	9	106	91	66	28
5	8.6	9.1	6.2	69	17	112	97	78	42
6	8.11	11.4	6.2	75	17	114	94	82	34
7	7.1	11.5	8.1	76	20	123	108	94	70
8	7.5	10.1	6.5	64	7	120	87	91	20
9	7.5	7.2	6.1	31	5	98	83	45	13
10	7.2	<6	2	5	1		removed	3	1
11	7.6	7.1	6.1	39	5	102	81	55	11
12	7.4	8.1	8.7	51	18	112	110	78	74
13	8.2	9	7.4	53	12	106	90	60	26
14	7.3	7.7	6.7	36	8	102	89	55	24
15	6.4	7.2	6.4	30	6	108	99	70	48
16	6.1	7	4	28	2	110	89	74	24
17	6.7	7.2	6.1	31	5	106	90	66	28
18	7.8	7.7	6.1	36	9	100	89	50	24
19	7.5	7.9	6.7	38	8	103	89	58	24
20	6.4	6.11	6.4	27	6	106	99	66	48

Table 5.5 Reading and comprehension in monolinguals (comparison group) –
Neale Analysis of Reading Ability (NARA)

NARA									
Monolinguals (Comparison group)									
Subject	C/Age	R / Age	C / Age	Raw/R	Raw/C	Stand/R	Stand/C	R / %	C / %
1	8.2	9.04	<6.0	57	4	109	removed	72	4
2	8.4	8.09	8.07	50	18	102	101	55	52
3	6.7	6.11	6.1	27	9	103	102	58	55
4	7.2	7.11	7.09	40	15	107	107	68	68
5	8.9	10.6	10.4	68	26	110	108	74	70
6	8.5	9.01	9.1	54	24	105	109	63	72
7	7	7.08	7	37	10	105	98	63	45
8	6.9	8.04	8.07	45	18	113	115	80	84
9	7.1	8.03	8.01	44	16	103	102	58	55
10	8.4	8.11	8.08	52	19	104	102	60	55
11	8.2	9.09	9.1	61	24	111	111	77	77
12	8.9	9.04	8.1	57	20	103	100	58	50
13	7.7	8.01	7.08	42	14	104	101	60	52
14	7.3	8.05	8.07	46	18	109	110	72	74
15	7.2	9	8.01	53	16	115	109	84	72
16	6.5	6.11	6.05	27	7	106	102	66	55
17	6.8	7	6.1	28	9	104	102	60	55
18	6.1	8	7.04	41	12	110	105	74	63
19	8.2	8.1	8.07	51	18	105	103	63	58
20	7.11	7.09	7.07	38	13	99	96	48	40

Figure 5.3 Box plot – reading assessment (NARA assessment standardised scores)

NARA Reading Assessment

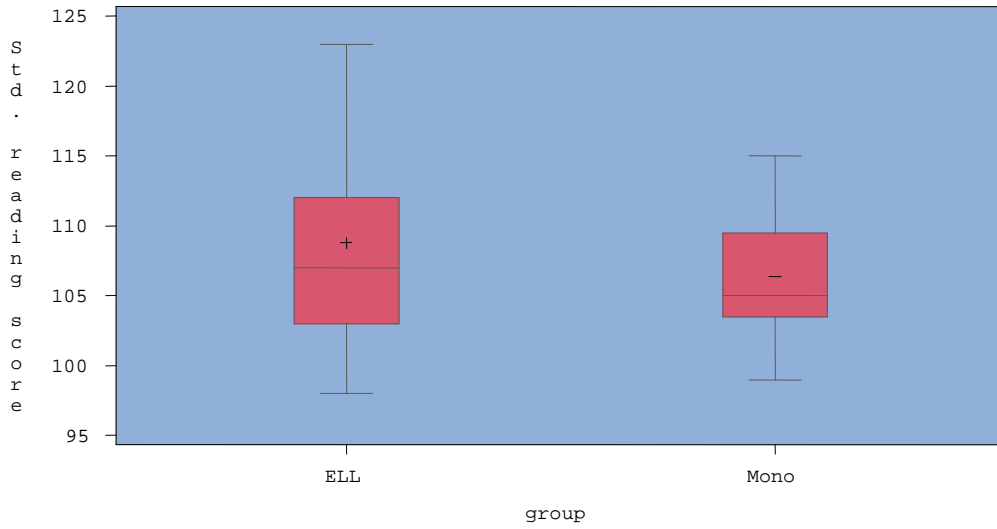
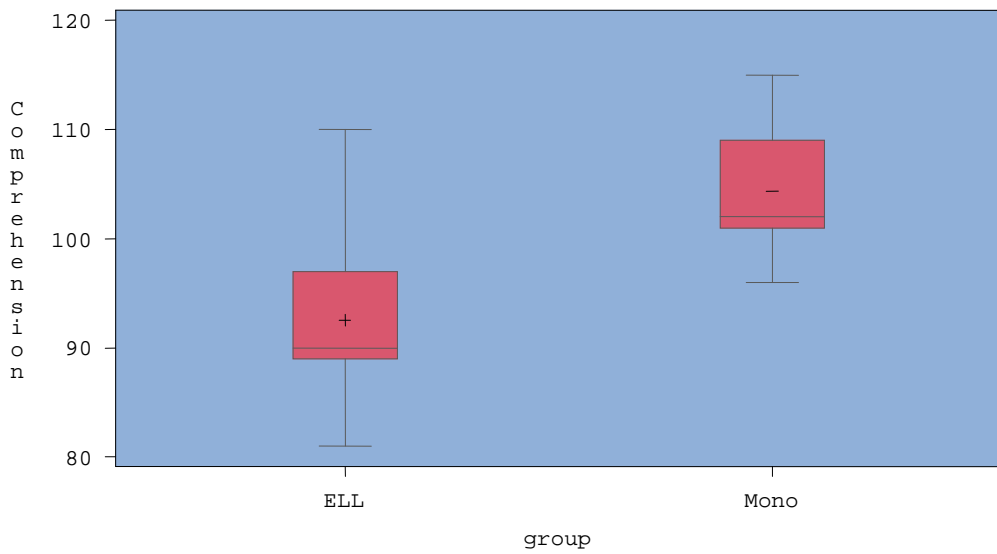


Figure 5.4 Box plot – comprehension assessment (NARA assessment standardised scores)

NARA Comprehension Assessment



5.3.2.4 Deductions from the NARA reading comprehension data analysis for ELL's and monolinguals

Visual inspection of the standardised reading and comprehension test results in Tables 5.4 and 5.5 seem to indicate that the performance of monolingual English learners are higher than that of the ELL's. Of particular importance to the study is the comprehension component of the NARA test and the performance between the two groups regarding comprehension was further investigated by means of a two-sample t-test for independent samples of unequal size (refer to chapter 4 in this regard).

A summary of t-test analysis results presented Table 5.5.1 indicates that the mean of the comparison-group's comprehension assessment was 104.4(monolinguals), whilst the mean comprehension assessment score for the subjects' group (ELL's) was 92.556. The standard deviation (std. dev) for the comparison group's comprehension assessment was 4.9127 and the corresponding statistic for the subject group's comprehension assessment was 7.670. The difference (D) in mean assessment scores between the groups came to 11.810. The unbiased estimator of the variance was calculated as 2.1 (S). The t-statistic, (the ratio of the D to S) was calculated as 5.540. The probability associated with the calculated t-statistic is less than 0.0001, which indicates to a highly significant difference in mean assessment scores for the monolingual and ELL groups. The null hypothesis of no difference in comprehension performance between monolingual and ELL's could thus be rejected in favour of the alternative hypothesis of monolingual learners' significantly higher performance than ELL's. The difference between the comparison group (monolingual) and the subjects (ELL) average comprehension scores for the NARA comprehension is highly significant. (< 0.001).

The t-test analysis results for the reading score could be interpreted likewise. In this instance however, the null hypothesis could not be rejected in favour of the alternative hypothesis. The results for the reading test could therefore not confirm a significant difference in performance between monolingual and ELL.

Correlation results in Table 5.5.1 indicates to a relatively strong, significant and positive relationship between standardised reading and comprehension scores of monolingual learners (0.84). The correlation implies that the reading and comprehension abilities of monolingual learners tended to perform in similar fashion, that is, performance in the one area would go hand in hand with performance on the other component. The same could however not be deduced for the ELL's. The correlation between reading and comprehension was only significant on the 10% level of significance

with a much lower correlation coefficient. This indicated that performance of reading ability did not necessarily follow the same trend as performance in comprehension.

In summary the difference between the comparison group and the subject group's comprehension averages is highly significant at the 0.1% level of significance and in addition further distinctions between the two groups became evident in that reading and comprehension ability for the comparison group was highly correlated while reading and comprehension performance in the experimental group did not indicate a significant correlation.

5.3.2.5 Peabody Picture Vocabulary Test (PPVT)

As indicated and discussed in Chapter four, the PPVT instrument evaluates comprehension of the spoken word in Standard English and is thus a measure of the learner's receptive vocabulary acquisition.

5.3.2.6 Analysis results on the assessment data of the Receptive vocabulary – Peabody Picture Vocabulary Test (PPVT)

Two ELL (subjects 3 and 7) and one monolingual (subject 1) the outlier/s' were removed from the data collected on the PPVT vocabulary assessment test (see 5.3.2.3). As described in the research methodology in Chapter four, the PPVT test was administered to twenty ELL's and twenty monolingual learners. In the interests of validity and a more reliable study (see 4.6) the researcher removed the outliers in both subject groups (the ELL and the monolingual group). Subjects number 3 and number 7 were removed from the ELL group and subject number 1 removed from the monolingual group. The outliers are indicated on the Table with the word "removed" in the standardised score column for easy reference. Appendix C –4 and C-4.1 shows the tabulation inclusive of the outliers. This Table is included for reference purposes only and is not taken into consideration in the brief analysis.

Tables 5.6 and 5.7 present the chronological age (Cr/Age), reading age or raw score (Raw/Score), vocabulary age (Vocab/age), standardised score (Stand/score) and percentiles for each ELL and monolingual learner. The standardised scores for each respondent were calculated as follows: the mean was calculated (by adding all the scores and dividing them by the number of scores). The variance was then established by squaring each deviation score, summing all the squared deviation scores and dividing the sum by the total number of scores (N).The square root of the variance yielded the standard deviation (STD). The standardised scores were then obtained by dividing the

raw score of each respondent by the standard deviation. The standardised scores were the scores ultimately best suited (see 5.3.2.3) and used for the comparative study. The standardised scores are highlighted in the Tables 5.6 & 5.7 respectively.

Results of the two sample t-test for independent samples, with unequal sizes, are presented in Table 5.7.1. The test was executed to determine whether the monolingual and ESL's differ significantly from one another with respect to their receptive vocabulary as measured on the PPVT. (Refer to sub-hypothesis three, section 4.2.3 of chapter 4).

Table 5.6 Evaluation of ELL's' (subjects) receptive vocabulary - PPVT

PPVT ELL (Subjects)					
Subject	Chron/Ag e	Vocab/Ag e	Raw/Scor e	Stand/Sco re	%ile
1	7.5	5.7	107	90	25
2	7.1	6.7	136	109	73
3	7.4	4.7	74	Removed	4
4	7.6	8	129	105	63
5	7.4	6.9	135	112	79
6	7.5	4.6	68	71	3
7	5.1	5.2	71	Removed	13
8	7.11	6.1	127	100	50
9	8.6	8.2	131	96	39
10	8.7	8.4	133	98	45
11	8.7	7.3	119	89	23
12	7.5	6.5	106	90	25
13	7.3	6.7	109	92	30
14	6.4	6.4	104	99	47
15	6.1	5.2	83	88	21
16	6.7	5.9	94	89	23
17	7.8	7.2	118	96	39
18	7.5	6.6	107	90	25
19	6.4	6.3	102	98	45
20	8.2	7.2	118	92	30

Table 5.7 Evaluation of monolingual (comparison group) learners' receptive vocabulary - PPVT

PPVT Monolinguals (comparison group)					
Subject	Chron/Age	Vocab/Age	Raw/Score	Stand/Score	%ile
1	8.2	9.7	148	Removed	86
2	8.4	9.1	142	108	70
3	6.7	6.6	116	107	68
4	7.2	5.6	89	83	13
5	8.9	9.1	142	101	53
6	8.5	9.1	142	109	73
7	7	6.1	99	88	21
8	6.9	9.2	143	126	96
9	7.1	8.4	133	106	66
10	8.4	8.6	135	101	53
11	8.2	9.4	145	113	81
12	8.9	9.3	144	103	58
13	7.7	7.1	126	102	55
14	7.3	8.1	130	108	70
15	7.2	8.3	132	112	79
16	6.5	7	116	109	73
17	6.8	6.11	115	103	58
18	6.1	8	128	111	77
19	8.2	8.8	137	106	66
20	7.11	8.2	131	104	61

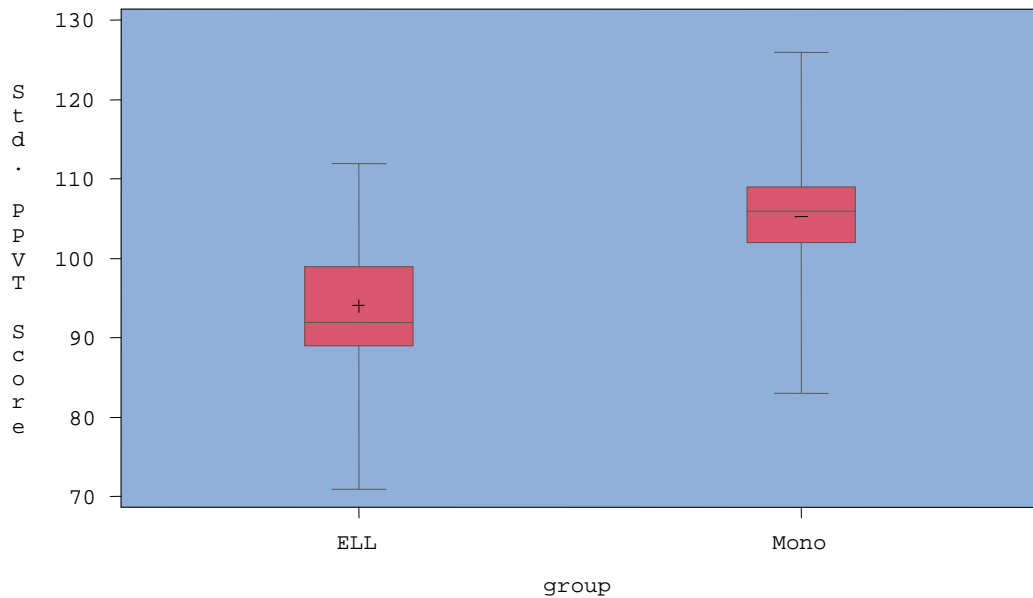
Results of the t-test for independent samples, as discussed in chapter 4 were calculated on the standardised scores and results are presented in Table 5.7.1. The test was executed to determine whether the monolingual and ELL learners differ significantly from one another with respect to their reading comprehension assessment means as measured on the PPVT receptive vocabulary and comprehension assessment.

Table 5.7.1 T-test results for small independent samples with unequal variances
(PPVT standardised vocabulary scores)

Table 5.7.1 T-test results for small independent samples with unequal variances (PPVT standardised vocabulary scores)		
Statistics	Monolinguals	ELL
Mean (Stand/C)	105.26	94.67
Std Deviation (Stand/C)	9.03	9.18
n ₁	19	18
<p>T-test for null hypothesis: $\mu_1 - \mu_2 = 0$ & alternative hypothesis: $\mu_1 > \mu_2$ Difference (D) = 105.26 - 94.67 = 10.60 $S_1 = 9.02984$; $S_2 = 9.18439$ $Std_D = 15.455$ T-test statistic = 3.5382 (Satterthwaite approximation) and, Probability (T_{statistic} = 3.5382) = 0.0012***</p> <p>Significance legend: ?: 10% level of significance *: 5% level of significance **: 1% level of significance ***: 0.1% level of significance</p>		

Figure 5.5 Box plot – Receptive vocabulary (PPVT standardised scores)

Peabody Picture Vocabulary Test



5.3.2.7 Deductions from the PPVT receptive vocabulary data analysis for ELL's and monolinguals

Visual inspection of the standardised receptive vocabulary score (PPVT) results in Tables 5.6 and 5.7 seem to indicate that the performance of monolingual English learners is higher than that of the ELL's. This first indication of difference in receptive vocabulary ability was further investigated by means of a t-test for independent samples of unequal size (refer to chapter 4 in this regard).

A summary of t-test analysis results presented in Table 5.7.1 indicates that the mean of the comparison-group's (monolinguals) comprehension is 105.26 while the subject's comprehension mean is 94.67. The std. dev for the comparison group (monolinguals) is 9.03 while the subjects (ELL's) std. dev is 9.18. The D (difference) between the means is 10.60 and the std. dev of the difference between the two means (S) is 2.995. The unbiased estimator of the two group's std.dev was calculated as 15. The t-statistic, (the ratio of the D to S) was calculated as 3.5382. The probability associated with the calculated t-statistic is 0.0012, which indicates to a highly significant difference in mean assessment scores for the monolingual and ELL groups. The null hypothesis of no difference in receptive vocabulary performance between monolingual and ELL learners could thus be rejected in favour of the alternative hypothesis of monolingual learners' significantly higher performance than ELL's. Thus the difference between the comparison group (monolingual) and the subject's (ELL) average scores for PPVT receptive vocabulary is highly significant (< 0.001).

5.3.2.8 Rapid Automatic Naming test –RAN/PA

The Rapid Automized Naming and Rapid Alternating Stimulus Test (RAN/RAS), as indicated in Chapter 4 measures the learner's ability to perceive a visual symbol such as a letter, and in this instance a sound and retrieve it accurately and rapidly.

5.3.2.9 Analysis results of the Rapid Automatic naming RAN/PA assessment on ELL's and monolinguals

The assessment results of n=19 comparison (monolinguals) and n=18 ELL (subject learners) on the RAN/PA test are presented in Tables 5.8 and 5.9. In the interests of validity and a more reliable study (See 4.6) the researcher removed the outliers in both subject groups (the ELL and monolingual group). Subjects number 5 and number 8 were removed from the ELL group and subject number 1 removed from the monolingual group. The outliers are indicated on the Table with the word "removed" in the standardised score column for easy reference. The chronological age (Cron/Age), RAN age (RAN/Age), raw score (Raw/Score), standardised score (Stand/Score) and percentiles for

each ELL and monolingual learner is listed. The standardised scores were the scores ultimately best suited and used in further analyses. The standardised scores are highlighted in the tables.

Results of the two sample t-test for independent samples with unequal sizes, as discussed in chapter 4, are presented in Table 5.9.1. The test was executed to determine whether the monolingual and ELL's differ significantly from one another with respect to their ability to perceive a sound and retrieve it instantly as measured on the RAN/PA assessment. (See hypothesis 2, section 4.2.3).

Table 5.8 Evaluation of ELL's (subjects) decoding/naming abilities - RAN/PA

RAN/PA ELL (Subjects)					
Subject	Chron/Age	RAN/Age	Raw/Score	Stand/Score	%ile
1	7.5	7.3	35	104	61%
2	8.6	10	26	105	63%
3	8.7	14	23	115	84
4	8.6	11.3	24	110	75%
5	5.1	6	59	removed	61%
6	7.11	13.6	23	125	95%
7	7.4	8	30	110	75%
8	7.6	7	36	removed	42%
9	7.2	6	56	81	10%
10	7.5	7	37	100	50%
11	7.5	9	27	119	90%
12	7.1	14	24	119	90%
13	7.3	7.9	32	108	70%
14	6.4	6.9	42	109	73%
15	6.1	6.6	43	113	81%
16	6.7	6.9	41	105	63%
17	7.8	8	31	104	61%
18	7.5	7	32	108	70%
19	6.4	6.9	40	111	77%
20	8.2	8.9	26	108	70%

Table 5.9 Evaluation of the monolinguals (comparison group) decoding/naming ability - RAN/PA learners

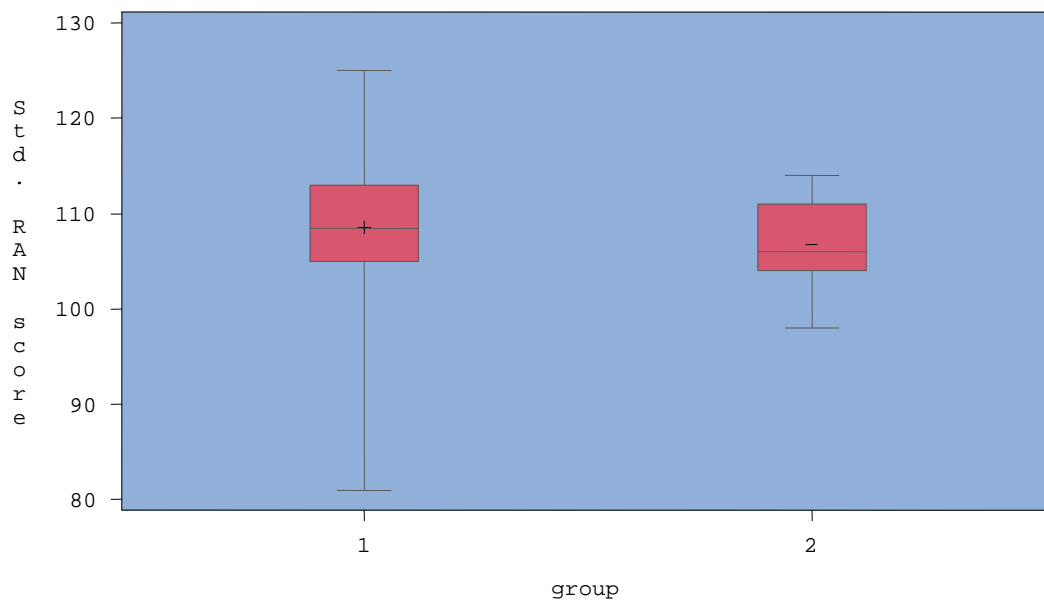
RAN/PA Monolinguals (Comparison group)					
Subject	Chron/Age	RAN/Age	Raw/Score	Stand/Score	%ile
1	8.2	11	25	Removed	81
2	8.4	8.06	28	104	61
3	6.7	6.09	39	107	68
4	7.2	7.06	33	107	68
5	8.9	14	24	111	77
6	8.5	8.06	28	104	61
7	7	7.06	33	106	65
8	6.9	8	31	114	82
9	7.1	7.09	32	103	58
10	8.4	10	26	108	70
11	8.2	12.03	25	112	79
12	8.9	9	27	103	58
13	7.7	8.03	29	106	65
14	7.3	8.03	29	111	77
15	7.2	8.06	28	114	82
16	6.5	6.03	49	102	55
17	6.8	6.09	42	104	61
18	6.1	7.03	35	109	73
19	8.2	8.06	28	105	63
20	7.11	7.03	35	98	45

Table 5.9.1 T-test results for small independent samples with unequal variances
(RAN/PA standardised score)

Table 5.9.1 T-test results for small independent samples with unequal variances (RAN/PA standardised score)		
Statistics	Monolinguals	ELL
Mean (Stand/C)	106.74	108.56
Std Deviation (Stand/C)	4.28	9.27
n ₁	19	18
<p>T-test for null hypothesis: $\mu_1 - \mu_2 = 0$ & alternative hypothesis: $\mu_1 > \mu_2$ Difference (D) = 106.74 – 108.56 = 1.82 $S_1 = 4.2797$; $S_2 = 9.26868$ $Std_D = 4.99$ T-test statistic = 0.7732 (Satterthwaite approximation) and, Probability (T_{statistic} = 0.7732) = 0.4446</p> <p>Significance legend: ? : 10% level of significance * : 5% level of significance ** : 1% level of significance *** : 0.1% level of significance</p>		

Figure 5.6 Box plot – Rapid automatic naming (RAN/PA standardised scores)

Rapid Automatic Naming Test



5.3.2.10 Deductions from the-Rapid Automatic naming RAN/PA analyses results for ELL's and monolinguals

Visual inspection of the standardised RAN score results in Tables 5.8 and 5.9 seem to indicate that the performance of monolingual and ELL's with respect to phonemic and rapid automatic naming as assessed with the RAN/PA test are more or less the same. This first indication was further investigated by means of a t-test for independent samples (refer to chapter 4 in this regard).

A summary of t-test analysis results presented Table 5.9.1 indicates that the mean RAN assessment of the comparison-group (monolinguals) was 106.74 and that of the ELL's group was 108.56. The std. dev for the comparison group (monolinguals) was 4.28 while the subjects (ELL learners) std. dev was 9.27. The difference (D) between the means came to 1.82 and the std. dev of the difference between the two means (S) to 2.352. The unbiased estimator of the two group's standard deviation was calculated as 4.99 (S). The t-statistic, (the ratio of the D to S) was calculated as 0.7732. The probability associated with the calculated t-statistic was 0.4446 which implies non significance. The null hypothesis of no significant difference in phonetic awareness and rapid automatic naming performance abilities between monolingual and ELL learners could thus not be rejected in favour of the alternative hypothesis of monolingual learners' significantly higher performance. Thus the ability-difference between the comparison group (monolinguals) and the subjects (ELL) for the RAN /PA assessment was not found to be statistically significant.

5.3.2.11 A comparison of t-test results for the NARA, PPVT and RAN/ PA tests: standardised means and standardised deviations

To conclude the section on the t-test results for the NARA, PPVT and RAN/PA literacy assessment, and to describe the literacy performance profile of ELL's with HCD, a comparison was made between the summary statistics of the NARA, PPVT and RAN t-test results. The means and standard deviations of the standardised scores on the reading, comprehension (NARA), vocabulary (PPVT) and phonetic (RAN/PA) tests are presented in Table 5.10. The means (and standard deviations) for both the ELL and monolingual learner groups are listed. Statistically significant differences between the standardised means of monolingual and ELL's for each attribute – as determined in the t-tests – are indicated with different small letters next to the means (if the letters do not differ, the means do not differ significantly). The Table allowed the researcher to evaluate the various aspects of literacy acquisition at a glance, and to indicate how the various assessment tests and their associated t-tests contributed towards answering the main null and alternative hypotheses of the research.

The interpretation of the combined results of Table 5.10 is discussed in section 5.3.3.1

Table 5.10 A comparison of summary statistics of the two sample t-test results for the NARA, PPVT and RAN/PA tests: standardised means (and standard deviations) and significant differences between comparison and ELL groups

Comparison of literacy levels of monolingual and ELL learners				
Standardised means (and standard deviations) for the monolingual and ELL learners as determined in the two sample t-tests on the NARA, PPVT and RAN/PA standardised assessment scores. Statistically significant differences between standardised means for monolingual and ELL learner groups are indicated with different small letters next to the standardised means for each literacy assessment test.				
Sample group	Literacy test:			
	NARA Reading	NARA Comprehension	PPVT Vocabulary	RAN/ PA
ELL	108.8 a (7.29)	92.6 a (7.68)	94.8 a (9.18)	108.6 a (9.27)
Monolingual	106.2 a (4.10)	104.5 b (4.91)	105.3 b (9.03)	106.7 a (4.28)

5.3.3 The main hypothesis of the study: Exploring, describing and quantifying the comparison between age appropriate comprehension, reading, vocabulary, and phonetics in ELL learners during first time literacy acquisition in the ‘high risk’ population defined for this study as compared to the monolingual learner group (A research objective)

5.3.3.1 Deductions from the NARA, PPVT and RAN/PA data for ELL and monolingual learners.

Based on the information presented in Table 5.10, it was argued that, although the literacy assessment figures of the NARA, PPVT and RAN/PA tests were not directly compared in a single statistical test, the fact that standardized scores were used for the individual two-sample t-tests on each standardised assessment data set, enabled the researcher to visually compare the t-test results side by side. Table 5.10 enabled the researcher to report on the performance trends over the reading, comprehension, vocabulary and RAN/PA attributes of literacy assessment that seem to emerge for (i) monolingual and (ii) ELL learners separately, and to compare the performance trends over these attributes between (iii) monolingual and ELL learners (The benefit of standardised means have been discussed in section 5.3.2.3 of this chapter).

(i) Visual inspection of the performance mean scores for the monolingual group over the four standardised literacy assessment means indicated that monolingual learners seem to perform almost equally well with respect to all four aspects of reading, comprehension, vocabulary and phonetics (all standardised mean assessment scores fall between 104.5 and 106.7). (ii) The same performance trend did not seem to be realized for the ELL’s: Performance on the literacy aspects of

reading and phonetics (decoding) appear to be higher - mean standardised scores of 108.8 and 108.6- (although statistical significance could not be attached to this) that literacy performance of ELL's on literacy aspects of comprehension and vocabulary (mean standardised scores of 92.6 and 94.8). (iii) Visual comparison of standardised mean scores between the two groups indicate that statistically significant differences exist between monolingual and ELL's on the literacy aspects of comprehension and RAN/PA. The monolingual learners' comprehension and RAN/PA performance in first time exposure to English as literacy language is statistically significantly superior to that of their ELL compatriots (results of the t-tests).

The visual comparison of the combined results provided a neat means of addressing the main hypothesis of the study which states that no significant difference exists between monolingual and ELL's with respect to literacy performance on reading, comprehension, vocabulary and phonetic aspects of English literacy acquisition. The argument in the preceding paragraphs proved (along with the sub-hypothesis findings for the individual t-tests) that the main null hypothesis can be rejected in favour of the main alternative hypothesis that states that ELL's and monolingual learners differ significantly with respect to the literacy acquisition aspects assessed in the study.

5.4 Overview and conclusion

This chapter focused on the results of the qualitative and quantitative components of the complimentary mixed model design which were performed on the research data collected with the purpose of isolating and specifying an at risk educational minority through the identification of the HCD.

To this end it was argued that a sub-group of English first time literacy acquisition learners reside in BC who are ELL's. It was postulated that this group represented the HCD at risk group. A profile of this specific group of ELL's in BC was compiled by means of qualitative assessment/ measuring techniques and analyses.(The profile was compared to a group of monolingual first time literacy acquisition learners who are referred to as the comparison group). It was furthermore argued that if, via quantitative assessment techniques, it could be verified that this particular profiled ELL group exhibited significant indications of HCD, the purpose of the research would be met, namely to identify and profile a learners' group that presented (significantly) more frequently with HCD than other monolingual first time English literacy acquisition learners.

Profiling of the postulated at risk group was achieved by collecting biographical and linguistic information from parents by means of a structured interview-questionnaires and from learners themselves by means of a structured observation in individual sessions where learner behaviour information was gathered (sections 5.2 of the current chapter).

It was further argued that HCD assessment and profiling, be determined via quantitative tests on the reading and comprehension (NARA), Receptive vocabulary (PPVT) and phonemic awareness (RAN/PA) and Likert semantic differential scales (section 5.3 of the current chapter).

The quantitative tests proved beneficial in identifying and assessing HCD while the qualitative evaluation served to identify and profile an at risk educational minority group. The at-risk HCD group, namely the school entry ELL group, was profiled in Table 5.1 as a group distinctive with respect to four biographical attributes, namely, parental residency in Canada (all immigrants), parent tuition in English (all parents receive English tuition), parent's ability to read and write in English (only 50% can read and write in English) and exposure to English through friendship with peers (only 20% of these learners are exposed to English through peers). This is supported in the literature review (see 2.2; 2.3 and 2.9) where globalisation, inclusive education and literacy are discussed and indicated as influential factors in these learners English language acquisition. In addition, Table 5.2 indicates marginal differences in anxiety levels between the monolinguals and the ELL, which links to Krashen's affective factor (See 2.5.1.1). These findings are elaborated upon in chapter 6.

The quantitative study - which assessed HCD - presented literacy attributes which identified significant statistical differences in learner ability (HCD indicators) regarding reading and comprehension (NARA), Receptive vocabulary (PPVT) and phonemic awareness (RAN/PA) and reader attitude.

The reading comprehension results (NARA) indicated significant difference between the comparison group and the ELL's comprehension averages, and a strong correlation between reading and comprehension scores of monolingual learners but not for ELL learners.

The Receptive vocabulary (PPVT) findings verified a highly significant difference between the comparison group (monolinguals) and the subjects (ELL) group.

The RAN/PA assessment on the other hand indicated no significant differences between phonetic awareness of the comparison group (monolinguals) and the subject (ELL's) group.

The aforementioned speaks to the primary objective, namely, the identification (isolate) and profiling (specify) of an at-risk educational minority and the presence of the HCD: The ELL's were identified as the HCD group and were profiled as a group of learners whose parents had immigrated to BC, who were not fluent in English, attended English classes for immigrant resident of BC, whose children did not speak English at home and whose children did not come into contact with English speakers as their peers and playmates. The ELL's were further identified as learners who on average performed significantly poorer than monolingual learners on the comprehension and RAN/PA aspects of first time English language acquisition.

Both modes of investigation attended to the secondary aims of the study which was to provide curriculum developers and teachers a framework for and awareness of vocabulary development, comprehension levels and the attendant barriers to meaningful learning.

In conclusion, the primary, general and secondary aims of the study have been realised.

CHAPTER 6

SUMMARY, CONCLUSIONS AND RECOMENDATIONS

6.1 Introduction

Throughout the previous chapters of this dissertation, the focus of the present study namely, the ELL acquiring first time literacy in a second language namely English in Grades 1, 2 and 3 when that language is not spoken at home has been delineated. The relevant literature has been reviewed in Chapters 2 and 3. Chapter 4 detailed the research methodology while Chapter 5 presented the findings of the investigation. Chapters 1 through 5 systematically align the objectives for the study, creating the framework for the main purpose of the study, which is to test the hypothesis namely:

H_{0m} :

There are no statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, comprehension, vocabulary levels and RAN/PA skills and when learners are exposed to first time literacy acquisition in a school/classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis:

H_{1m} :

There are statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, comprehension, vocabulary levels and RAN/PA skills when learners are exposed to first time literacy acquisition in a school/classroom environment where English is the language of instruction.

And the sub hypothesis:

Age appropriate reading, H_{01} :

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis, H_{11} :

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

For performance on vocabulary levels, the null hypothesis H_{02} states that,

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on vocabulary levels when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis, H_{12} :

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on vocabulary levels when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

For RAN/PA skills evaluation, H_{03} :

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on RAN/PA skills when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis, H_{13} , that states that,

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on RAN/PA skills when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

The performance on English comprehension can be evaluated against the null hypothesis of, H_{04}

There is no statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English)

evaluated on English comprehension when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

As opposed to the alternative for this hypothesis, H₁₄, namely,

There is a statistically significant difference in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated on English comprehension when learners are exposed to first time literacy acquisition in a school and classroom environment where English is the language of instruction.

Having attended to the objectives and the problem statement of the study in the previous chapters, Chapter 6, the concluding chapter for this study, summarises the findings of both the literature review and the empirical study and aligns them with the objectives and the problem statement which all substantiate the hypothesis and sub hypothesis. The chapter begins with an overview of the objectives and a summary of the findings of the literary review. The findings of the comparative approach to the mixed model research design study, namely the empirical study are then viewed in relation to the theoretical propositions found in Chapter 2 and 3. This enables the researcher to isolate and specify the postulated at risk educational minority through the identification of the HCD thereby attending to the purpose, focus and objectives of the study.

Finally, conclusions are drawn from the literature review and the empirical investigation. Recommendations are made and the limitations of the study are deliberated and noted.

It should be noted, however, that the conclusions drawn are relevant to ELL's who participated in the study. However, the conclusions may be applicable to many ELL's not only in British Columbia but those mentioned in Chapter 2, section 2.2.2.

6.1.1 Overview of the objectives

The primary objective of the study was to isolate and specify an at risk educational minority through the HCD. Accordingly in support of and in order to sustain the primary objective, the general objectives were addressed namely:

1. To explore the cognitive, academic, cultural and social reality of ELL's acquiring first time literacy and their needs within the culture of inclusion prevalent in today's classroom.

2. To identify a high risk, i.e. educationally vulnerable, ELL population acquiring first time literacy.
3. To explore and describe ELL's acquiring first time literacy.
4. To identify, describe and quantify the HCD associated with ELL's acquiring first time literacy in a second or third language.
5. To explore, describe and quantify the comparison between age appropriate reading, vocabulary, Rapid Automatic Naming (RAN/PA) and comprehension in ELL during first time literacy acquisition in the high risk population identified for this study.

In alignment with the objectives aforementioned, the literature review analysed various aspects of globalisation, inclusion, language acquisition, proficiency, vocabulary levels and how they influence reading comprehension. In so doing, provided a framework for the empirical investigation, namely a comparative approach to the mixed model research design and a complementary mixed method approach to the mixed model research investigation. The qualitative investigation intended to create a precise portrait of the ELL acquiring first time literacy. While the quantitative investigation determined statistically how the variables reading, comprehension, RAN/PA and vocabulary affect reading comprehension, more specifically the reading comprehension deficit in ELL's acquiring first time literacy in English.

6.2 Summary of the literature review

6.2.1 Introduction

The main undertaking of the literature review was to explore a synthesis of current research on globalisation, inclusive education and how they relate to and affect early language acquisition, language structure, vocabulary development and its intrinsic underpinning of comprehension. The study focused on monolingual rich literature, providing a workable theoretical framework for the comparative study of the ELL acquiring first time literacy in English. The study identified, highlighted and then focused on the attendant divergent background, SLA, vocabulary differentials and deficiencies, comprehension differentials and deficits and ultimately the academic outcomes of the ELL. The literature review created the propositional theoretical framework for the comparative investigation where the at-risk educational minority was identified through the isolation of the HCD. Based on an extensive and complex topic and therefore literature investigation, the theoretical findings from the literature review established the profile of the at risk educational minority. For the purposes of concluding the study, the main findings of the literature review will be illuminated.

The findings of the literature review are discussed below as they pertain to globalisation, inclusive education, socialisation, culture and more specifically the language, vocabulary and comprehension variables in SLA. In addition, it references how time and quality of exposure affect SLA.

6.2.2 A summary of the findings of the literature review

The discussion on globalisation (See 2.2) isolated and defined a demographic population of learners who by virtue of circumstance, (born to non English speaking immigrant parents in an English speaking country) are identified as the postulated 'at risk educational minority', when they pursue first time literacy acquisition in English.

Inclusive education was briefly discussed in order to elaborate upon the academic more specifically the classroom environment of the postulated at risk educational minority. In addition, the discussion on inclusion will attend to and facilitate the recommendations of this study which are discussed in section, 6.5.

The findings of the literature research describes inclusive education as an ideology that embodies the disparate ideals of excellence and equity and by nature is evolutionary as it tends to the dynamic learner population it serves. The discussion on inclusion (2.3) raised the salient question: are the ELL's acquiring first time literacy in English being served by the ideals of inclusion? The findings of the discussion on inclusion were namely, with the demographic identification of the postulated at risk educational minority, the framework of action will (in line with the ideals of and the evolutionary process that is inclusion) further research, build a support structure and encompass the diverse needs of this postulated at risk educational minority. This will embody and fulfill the ideals of excellence and equity as inclusion evolves and serves all learners including the vulnerable ELL's acquiring first time literacy in English.

As aforementioned, the literature review's main focus after establishing and identifying the ELL profile, was to explore early language acquisition, SLA, language structure, vocabulary development and its intrinsic underpinning of comprehension in both the monolingual and the ELL. The findings of the literature research, revealed the disparate trajectories of language acquisition in the monolingual and the ELL. In addition, it highlighted the communication proficiency (see 2.6), the vocabulary (see 2.11) and comprehension (see 3.2.2) of the ELL as being in a differential deficit when compared to the monolingual.

The cultural and familial social background of the ELL, were found to be equally divergent when viewed against those of the monolinguals in the English speaking classroom.

LEP, as noted in the literature review, identifies the ELL within the English classroom as the postulated at risk educational minority, by virtue of the limited language proficiency, vocabulary (see 2.11) and comprehension (see Chapter 3) manifested in the ELL. Furthermore, social and cultural dissonance (see 2.2.3.1 & 2.2.3.2) was revealed in the literature and contributes to the postulated at risk educational minority, whose needs are not aligned with the needs of the monolingual either linguistically or culturally. In addition, the needs of the ELL in the classroom are not addressed in the area of first time literacy acquisition in a second language by the curriculum, teacher and school.

In conclusion, the literature review revealed a postulated at risk educational minority identified through, demographics, cultural and socialisation criteria. In addition to and more specifically, the findings further outlined the specific linguistic differences and deficits, which identify this postulated at risk educational minority.

The objective of the literature review was addressed by delineating and specifying a postulated at risk educationally vulnerable learner, demographically, culturally and socially. Furthermore, the review created a theoretical framework for a comparative investigation on language acquisition in both monolinguals and ELL's, by portraying the differences and deficits of the ELL, linguistically and affectively when compared to their monolingual peers. In so doing, a postulated vulnerable at risk educational minority was identified and isolated in terms of demographics, culture, socialisation, LEP, comprehension, vocabulary differences and deficits and affective factors. The literature review aligned the theoretical framework with the objectives of the study and with the proposed empirical investigation.

The literature was synthesised, reviewed, and analysed with the results providing a framework for the research data collection. The literature review spoke to and supported an empirical investigation of a complementary mixed mode (both a qualitative and a quantitative investigation) which is summarised and reviewed in the next section.

6.3 Summary of the empirical findings

6.3.1 Introduction

The findings from the literature review revealed the disparate trajectories taken by monolinguals acquiring language and SLA by the ELL's (see 6.2). These findings formed the theoretical framework for and more importantly informed the Empirical investigation.

The primary aim of the study (see 1.2.1), the primary objective (see 1.5), the general objectives (see 1.5), the problem statement (see 1.3) and the research question (see 1.7) informed the literature review and in turn, inform the empirical investigation. The objectives, literature review and empirical investigation along with the sub hypothesis findings align to not only inform the main alternative hypothesis (see 1.8) but to confirm the main alternative hypothesis and reject the main null hypothesis. The findings of the qualitative investigation are summarised below.

6.3.2 Summary of the Qualitative study findings

The main undertaking of the qualitative study was to establish a profile of the ELL in order to underpin or add substance if you will to the quantitative study. The literature review, having identified the demographic, cultural, social and linguistic isolation of the ELL provided the framework for the micro ethnographic study. The micro ethnographic study by means of a questionnaire (see Appendix A-2) and structured observation (see Appendix B-2) elaborated upon and identified the at-risk educational minority, by illuminating the linguistic, cultural and societal background of the ELL (see 4.9.1.1 and 4.9.1.2). In so doing, the first component of the primary objective (see 5.2.) and the general objectives for the study were addressed. The micro ethnographic study (see 5.2) underpinned by the literature review (Chapters 2 and 3) revealed a profile of the ELL as having a linguistic, cultural, social and affective differential deficit when compared to the monolingual learner.

The findings of the literature review, ratified by the qualitative micro ethnographic investigation as aforementioned, addressed the first component of the primary objective, and the general objectives, namely to isolate, identify and explore an at- risk educational minority (see 6.1.1). In so doing, the literature review and the qualitative investigation complement and inform the quantitative investigation to follow.

6.3.3 Summary of the quantitative study findings

Having identified the at risk educational minority linguistically, culturally, socially and affectively, in the literature review and in the subsequent qualitative investigation, the quantitative investigation addressed the second component of the primary objective, namely the identification of the HCD, as stated in the primary objective (see 5.3).

The general objectives and the first component of primary objective aforementioned were addressed, namely the at-risk educational minority who have been specified and isolated by highlighting the linguistic, cultural, societal and affective differentials and deficits between the monolingual and the ELL's. The quantitative investigation then focused on the identification of the HCD which addresses the second component of the primary objective, informs the research question (see 1.7) and ultimately supports the hypothesis statement as stated in 6.1.

The instruments used in the quantitative study, namely the NARA, RAN /PA and PPVT, revealed variables which have statistical relevance relating to and which inform the second component of the primary objective, namely the identification of the HCD. The findings in the comparative study were that the differences in reading comprehension (NARA) (see 5.3.2.3) and receptive vocabulary (PPVT) (see 5.3.2.5) were highly significant between the monolinguals and the ELL's revealing a deficit differential in the ELL's. While the RAN/PA and reading (NARA) (see 5.3.2.8) variables were not statistically significant. Considering the significant difference between monolinguals and ELL's in retrieving meaning from passages read and vocabulary levels, the findings of this study indicate a significant difference between the monolingual learners and ELL's' reading comprehension and vocabulary levels. The study also indicates that the reading ability and the RAN/PA ability of the ELL's are not statistically significant. The significant difference in reading comprehension and vocabulary indicates the presence of a CD postulated in the primary objective. On the other hand, the findings of the RAN/PA and reading variables as being not statistically significant, contribute to, the hiding or masking CD, thus, confirming the presence of the HCD. Comprehension difficulties and attendant vocabulary deficiencies are experienced by typically developing learners, termed typically developing in that they have do not have developmental, neurological damage nor do they have sensory impairments. This study has focused specifically on learners who are typical and are acquiring first time literacy in a second language. They have acquired age appropriate reading skills but with attending comprehension skills in a deficit when compared to their monolingual peers. The nature of the HCD and the causal variables have been elaborated and deliberated upon in the aforementioned summary.

In sum, the findings of the qualitative study, underpinned by the literature review, reveal the presence of an at risk educational minority linguistically, culturally, socially and affectively, satisfying the first aspect of the primary objective and the hypothesis. While the findings of the quantitative study reveals the presence of the HCD and in addition identifies and specifies the ELL acquiring first time literacy in a SL; thereby speaking to the second component of the primary objective. The empirical investigation is underpinned by the literature review. The following section will discuss the summary of the findings and draws a conclusion which indicates whether or not the hypothesis has been confirmed or not.

6.4 Conclusions from the literature review and empirical investigation

6.4.1 Introduction

One of the most astonishing feats of the young learner is the seemingly effortless ability to acquire language. With regard to spoken language development, the early years or preschool years are highly representative of this notable feat. As the learner enters school, the learner is required to use the newly developed language skills which have been accumulating over the past five to six years, as instruments to further learning in other words reading and writing. The critical importance of these language skills both written and spoken suggest that differences and deficiencies determine the extent of the risks involved in academic competence and ultimately academic outcomes. What then becomes of learners who do not possess the relevant language skills upon school entry? Classrooms today are filled with learners with varying degrees of “word poverty” (Moats, 2001:8) or language deficit, each learner with different needs and disparate causes. However, what happens to these limited language proficient (LLP) learners as they embark on their academic futures has serious consequences for the rest of their lives. Hart and Risley (2003) chillingly referred to this bleak reality and its serious implications as “The early catastrophe” in a study on the meaningful differences on American learners: a catastrophe for the learners, their peers, the classroom, school, curriculum and finally society where, with the resultant poor academic outcomes, the learners’ futures are compromised and at risk.

This study has focused on the ELL acquiring first time literacy in a second language namely English in Grades 1, 2 and 3 when that language is not spoken at home. The objective, was to isolate and specify an at- risk educational minority through the identification of the HCD.

In other words, an investigation into typical learners who have not acquired the relevant language skills when entering formal schooling, who, in varying degrees manifest Moat’s “word poverty”.

The critical importance of language skills both written and spoken, suggest that differences and deficiencies determine the extent of the risks involved in the academic competence and ultimately academic outcomes of the ELL.

In the light of the findings in Chapter 5, and the aforementioned summary, the literature review and the empirical investigation responds to and addresses the main hypothesis posed in Chapter 1 namely,

H_{0m} :

There are no statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, RAN/PA skills, vocabulary levels and English comprehension when learners are exposed to first time literacy acquisition in a school/classroom environment where English is the language of instruction.

As opposed to the alternative hypothesis:

H_{1m} :

There are statistically significant differences in literacy performance of ELL's (whose home language is other than English) and monolingual learners (whose home language is English) evaluated against age appropriate reading, RAN/PA skills, vocabulary levels and English comprehension when learners are exposed to first time literacy acquisition in a school/classroom environment where English is the language of instruction.

Therefore, it can be concluded that the at-risk educational minority exists, identified by their cultural and linguistic differentials and deficits and the presence of the HCD.

The phenomenon aforementioned "makes the slow growth of vocabulary in the early years far more ominous than it appears when viewed as one unfortunate phenomenon" (Wolf, 2007:103). Wolf summed the essence of this study up in her statement "Literacy acquisition never just occurs. Not a word, sound, concept, or a social routine is wasted in the 2,000 days" (Wolf, 2007:107) that prepare the young learner for literacy acquisition. It is there from the start – or not with consequences for the rest of the learners' literacy development, academic outcome and for the rest of their lives (Wolf, 2007:107).

Founded on the conclusions aforementioned, the following recommendations are made.

6.5 Recommendations

The following section outlines certain recommendations for possible further research.

1. The validity of the HCD has not been established in the literature and empirical investigation. This phenomenon demands further research and is essential in order to minimise risk and ensure adequate support for the ELL acquiring first time literacy in a language not spoken at home.
2. Based on the HCD aforementioned, listening comprehension in the early years for those learners acquiring first time literacy in a second language requires further research and is essential not only in support of minimising the HCD but in order to minimise academic risk and promote positive academic outcomes.
3. The sample used in this investigation was demographically isolated and small in number. The obvious recommendation is to extend the sample to include all ELL's acquiring first time literacy in English speaking countries with large immigrant populations.
4. A longitudinal study, investigating learners acquiring first time literacy in a second language, specifically with emphasis placed on the fourth grade slump, academic outcomes and school dropout rates of the ELL acquiring first time literacy in a second language, is an area in which more research could be conducted.
5. Findings from the aforementioned could inform curriculum planning, teaching methods and teacher awareness through further research.
6. The effect of teacher's attitudes to and on ELL's acquiring first time literacy and how this relates to the ideals of inclusive education is an aspect in which further research would be beneficial.
7. The effect of linguistic isolation (the omega children) compromised literacy levels as outcomes of compromised language and how these variables impact the learners' emotional and psychosocial development requires further research.
8. The LEP of ELL's is generally recognised as being disadvantaged. Chapter 2 and 3 have attempted to outline the effects of the differential and deficit aspect of such limitations and therefore highlighted the disadvantages these learners inherently face upon school entry. There have, however, been very few findings for the remediation of the differential and deficit variables in the ELL acquiring first time literacy in a second language. Vocabulary building through information rich and culturally relevant texts, in addition, developing extracting meaning from written text and comprehension skills for the at- risk educational minority in the early grades, are noteworthy areas for research.

9. Opportunities to exploit time and quality exposure to the second language prior to school entry, is another area worthy of further research. Considering a kindergarten vocabulary and language rich/enrichment program may provide a positive result for the ELL as he/she embarks on literacy acquisition in Grades 1, 2 and 3.
10. A vocabulary enrichment program in support of literacy acquisition is worthy of further research.
11. Refining the reading assessment analyses format whereby comprehension is not only included in the analyses but becomes a greater part of the reading analysis thus creating the big picture. Presenting a balanced investigation into reading comprising of both decoding and comprehension is an area demanding further research if we are to understand and address the needs of this vulnerable ELL.
12. Considering the teacher's constant need to know where a learner's abilities lie both in decoding and comprehension, an analysis instrument that is easily integrated into classroom assessment such as a graded reading scheme with attendant comprehension questions could be designed to refine both reading and comprehension assessment within the classroom. Having the instrument readily available to teachers in the classroom ensures that the dynamic vocabulary and comprehension levels are instantly available to the teacher who with the attendant remediation program is able to address the needs of the learner daily or weekly. Further research in this area is a must.
13. There is a need to explore programs involving parents, specifically mothers or care givers in simultaneous language and literacy acquisition programmes, where learners and mother/caregivers learn simultaneously. This has an advantage as it taps into the cognitive maturity of the adult who is already literate in the home language and is able to transfer those skills to the second language and literacy acquisition in that second language. This process will support the learner in his/her quest for literacy acquisition in a second language. Further research in designing a buddy program of this nature would be beneficial to both learner and parent and ultimately society.
14. The present study involved learners in Grades 1, 2 and 3 which represents a small fraction of the ELL's familial profile. Future studies could investigate the influence of older siblings who are familiar with English and reading in English on the ELL learner acquiring first time literacy, along the lines of the buddy system aforementioned. Moreover, examining the dynamics of the circumstances at home may reveal a rich source of information for further research on curriculum planning.

The aforementioned recommendations speak to the essence of inclusion and further more embody exciting initiatives and opportunities to investigate the salient question: Are learners served by the definition and goals of inclusion? The recommendations address the framework of action (see 2.3) which encourages schools to invest in a learner centred pedagogy thereby supporting all learners and further investigation.

Further research is essential if Inclusive education is to embody Naylor's vision of pursuing equity and excellence for both learners and educational institutions.

In sum, the area of SLA and simultaneous literacy acquisition in the early years as young learners enter formal schooling is in its infancy. It has exciting possibilities notwithstanding the desperate need of these learners for support. Not only support in the general term but support which is founded on their needs and facilitates progress.

6.6 Limitations of the study

The study was limited both in number of subjects and the demographic location of the subjects. These factors amongst others do impinge upon the reliability and validity of the study.

The findings of this study were derived from a small number of demographically isolated subjects and will need further research for generalisation. The studies external validity is affected, since external validity has to do with the extent to which the results of the study can be generalised from samples to other subjects and conditions (McMillan & Schumacher, 2003:591). It does, however suggest that in the pursuit of excellence and equity that is the goal of inclusive education, further and more in depth research will not only be useful but is essential.

In addition, the findings were derived from Mandarin speaking learners and may interfere with the reliability of the findings due to the subjective nature of the data gathering. The data was limited to the Mandarin speaking population and may therefore not be consistent in other second language groups. Reliability speaks to the extent to which measures from a test are consistent (McMillan & Schumacher, 2003:599). Further research in all second language groups is necessary, thus creating a more relevant, consistent and applicable study.

The instruments used to assess the comprehension and the vocabulary levels would have been more accurate and reliable had they been linguistically, culturally and affectively sensitive, in so

doing, rendering the findings applicable to all language groups, cultures and thus creating a more relevant and applicable investigation.

6.7 Concluding remarks

This chapter has brought the research to its culmination in which the problems formulated in Chapter 1 have been investigated and the objectives met. In summarising the main findings from the literature review and the empirical investigation, the researcher was placed in a position to identify and isolate an at-risk educational minority and in addition identified the HCD. The envisioned aim was achieved and the main alternative hypothesis accepted. It is the hope of the researcher that this study will become a catalyst for further research in which the identity of the at-risk educational minority with the HCD will form the theoretical framework for research to come, thus being able to address the difficulties these young learners face with an established and substantive theoretical base, followed by rigorous empirical research.

The recommendations for further research were gleaned from the literature review, the empirical investigation and the researcher's many years of experience in the field. In addition, further research is demanded, founded on deep empathy and a moral obligation to these young learners as they face their futures. Supplementary research is identified and stipulated. Finally and in conclusion the limitations of the research were discussed.

John Dunn captures the premise of this study when he (1993:31) states: "The way of words, of knowing and loving words, is a way to the essence of things, and to the essence of knowing." Without the knowing of words, knowing in the sense of comprehending the written word (or for that matter the spoken word) the essence or understanding of our world is diluted. Knowing the profile of the at-risk educational minority and their attendant HCD is, to understand knowing {know} how to address this particular phenomenon in our global world. Our most vulnerable, our children are at risk.

Bibliography

- Adams, M.J. 2003. Alphabetical anxiety and explicit systematic phonics instruction: A cognitive science perspective. In: Neuman, S.B. & Dickenson, D.K. *Handbook of early literacy research*, vol. 1. New York: The Guilford Press.
- Akhtar, N., Jipson, J. & Callanan, M. A. 2001. Learning words through overhearing. *Child Development*, 72(2): 416-430.
- Adjemian, C. 1976. On the nature of interlanguage systems. *Language Learning*, 26(2):297-320.
- Allington, R. L. 1984. Content, coverage and contextual reading in reading groups. *Journal of Reading Behaviour*, (16) 85-96.
- American Academy of Pediatrics (AAP) Committee on Community Health services 2005. Health care of children of immigrant families. *Pediatrics*, (4): 115.
- Anderson, R. C. & Freebody, P. 1981. Vocabulary Knowledge. In: Guthrie, J. T. (Ed.). *Comprehension and teaching: Research reviews*. Newark, DE: International Reading Association.
- Andrews, J., Lupart, J. L. 2000. *The inclusive classroom: Educating exceptional children (2nd Ed.)*. Scarborough, ON: Nelson.
- Anglin, J. M. 1993. Vocabulary development: A morphological analysis. *Monographs of the Society for Research in Child Development*, Serial No. 238:58.
- Arua, A.E. & Magocha, K. 2002. Patterns of language use and language preference of some Children and their parents in Botswana. *Journal of Multilingual and Multicultural development* 23:6 449 – 461.
- Arzipe, E. 2006. Young interpretes: Affective dimensions of bilingual Children's Response to Pictures. In: Enever, J. & Schmidt – Schonbein, G. (Eds.). *Picture books and Primary EFL learners*. Munich: Langenscheidt.

August, D. & Shanahan, T. 2006. *Developing literacy in second language learners. Report of the National Literacy Panel on Language Minority Children and Youth*. NJ, London: Lawrence Erlbaum Associates, Publishers Mahwah.

Bahktin, M.M. 1986. *Speech genres and other late essays*. (Translated by Mc Gee, V., edited by Emerson C. & Holquist, M. Austin Texas: University of Texas Press.

Bankson, N. W. 1977. *Bankson's language screening test*. Baltimore: University Press.

Barnhill, G. 2001. What is Asperger's syndrome? *Intervention in school and clinic*, 36(5):259 – 265.

Bates, E. & Goodman, J. C. 1997. On the inseparability of grammar and the lexicon: Evidence from acquisition aphasia, and real time processing. *Language and Cognitive Processes*, 12 (5-6): 507-584.

Bazeley, P. Issues in mixing qualitative and quantitative approaches to research.

Presented at: 1st International Conference-Qualitative Research Marketing and Management University of Economics and Business administration, Vienna 10th April 2002 Published in: R. Buber, J. Gadner & L. Richards (eds.) *Applying qualitative methods to marketing management research*. UK: Palgrave Macmillan (141 – 156). Available at:

http://www.dedoose.com/Assets/PDF/Publications/Bazeley_2002_Mixed%20Methods%20in%20Market%20Research.pdf. Accessed: 21/08/2010

B. C. Ministry of Education. 2004. Diversity in B.C. schools: A framework. Available at:

<http://www.bcbudget.gov.bc.ca/sp2005/educ/>. Accessed: 15/01/2009

Beck, I. L. & McKeown, M. 1991. Social studies texts are hard to understand: Mediating some of the difficulties. *Language Arts*, (68) 482 – 490.

Beck, I. L., McKeown, M. G. & Kucan, L. 2002. Bringing words to life: Robust vocabulary instruction. Cited in Wagner, R. K., Muse, A.E. & Tannenbaum, K.R. 2007. *Vocabulary Acquisition: Implications for reading acquisition*. New York London: The Guildford Press.

Beimiller, A. 1999. *Language and reading success*. Cambridge, MA: Brookline Books.

Beimiller, A. & Slonim, N. 2001. Estimating root word vocabulary growth in normative and advantaged populations: Evidence for common sequence of vocabulary acquisition. *Journal of Educational Psychology*, 93(3):498-520.

Beimiller, A. 2003. Oral comprehension sets the ceiling on reading comprehension. *American Educator*, 27(1):23, 44. Available at: http://www.aft.org/pubs-reports/american_educator/spring2003/biemiller.html. Accessed: 09/12/2008.

Beimiller, A. 2007. The influence of vocabulary on reading acquisition. *Encyclopaedia of Language and Literacy Development* (pp. 1-10). London, ON: Canadian Language and Literacy Research Network. Available at: <http://www.literacyencyclopedia.ca/pdfs/topic.php?topId=19>. Accessed: 14/9/2010

Bennett-Kastor, T. 1988. *Analyzing children's language*. Oxford: Blackwell.

Berger, K. S. 2003. *The developing person through childhood and adolescents*. (4th Ed.). New York: Worth.

Berko Gleason, J. 2005. *The development of language*. (6th Ed.). Boston, MA: Pearson.

Bernhardt, E. 1987. Cognitive processes in L2: An examination of reading behaviours. In: Lantolf, J. & Labarca, A. (Eds.). *Research on second language acquisition in classroom settings*. Delaware Symposium No. 6. Norwood, NJ: Ablex.

Berninger, V., Abbott, R., Brooksher, R., Lemos, Z., Ogier, S., Zook, D. & Moustafapour, E. 2000. A connectionist approach to making the predictability of English orthography explicit to at risk beginning readers: Evidence for alternative effective strategies, *Developmental Neuropsychology*, 17, 241-271.

Bernstein, B. 1996. *Pedagogic symbolic control & identity: Theory, research, critique*. London: Taylor and Francis.

Bialystok, E. & Hakuta, K. 1994. *In other words*. New York: Academic Press.

- Bialystok, E. R. 1997. Effects of bilingualism and biliteracy on children's emerging concept of print. *Developmental Psychology*, 33: 121-132.
- Bloom, P. 2000. How children learn the meaning of words. Cambridge, MA: MIT Press.
- Booth, T., Ainscow, M., Black – Hawkins, K., Vaughn, M. & Shaw, L. (Eds.). 2000. *Index for inclusion: developing learning and participation in schools*. Bristol: CSIE
- Bothma, M., Gravett, S. & Swart, E. 2000. The attitudes of primary school teachers towards inclusive education. *South African Journal of Education*, 20(3): 200-204.
- Brodeur, M., Gosselin, C., Mercier, J., Legault, F. & Vanier, N. 2006. Prevention of reading difficulties: Differential effects of a program implemented by kindergarten teachers for their students. *Education et Francophonie, numero thematique sur la litteratie*. 34(2): 56-83. Available at: http://www.acelf.ca/c/revue/pdf/XXXIV_2_056.pdf. Accessed :27/8/2007.
- Bromley, H. 1996. "Madam! Read the scary book, Madam" – the emergent bilingual reader. In: Watson, V. & Styles, M. (Eds.) *Talking pictures*. London: Hodder and Stoughton.
- Brown, A. L., Palincsar, A. S. & Purcell, L. 1986. Poor readers: Teach, don't label. In: Neisser, U., (Ed.) *The school achievement of minority children: New Perspectives* (Pp. 105-43). Hillsdale, NJ: Erlbaum.
- Brown, H. D. 2000. *Principles of language learning and teaching*. (4th Ed.). White Plains: Longman .
- Brooks, P. J., Tomasello, M., Dodson, K. & Lewis, L. B. 1999. Young children's overgeneralisations with fixed transitivity verbs. *Child Development*, 70 (6) 1325 – 1399.
- Bryant, P. E., MacLean, M. & Bradley, L. 1990. Rhyme language and children's reading. *Applied Psycholinguistics*, 11(3) 237-252.
- Burns, P.C., Roe B. D. & Ross, E. P. 1992. *Teaching reading in today's elementary schools*. (5th Ed.). Englewood Cliffs, NJ: Prentice- Hall.

Butler, S.R., Marsh, H.W., Sheppard, M.J. & Sheppard, J.L. 1985. Seven year longitudinal study of the early prediction of reading achievement. *Journal of Educational Psychology*, 77, 349-361.

Cain, K. 2003. Text comprehension and its relation to coherence and cohesion in children's fictional narratives. *British Journal of Developmental Psychology*, 21:335-351.

Cain, K. & Oakhill, J. V. 2004. The development of comprehension skills. In: Nunes, T. & Bryant, P.E. (Eds.). *Handbook of literacy*. (155-180). Dordrecht, Netherlands: Kluwer.

Cain, K. & Oakhill, J. 2007. *Children's comprehension problems in oral and written language: A cognitive perspective*. New York, NY: The Guilford Press.

Cairney, T.H. *The home school connection in literacy and Language development*. In: Campbell, R. & Green, D. (Eds.). 2000. *Literacies & learners: Current perspectives*. (Pp.91-104). Australia: Prentice Hall.

Canadian Council for Learning: Lessons Learned, 2008. *Understanding the academic trajectories of ESL students*. Available at: <http://www.ccl.ca.ca/pdfs/LessonsInLearning/Oct-02-08-Understanding-the-academic.pdf> Accessed: 03/05/2009

Carey, S. 1978. The child as a word learner. In: Halle, M. Bresnan, G., & Miller G. (Eds.). *Linguistic theory and psychological reality*. Cambridge MA: MIT Press.

Carey, S. & Bartlett, E. 1978. Acquiring a single new word. *Papers and Reports on Child Language Development*, 15: 17-29.

Catts, H.W. 1997. The early identification of language based reading disabilities. *Language, Speech and Hearing Services in Schools*, 28, 86-87.

Catts, H. W., Fey, M. F., Zhang, X. & Tomblin, J. B. 1999. Language basis of reading and reading disabilities: Evidence from a longitudinal investigation. *Scientific Studies of Reading*, (3) 331-361.

Chall, J.S., Jacobs, V. A. & Baldwin, L.E. 1990. *The reading crisis: Why poor children fall behind*. Cambridge, Mass: Harvard University Press.

Chomsky, N. 1965. *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.

Chomsky, N. 1980. *Rules and representations*. New York Chichester, West Sussex: Columbia University Press.

Chomsky, N. 1980. *Rules and representations*. New York Chichester, West Sussex: Columbia University Press.

Chomsky, N. 2002. *On nature and language*. Cambridge: University Press.

Chomsky, N. 2005. *New horizons in the study of language and mind*. Cambridge University Press: Cambridge UK.

Clark, E. V. 2003. *First language acquisition*. Cambridge, UK: Cambridge University Press.

Clay, M.M. 1996. *An Observable Survey: Of Early Literacy Achievement*. Auckland NZ: Heinemann.

Cohen, A.C. 1991. *Truncated and censored samples: Theory and applications*. New York: Dekker Publishers.

Cohen, A.L., Rivara, F., Marcuse, E.K., Mc Phillips, H. & Davis, R. 2005. Are language barriers associated with serious medical events in hospitalized pediatric patients? *Pediatrics*, 116:575-579.

Collier, V.P. & Thomas, W. P. 1989. How quickly can immigrants become proficient in school English? *Journal of Educational Issues of Language Minority Studies*, 5:26-38.

Cooper, P.A., 1999 Lexis and the undergraduate: Analysing needs, proficiencies and problems. Unpublished MA dissertation, University of South Africa, Pretoria.

Corder, S. P. 1967. The significance of learners' errors. *International Review of Applied Linguistics*, 5(4) 367-383.

Colledge, M. 2005. Baby Bear or Mrs Bear? Young English Bengali – speaking children’s responses to narrative picture books at school, *Literacy*, 39, 24-30.

Collier, V. P. & Thomas, W.P. 1989. How quickly can immigrants become proficient in school English? *The Journal of Educational Issues of Language Minority students*, 5:26-38.

Collier, V.P. 1987. Age and rate acquisition of second language for academic purposes. *TESOL Quarterly*, 21(4): 617-641.

Cook, V.J. 1978. Second Language Learning: A psycholinguistic perspective. *Language Teaching Abstracts*, 11: 73-90.

Coulthard, K., Arzipe, E. & Styles, M. 2003. “Getting inside Anthony Browne’s head”: Pupils and teachers asking questions and reading pictures. In : Bearne, E., Dombey, H. & Grainger, T. (Eds.) *Interactions in language, literacy and the classroom*. Milton Keynes: Open University Press (77-89).

Crais, E.R. 1990. World knowledge to word knowledge. *Topics in Language Disorders*, 10 (3):13-28.

Crawford, C. 2005. Inclusive education in Canada: Key issues and directions for the future. Report based on the Canadian Association for Community Living’s National Summit on Inclusive Education of November, 2004. *L’Institut Roehrer Institute*, (6). Available at: <http://www.inclusiveeducation.ca/documents.ROEHER-STATE-OF-2005pdf> Accessed on 22/4/2007
Accessed: 22/07/2008.

Creswell, J. W. 1994. *Research design: Qualitative and Quantitative approach* . Thousand Oaks, California: Sage.

Creswell, J. W. 2008. *Research design: Qualitative and Quantitative approach* (3rd Ed.). Thousand Oaks, California: Sage.

Cresswell, J., Plano- Clark V. L. 2010. *Designing and conducting mixed method research* (2nd Ed.). London UK: Sage.

Cummins, J. 1979. Cognitive/academic language proficiency, linguistic interdependence, the optimum age question and some other matters. Working papers on Bilingualism, 19, 121 -129. Toronto: The Ontario Institute for Studies in Education.

Cummins, J. 1980. Psychological assessment of immigrant children: Logic or institution? *Journal of Multilingual and Multicultural Development*, 1 (2) 97-111.

Cummins, J. 1981. The role of primary language development in promoting educational success for language minority students. In: California State Department of Education (ED.). *Schooling and language minority students: A theoretical framework*. (Pp. 3-49). Los Angeles: National Dissemination and Assessment Centre.

Cummins, J. 1984. *Bilingualism and special education: Issues in assessment and pedagogy*. Clevedon, England: Multilingual Matters.

Cummins, J. & Nakajima, K. 1987. Age of arrival, length of residence and interdependence of literacy skills among Japanese immigrant students. In: Harley, B., Allen, P., Cummins, J. & Swain, M. (Eds.). *The development of bilingual proficiency, Final Report, Volume I: Social Context and age*. Toronto: Modern Language Centre, The Ontario Institute for studies in Education.

Cummins, J. 1994. The acquisition of English as a second language. In: Spangenberg – Urbschat, K. & Pritchard, R. (Eds.). *Kids come in all languages: Reading instruction for ESL students* (Pp. 36 -62). Newark, DE: International Reading Association.

Cummins, J. 2000. *Language, power and pedagogy: Bilingual children in the crossfire*. Buffalo, NY: Multilingual Matters.

Cunningham, A.E. & Stanovich, K.E. 1991. Tracking the unique effects of print exposure in children: Associations with vocabulary, general knowledge, and spelling. *Journal of Educational Psychology*, 83, 264-274.

- Cunningham, A. E. & Stanovich, K. E. 1998. Early reading acquisition and its relation to reading experience and ability 10 years later. *Developmental Psychology*, (33): 934-945.
- Cunningham, A.E. 2005. Vocabulary growth through independent reading and reading aloud to children. In: Hiebert, H.E & Kamil, M.L. (Eds.). *Teaching and learning vocabulary: Bringing research to practice*. (Pp. 45-68). Mahwah, NJ: Erlbaum.
- Curtis, M.E. 1987 *The nature of vocabulary acquisition* (Eds.). Hillsdale, NJ: Erlbaum.
- Cutting, L. E., Scarborough, H.S. 2006. Prediction of reading comprehension: Relative contributions of word recognition, language proficiency, and other cognitive skills can depend on how comprehension is measured. *Scientific Studies of Reading*, 10 (3):277-299.
- Dale, E. & O'Rourke, J. 1981. *The living word vocabulary*. Chicago: Worldbook/ Childcraft International.
- Daneman, M. 1991. Individual differences in reading skills. In: Barr, R., Kamill, M., Mosenthal, P. & Pearson, P.D. (Eds.). *Handbook of reading research, vol. 2*. (Pp. 512-538). Mahwah, NJ: Erlbaum.
- Day, R. R. & Brumfitt, J. 1998. *Extensive reading in a second language classroom*. Cambridge: Cambridge University Press
- Day, J. C., Jamieson, A. & US Census Bureau. 2003. School enrolment 2000. Washington, DC: U.S. Government Printing Office. Available at: www.census.gov/prod/2003pubs/c2kbr-26.pdf Accessed: 9/11/2008.
- Dednam, A. 1999. Piaget's language theory and language acquisition. Learning Support Study Guide. Unpublished study material. Pretoria: UNISA.
- Denckla, M. B. & Rudel, R.G. 1976 a. Naming of objects by dyslexic and other learning- disabled children. *Brain and Language*, 3, 1-15.
- Denckla, M. B. & Rudel, R. G. 1976 b. Rapid "automized" naming (R.A.N.): Dyslexia differentiated from other learning disabilities. *Neuropsychologia*. 14, 471-479.

Denzin, N.K. & Lincoln, Y.S. 2000(Eds.). 2000.*Handbook of qualitative research*. Thousand Oaks, CA: Sage Publications Inc.

Department of Education 1997: vii. Quality education for all. Overcoming barriers to learning and development. Report of the National Commission on special needs education and training (NCSNET) and National Committee on education support services (NCESS). Pretoria: Government Printers.

Department of Education (Do E) 2001. *Education White Paper 6: Special needs education. Building an inclusive education and training system*. Pretoria: Department of Education.

Department of Education and Employment (DfEE)2000. *Code of practice on the identification and Assessment of special educational needs*. Available at: <http://www.dfes.gov.uk/sen/standard.htm>
Accessed: 11-12/07/08.

Devine, J. 1998. The relationship between general language competence and second language reading proficiency: Implications for teaching. In: Carrell, P. L., Devine, J. & Eskey, E., E. (Eds.). *Interactive approaches to second reading*. Cambridge, England: Cambridge University Press.

Dickinson, D. K., McCabe, A. & Clark - Chiarelli, N. 2004. Preschool prevention of reading disability: Realities versus possibilities. In: Stone, C.A., Silliman, E. R., Ehren, B.J. & Apel, K. (Eds.). *Handbook of language and literacy: Development and disorders*. Guilford Press.

Dickinson, D. K., McCabe, A. & Clark - Chiarelli, N. & Wolf, N.2004. Cross-language transfer of phonological awareness in low income Spanish and English bilingual pre-school children. *Applied Linguistics*, 25 (3) 323 – 347.

Dickinson, D. K., McCabe, A., Anastasopoulos, L., Peisner-Feinberg, E. & Poe, M.D. 2003. The comprehensive language approach to literacy: The interrelationships among vocabulary, phonological sensitivity, and print knowledge among preschool aged children. *Journal of Educational Psychology*, 95(3):465-481.

Dictionary of South African Education and Training. 2000:95, s.v. "learner". Johannesburg: Hodder and Stoughton.

Dietrich, S., Assel, M., Swank, P., Smith, K.E. & Landry, S.H. 2006. The impact of early maternal verbal scaffolding and child language abilities on later decoding and reading comprehension. *Journal of School Psychology, 43*: 481-494.

Dietrich, S., Assel, M., Swank, P., Smith, K.E. & Landry, S.H. 2006. The impact of early maternal verbal scaffolding and child language abilities on later decoding and reading comprehension. *Journal of School Psychology, 43*: 481-494.

Droop, M. & Verhoeven, L. T. 1998. Background knowledge, linguistic complexity, and second language reading comprehension. *Journal of Literacy Research, 30*(2): 253-271.

Dulay, H. & Burt, M. 1974. Natural sequences in child second language acquisition. *Language Learning, 24*(1): 37-53.

Dulay, H. & Burt, M. & Krashen, S. 1982. *Language two*. New York: Oxford University.

Dunbar, R. 2004. *The human story: A new history of mankind's evolution*. London: Faber & Faber.

Duncan, G., Brooks –Gunn, J. & Klebanov, P. 1994. Economic deprivation and early childhood development. *Child Development, 65*, 296-318.

Dunn, L.M. & Dunn, M. 1982. Peabody picture vocabulary test revisited. Circle Pines, Minn: American Guidance Service.

Dunne, J. 1993. *Love's mind: An essay on contemplative life*. Notre Dame, Indiana: University of Notre Dame Press.

Durkin, D. 1993. *Teaching them to read 6th* (Ed.). Boston, MA: Allyn & Bacon.

Dworet, D. & Bennett, S. 2002. A view from the North – Special education in Canada. *Teaching exceptional Children, 34*(5): 22-27.

Ekwall, E. E. & Shanker, J. L. 1989. *Teaching reading in the elementary school* (2nd Ed.). Columbus: Merrill.

Ellis, R. 1997. Second Language acquisition. In: *Oxford introduction to linguistics*. Oxford: Oxford University Press

English Language Learners ESL and ELD Programs and Services. 2007. *Policies and Procedures for Ontario Elementary and Secondary Schools, Kindergarten to Grade 12. Ch1.2:8*. Available at: <http://www.edu.gov.on.ca/eng/document/esleldprograms.pdf> Accessed: 2/4/2009.

The English as a Second Language Policy and Guidelines document. 2009. *Definitions: 4*. Available at: <http://www.bced.gov.bc.ca/esl/policy/guidelines.pdf> Accessed: 3/9/2010.

Epstein, S. D., Flynn, D. & Martohardjono, G. 1996. Second language acquisition: Theoretical and experimental issues in contemporary research. *Behaviour and Brain Sciences*, 19(4): 677-758.

Erasmus, D. A declamation of on the subject of early liberal education for children. In: *Collected Works of Erasmus: Literary and educational writings*, 1 and 2, Volumes 23 & 34, edited by, C.R. Thompson. 1978. Toronto: University of Toronto Press.

ERIC Clearinghouse on Urban Education. 2001. *Latinos in school: Some facts and findings*. ERIC Digest, 162. Available at: www.eric.ed.gov/ERIC-Docs2sql/content_storage_01/0000019b/80/16/cd/eo.pdf. Accessed: 15/10/2008.

Felix, S. & Weigl, W. 1991. Universal Grammar in the classroom: The effects of formal language instruction on second language acquisition. *Second Language Research*, 7(2): 162-181.

Fey, M. E. , Catts, H. W. & Larrivee, L. S. 1995. Preparing preschoolers for academic and social challenges in school: In: Fey, M.E., Windsor, J. & Warren, S. (Eds.). *Language intervention: Preschool through the elementary years*. Baltimore: Paul Brooks Publishing.

Finegan, E. 2004. *Language: Its structure and use* (4th Ed.). Boston: Wadsworth.

Fishman, J. 1982. *Language and ethnicity in minority sociolinguistic perspective* In: Kuper, A., Kuper, J. *The social science encyclopedia*. 1989. New York New York: Routledge, Chapman & Hall.

- Fitzgerald, J. 1995. English as a second- language- learners' cognitive reading process: A review of the research in the United States. *Review of Educational Research*, 65: 145-190.
- Florian, L. 1998. Prompting inclusive practice. London: Routledge/Falmer.
- Frederickson, N. & Kline, T. (Eds.). 1990. *Curriculum related assessment with bilingual children: A set of working papers*. London: University College London Department of Psychology.
- Freebody, P. & Luke, A. 1990. Programmes: Debates and demands in cultural contexts. *Prosepect: A Journal of Australian TESOL*, 5 (7): 7-16.
- Freeman, D. E. & Freeman, Y. S. 2001. *Between worlds: Access to second language acquisition*. (2nd Ed.). Portsmouth, NH: Heinemann.
- Freund, R.J. & Wilson, W.S. 2003. *Statistical Methods*. (2ndEd.). London, UK: Academic Press.
- Friend, M., Bursuck, W. & Hutchinson, N. 1998. *Including exceptional students: A practical guide for classroom teachers* (Canadian Edition). Scarborough, ON: Allyn & Bacon.
- Fromkin, V. & Rodamn, R. 1983. *An introduction to language* (6th Ed.). Fort Worth, TX: Harcourt Brace College Publishers.
- Gallaway, B. & Richards, B. J. 1994. *Input and interaction in language acquisition*. New York: Cambridge University Press.
- Garcia, G.E. & Nagy, W.E. 1993. Latino students' concept of cognates. Examining central issues in literacy research theory and practice. *Chicago: National Reading Conference*. Chicago, 1993.
- Garcia, G. 2000. Bilingual children's reading. In: Kamil, M.L., Mosenthal, P.B., Pearson, P.D. & Barr, R. (Eds.). *Handbook of reading research, vol. 111* . (Pp. 813 -834). Mahway, N.J.: Erlbaum.
- Garner, D. 1990. The teacher's task: the work of the classroom. In: Murphy E. (Ed.). *ESL: a handbook for teachers and administrators in international schools*. Philadelphia: Multilingual Matters.

Garnett, B. & Aman, C. 2008. Academic performance of immigrant youth in Vancouver, Montreal and Toronto: The Vancouver context. Presented at the 10th National Metropolis Conference in Halifax, Nova Scotia on April 4, 2008.

Garnett, B. *A critical examination of the academic trajectories of ESL youth*. Unpublished PhD dissertation. University of British Columbia.

Garnica, O. 1983. Social dominance and conversational interaction – The omega child in the classroom. In: Wallat C. & Green, J. (Eds.). *Ethnography in educational settings*. (Pp. 229 – 252). Norwood, NJ: Ablex Publishing.

Garton, A. & Pratt, C. 1998. *Learning to be literate: The development of spoken and written language*. (2nd Ed.). Oxford UK: Blackwell.

Gee, J. P. 1987. *What is literacy?* In: Mitchell C. & K. Werler (Eds.). *Rewriting Literacy*. New York. Bergun & Ganey.

Gee, J.P. 1988. Discourse systems and aspirin bottles: On Literacy. *Journal of Education*, 170(1):27-40.

Gee, J. P. & Green, J. L. 1998. Discourse analysis, learning and social practice: A methodological study. *Review of Research in Education*, 23: 119-169.

Gee, J.P. 2004. A sociocultural perspective on early literacy development. In: Neuman, S. B. & Dickenson, D. K. (Eds.). *Handbook of early literacy research*. New York: The Guilford Press.

Gee, J.P. 2007. *Good video games and good learning*. New York: Peter Lang.

Gernsbacher, M. A. 1990. *Language comprehension as structure building*. Hillsdale NJ: Erlbaum.

Gernsbacher, M. M., Varner, K. R. & Faust, M. E. 1990. Investigating individual differences in general comprehension skill. *Journal of experimental Psychology: Learning, Memory and Cognition*, 16:430-445.

- Gesell, A., Ilg, F. & Ames, L. B. 1977. *The child from five to ten*. New York: Harper and Row.
- Giroux, H.A. 1987. In: Freire, P. & D. Macedo (Eds.). *"Literacy: Reading the word and the world"*. Granby, MA: Bergin and Garvey.
- Glesne, C. 1998. *Becoming qualitative researchers: An introduction*. New York: Longman.
- Gopnik, A., Meltzoff, A. & Kuhl, P. 1999. *The scientist in the crib: Minds, brains, and how children learn*. New York: William Morrow and Co.
- Gorman, G.E. & Clayton, P. 1997. *Qualitative research for the information professional: A practical handbook*. London: Library association.
- Goswami, U. 2003. Early phonological development and the acquisition of literacy. In: Neuman, S. B. & Dickenson, D. K. (Eds.). *Handbook of literacy research*. New York: The Guilford Press.
- Grabe, W. 1991. Current development in second language reading research. *TESOL Quarterly*, 25(3): 375-406.
- Graf, V., L. 1992. Minimizing the inappropriate referral and placement of ethnic minority students in special education. In: T. Cline (Ed.). *The assessment of special educational needs: International perspectives*. London: Routledge.
- Graves, M. F. 1987. The roles of instruction in fostering vocabulary development. In: McKeown M. E. & Curtis, M. E. (Eds.). *The nature of vocabulary acquisition*. Hillsdale, NJ: Erlbaum.
- Gutierrez, K. 1993. How to talk, content and script shape contexts for learning. A cross case comparison of journal sharing. *Linguistics and Education*, (5) 335 – 365.
- Gunderson, L. 2007. *English only instruction in secondary schools: A critical examination*. Mahwah, New Jersey: Lawrence Erlbaum & Associates.

Gunderson, L. 1991. *ESL literacy instruction: A guidebook to theory and practice*. Englewood Cliffs, New Jersey: Prentice Hall Regents

Hacking, I. 1999. *The social construction of what?* Cambridge Massachusetts : Harvard University Press.

Hakuta, K. 1986. *Mirror of language: The debate on bilingualism*. New York: Basic Books.

Hakuta, K., Butler, Y.G. & Witt, D. 2000. *How long does it take English learners to attain proficiency?* (Policy Report 200-1). Los Angeles: The University of California Linguistic Minority Research Institute.

Hakuta, K. & August, D. 2001. *Improving schooling for language - minority children: A research Agenda of the National Council Institute of Medicine*. Washington, DC: National Academy Press.

Hakuta, K. 2001. The education of language-minority student's testimony to the U.S. commission on civil rights. Washington, DC. *Multilingual News*, 24 (6): 10-14.

Hall, D. 1995. *Assessing the needs of bilingual pupils: Living in two languages*. London: David Fulton.

Halliday, M.A.K. & Hasan, R. 1989. *Language, context, and text: Aspects of language as a social semiotic perspective*. Oxford, UK: Oxford University Press.

Hannon, P. & McNally 1986. Children's understanding and cultural factors in reading test performance. *Educational Review*, 38(3):237-246.

Harris, R., Leung, C. & Rampton, B. 2001. Globalization, language and education. In: Block, D. & Cameron, D. *Globalization and language teaching*: New York: Routledge.

Hart, B. & Risley, T. 2003. The early catastrophe. *American Educator*, 27(4):6-9.

Hart, B. & Risley, T. 1995. *Meaningful differences in everyday experiences in young American children*. Baltimore: Brooks.

Hartley, L. 1994. Cognitive communicative abilities following brain injury: A functional approach Neurogenic communication disorders. San Diego: Singular Publishing.

- Hatch, E. 1985. Culture. In: Kuper, A. & Kuper, J. (Eds.). *The social science encyclopaedia*. (Pp. 178-181). New York: Routledge.
- Hawker, S. & Waite, M. 2007. *Oxford Dictionary & Thesaurus*. Oxford: Oxford University Press.
- Heath, S., B. 2003. What no bedtime story means. Narrative skill at home and at school. In: Maybin, J. *Language and literacy in social practice*. (Pp.73-95). Great Britain: Short Run Press Ltd.
- Heckman, J. & Lochner, L. 2000. Rethinking education and training policy: Understanding the sources of skill formation in a modern economy. In: Danzigian & Waldfloyd J. (Eds.). *Securing the future: Investing in children from birth to college*. (Pp. 22-83). New York: Russell Sage Foundation .
- Hill, J.D. & Flynn, K.M. 2006. *Classroom instruction that works for English language learners*. (Pp. 14-22). Association for Supervision and Curriculum Developers (ASCD): Alexandria.
- Hirsch, E. D. 1987. *Cultural Literacy*. Boston: Houghton Mifflin and Langer.
- Hirsch, E. D. 2003. Reading comprehension requires knowledge of words and the world. *American Educator*. Spring : 10 -29.
- Hudelson, S. 1994. Literacy development of second language children. In: F. Genesee (Ed.). *Educating Second language Children: The whole Child, the whole Curriculum, the whole Community*. pp. 129-158. Cambridge: Cambridge University Press.
- Human Early Learning Partnership (HELP) 2005. The British Columbia Atlas of Child Development (1st Ed.). Available at: http://www.earlylearning.ubc.ca/wp-uploads/web.help.ubc.ca/2010/02/BCAtlasofChildDevelopment_CD_22-01-06.pdf Accessed: 12/11/2008.
- Itoh, H. & Hatch, E. 1978. Second language acquisition: A case study. In Hatch, E.(Ed). *Second language acquisition: A book of readings*. Rowley, MA: Newbury House Publishers.

- John –Steiner, V. & Mahn, H. 1996. Sociocultural approaches to learning and development: A Vygotskian framework. *Educational Psychologist*, 31 (3)191-206.
- Johnson, B. & Christensen, L. 2000. *Educational research: quantitative and qualitative approaches*. Boston: Allyn & Bacon.
- Johnston, I. & Carson, R. 2000. The difficulty with difference in teacher education: Toward a pedagogy of compassion. *Alberta Journal of Education Research*, 46(1) 75-83.
- Johnston -Laird, P.N. 1986. *Mental Models*. Cambridge Mass: Harvard University Press.
- Juel, C. Griffiths, P.L. Gough, P.B. 1986. Acquisition of literacy: A longitudinal study of children in first and second grade. *Journal of Educational Psychology*, 78, 243-255.
- Justice, L. M. 2005. Literacy and its impact on child development: Comments on Tomblin and Senechal. In: Tremblay, R. E., Barr, R. G., Peters, R DeV, (Eds.). *Encyclopaedia on Early Childhood Development*. Montreal, Quebec: Centre of Excellence for Early Childhood development. Available at: <http://www.excellence-earlychildhood.ca/encyclopaedia>. Accessed: 12/7/2008.
- Kanbar, R. 2002. Economics, social science and development. *World Development*, 30 (3): 477-486.
- Keating, D. P. 1999. *Developmental health as the wealth of nations*. New York: The Guilford Press. New York, NY and London. 337-47.
- Kahmi, A.G. 2005. *Finding the beauty in the ugly facts about reading comprehension*. In Catts, H.W. & Kahmi , A.G. (Eds.).*The connections between language and reading disabilities*. Mahwah, NJ: Erlbaum.
- Karmiloff, K. & Karmiloff-Smith, A. 2001. *Pathways to Language: From foetus to adolescent*. Cambridge Mass: Harvard University Press.
- Keating, D.P. & Herzman, C.1999.*Developmental health and the wealth of nations: Social, biological & educational dynamics*. New York: Guildford Press.

- Kilfoil, W. R. & Van der Walt, C. 1997. *Learn to teach. English language teaching in a multilingual context*. Pretoria: JL van Schaik.
- Kintsch, W. 1998. *Comprehension: A paradigm for cognition*. New York: Cambridge University Press.
- Klesmer, H. 1994. Assessment and teacher perceptions of ESL student achievement. *English Quarterly*, 26 (3): 8-11.
- Koda, K. 1989. The effects of transferred vocabulary knowledge on the development of L2 reading proficiency. *Foreign Language Annals*, 22 (6) 529 -540.
- Kokot, S. J. 2002. *Psychology of education (BEd) Only study guide for OS1431-5*. Unpublished study material. Pretoria: UNISA.
- Krashen, S. D. 1982. *Principles and practice in second language acquisition*. New York: Pergamon Press.
- Krashen, S. D. & Terrel, T. 1983. *The Natural Approach: Language acquisition in the classroom*. Cited by Morrow, L.M. & Gambrell, L.B. In: Neuman, S.B. & Dickenson, D.K. 2003. *Handbook of early literacy research*, vol. 1. New York: The Guilford Press.
- Kucer, S.B. 2001, cited in Pardo, L. 2004. What every teacher needs to know about comprehension. *The Reading teacher*, 58(3)272 -280.
- Landauer, T.K. & Dumais, S.T. 1997. A solution to Plato's problem: The latent semantic analysis theory of acquisition, induction, and representation of knowledge. *Psychological Review*, 104 (2) 211-240.
- Landry, S.H., Miller- Lancar, C.L., Smith, K.E. & Swank, P.R. 2002. The role of early parenting in children's development of executive processes. *Developmental Neuropsychology*, 21 (1) 15-21.
- Larsen-Freeman, D. (Ed). 1980. *Discourse analysis in second language research*. Rowley, MA: Newbury House.

- Laycock, L. 1998. A way into a new language and culture. In: Evans, J. (Ed.). *What's in the picture? Responding to illustrations in picture books*. London: Paul Chapman.
- Lennenberg, E. 1967. *Biological foundation of language*. New York: John Wiley and Sons.
- Lerner, J.W. 2000. *Learning disabilities: Theories, diagnosis, and teaching strategies* (8th Ed.). New York: Houghton Mifflin Company.
- Lesaux, N.& Geva, E. 2006. Synthesis: Development of literacy in language – minority students. In: August, D. & Shanahan, T. *Developing literacy in second- language learners. Report of the National Literacy Panel on Language – Minority Children and Youth*. Mahwah, New Jersey: Lawrence Erlbaum.
- Lightbown, P.M. & Spada, N. 1993. *How languages are learned*. New York: Oxford University Press.
- Lightbown, P.M. & Spada, N. 1999. *How languages are learned*. (2nd Ed.). New York: Oxford University Press.
- Limbos, M. & Geva, E. 2001. Accuracy of teacher assessments of second – language students at risk for reading disability. *Journal of Learning Disabilities*, 34(2) 136-151.
- Long, M. H. 1993. Native Speaker/non native speaker conversation and the negotiation of comprehensible input, *Applied Linguistics*, 4 (2)126-41.
- Lupart, J. L. 1999. *Inching toward inclusion: The excellence equity dilemma in our schools*. Paper presented at the PCERA symposium. Ottawa, Ontario.
- Lupart, J. L. & Webber, C. 2002. Canadian schools in transition: Moving from dual education systems to inclusive schools. *Exceptionality Education Canada* ,12 (2 & 3): 7-52.
- Lyon, G.R., Shaywitz, S. E. & Shaywitz, B. A. 2003. A definition of dyslexia. *Annals of Dyslexia*, 53(1):1-4.
- Lyon, G. R., Shaywitz, S. E. & Shaywitz, B. A. 2003. A definition of dyslexia. *Annals of Dyslexia*, 53(1):1-4.

Machado, J. M. 2003. *Early childhood experiences in language arts: Emerging literacy*. (7th Ed.). Belmont , USA: Thomson Delmar Learning.

Mac Whinney, B. 1998. Models of the emergence of language. *Annual Review of Psychology*, 49: 199-227.

Mattingly, 1972. Cited in Snowling, J., Hulme, C. 2005. *The science of reading: A handbook : Learning to read with impairment*. Oxford, UK: Blackwell Publishing.

Mc Andrew, M., Ledent, J., Murdoch, J. & Ait Said, R. *Academic performance of immigrant youth in Vancouver, Montreal and Toronto: The Montreal context*. Paper presented at the 10th National Metropolis Conference in Halifax, Nova Scotia on 4 April, 2008.

McGregor, K. K. 2004. Developmental dependencies between lexical semantics and reading. In: Stone, C.A., Silliman, E.R., Ehren, B.J. & Apel, K. (Eds.). *Handbook of language and literacy: Developmental disorders*. (Pp. 302-317). New York: Guilford Press.

McLoyd, C. 1998. Socioeconomic disadvantage and child development. *American Psychologist*, 53:185-204.

McLuhan, M. 1964. *Understanding the media*.: Cambridge Massachusetts: The MIT Press.

McMillan, H. & Schumacher, S. 2001. *Research in education: A conceptual approach* (5th Ed.). New York: Longman.

Meirs, M. & Foster, M. 1999. Assessment and researching monitoring learning: The Australian Council for Education Research. *The ACER longitudinal literacy and numeracy study (LLANS)*. Paper presented at the ACER Research Conference: Improving Literacy Learning – What does research tell us? Adelaide. Available at:

http://researchacer.edu.au/cgviewcontent.cgi?article=1006&context=monitoring_learning

Accessed: 8/2/2008.

Michaels, S. 1991. Sharing time. *Language in Society*, 10:423-447.

Mines, H. 2000. *The relationship between children's cultural literacies and their readings of literary texts*. Unpublished PhD thesis, University of Brighton.

Misra, M., Katzir, T., Wolf, M. & Poldrack, A. 2004. Neural systems for rapid automatized naming in skilled readers: Unravelling the RAN –reading relationship. *Scientific Studies in Reading* 8(3):241-256.

Moats, L.C. 2001. Overcoming the language gap. *The American Educator*, 25(5): 8-9.

Moon, C. Cooper, R. P. & Fifer, W.P. 1993. Two day olds prefer their native language. *Infant Behaviour and development*, 16 (4): 495-500.

Morrow, L. M. 2001. Literacy development in young children: Research to practice. In: Goldbeck, L. (Ed.). *Creating environments for learning in the early years: From research to practice*. Rutgers Graduate School of Education. New Brunswick, US. This volume is based on original papers presented by the authors at the aforementioned meeting. Mahwa, NJ: Lawrence Erlbaum and associates.

Mouton, J. 2001. *How to succeed in your master's and doctoral studies: A South African guide and research book*. Pretoria: JL van Schaik.

Munoz-Sandoval, A. F., Cummins, J., Alvarado, C.G. & Ruef, M. L. 1998. *Bilingual verbal ability tests*. Itsaka, IL:Riverside.

Muter, V., Hulme, C., Snowling, M.J. & Stevenson, J. 2004. Phonemes, rimes, vocabulary and grammatical skills as foundations of early reading development: Evidence from a longitudinal study. *Developmental Psychology*, (40) 665-681.

Nagy, W.E. & Sott, J. A. 2000. Vocabulary processes. In: Kamil, M. L., Mosenthal, P. D. Pearson, & Barr. R. (Eds.). *Handbook of reading research*.(3).(Pp.269-284). Mahwah, NJ: Erlbaum.

Narvaez, D. 2002. Individual differences that influence reading comprehension. In: Block, C. & Pressley, M. (Eds.). *Comprehension instruction: Research – based practices*. (Pp. 158 – 175). NY: Guilford.

National Assessment of Education Progress. The Nation's Report Card. Sept 2007. Available at: <HTTP://nces.ed.gov/nationsreportcard/>. Accessed: 09/02/2009.

National Reading Panel. 2000. *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. NIH pub. No.00-4769). Washington: National Institute of Health.

Nation, K. & Snowling, M.J. 1997. Assessing reading difficulties: The validity and utility of current measures of reading skill. *British Journal of Educational Psychology*, 67: 359-370.

Nation, K. & Snowling, M.J. 1999. Developmental differences in sensitivity to semantic relations among good and poor comprehenders: Evidence from semantic priming. *Cognition*, 70:81-83.

Nation, K., Clark, P., Marshall C.M. & Durand, M.2004. Hidden Language impairments in children: Parallels between poor reading comprehension and specific language impairment. *Journal of Speech, Language and Hearing Research*, 47:199-211.

National Centre for Education Statistics(NCES) 2003. US Department of Educational Sciences Institute.

Naylor, C. 2005. Inclusion in British Columbia's public schools: Always a journey, never a destination. Paper presented at the Canadian Teacher's Federation Conference. *Building inclusive schools: A search for solutions*. Ottawa ,Ontario, Canada.

Navararez, D. 2002. Individual differences that influence reading comprehension. In: Block, C.C., Pressley, M. (Eds.). *Comprehension instruction: Research based best practices*. (Pp. 158 – 175). New York: Guilford Press.

Neale, M. D. 1997. *Neale analysis of reading ability – revised manual for schools*. (2nd Ed.). London: Macmillan.

Nemser , W. 1971. Approximate systems of foreign language learners. *IRAL*, 9(2): 115-124.

- Neuman, S.B. & Dickenson, D.K. 2003. *Handbook of early literacy research*, vol. 1. New York: The Guilford Press.
- Oakhill, J. 1997. Review of NEALE Analysis of reading Ability. In: Beech, J.R. & Singleton, C. (Eds.). *The psychological assessment of reading*. (Pp. 329-326). London: Routledge.
- OECD, 2006. *Where immigrant students succeed: a comparative review of performance and engagement in PISA 2003*. Paris: OECD.
- Oka, E. & Paris, S. 1987. Patterns of motivation and reading skills in underachieving children. In: Ceci (Ed.). *Handbook of cognitive, social, and neuropsychological aspects of learning disabilities*, vol. 2. (Pp 115-145). Hillsdale, NJ: Erlbaum.
- Ollilla, L. O. & Mayfield, M. I. 1992. *Emerging literacy: Preschool, kindergarten, and primary grades*. Boston: Allyn & Bacon.
- Oxford Dictionary, White, M. (ed). 2007. Oxford, UK: Oxford University Press.
- Patowski, M. 1980. The sensitive period for the acquisition of syntax in a second language. *Language Learning*. 30: 449-472.
- Patton, M.Q. 1990. *Qualitative evaluation and research methods*. (2nd. Ed.). CA: Sage.
- Penfield, W. & Roberts, L. 1959. *Speech and brain mechanism*. New York: Athenium Press.
- Perfetti, C. 2009. Reducing the complexities of reading comprehension: A simplifying framework. University of Pittsburg, Learning and development Centre. Available at: <http://www.google.ca/hws/search?client=dell-row&adsafe=high&safe=high&channel=ca-ppsp&hl=en&ibd=&q=The+rand+reading+study+group+report+2002+comprehension+is+intentional+hinking&Submit=Search> Accessed: 23/01/2010.
- Pinker, S. 2000. *The language instinct*. New York, NY: Perennial.
- Pinker, S. 2000. *Words and Rules: The ingredients of language*. New York: Harper Collins.

Pinker, S. 2002. *The blank slate: The modern denial of human nature*. New York, New York: Penguin.

Protocol for Agreements For Minority – Language Education and Second – Language Instruction 2009-2010 to 2012-2013 between the Government of Canada and the Council of Ministers of Education, Canada. Available at:<http://www.cmec.ca/Publications/Lists/Publications/Attachments/211/protocol-for-agreements-2009-2013.pdf> Accessed :20/02/ 2009.

Pythian – Sence, C. & Wagner, R. 2002. Vocabulary Acquisition: A primer. In: Wagner, R. K., Muse, A.E. & Tannenbaum, K.R. 2007. *Vocabulary Acquisition: Implications for reading acquisition*. New York London: The Guildford Press.

Rayner, K. & Pollatsek, A. 1989. *The psychology of reading*. Engelwood Cliffs, NJ: Prentice Hall.

Reder, S. 1994. *Practice- engagement theory: A socio-cultural approach to literacy across languages and cultures*. In: Ferdman, B.M., Weber, R.M. & Ramirez, A.G. (Eds.). *Literacy across languages and cultures*. Albany: State University of New York Press.

Reichardt, C. & Cook, T. 1979. In: Nunan, D. 1992. *Research methods in language learning*. Cambridge: Cambridge University Press.

Richards, J.C., Platt, J. & Platt, H. 1999. *Dictionary of language teaching & applied linguistics*. (2nd Ed.). Essex: Longman Group UK .

Richards, J.C. & Rodgers, T.S. 2001. *Approaches and Methods in Language Teaching: Cambridge Language Learning Library*. Cambridge, UK: Cambridge University Press.

Roberts, S.2000. In a generation, minorities may be the US majority. *The New York Times*, A1. Available at: www.nytimes.com/2008/08/14/washington/14census.html Accessed: 12/9/2008.

Robbins, C. & Ehri, L.C. 1994. Reading storybooks to Kindergartners helps them learn new vocabulary words. *Journal of Educational psychology*, (86) 54-64.

Roth, F. P., Speece, D. L. & Cooper, D. H. 2002. A longitudinal analysis of the connection between oral language and early reading. *Journal of Educational Research*, 95: 259 -272.

Rumelhart, D., McClelland, J. & the PDP Research Group. 1986. *Parallel distributed processing: Explorations in the microstructures of cognition: Psychological and biological models. Vol. 11* Cambridge, MA: MIT Press.

Russell, B. 1959. Foreward to Ernest Gellner's *Words and things*. London: Gollancz.

Samson, J.F. 2009. Language minority learners in special education: Rates and predictions of identification services, *Journal of Language Disabilities*, 42 (2): 148 – 162.

Scarborough, H.S. 1998. Early identification of children at risk for reading disabilities: Phonological awareness and some other promising predictors. In: Accardo, P., Capute, A. & Shapiro (Eds.). *Specific reading disability: A view of the spectrum*. Timonium, MD: York Press.

Scarborough, H. S. 2001. Connecting early language and literacy to later reading (dis)abilities: Evidence, theory and practice. In: Neuman S. B. & Dickenson D., K. (Eds.). *Handbook of early literacy research*. New York, NY: Guilford Press.

Schachter, J. 1974. An error in error analysis. *Language Learning*, 24(2): 205-214.

Schachter, J., and Celce-Mercer, M., 1977. Some reservations concerning error analysis. *TESOL Quarterly*, 11(4): 441-451.

Schieffelin, B.B. & Ochs, E.(Eds.). 1986. *Language socialisation across cultures*. Cambridge, UK: Cambridge University Press.

Schieffelin, B. & Ochs, E. 1986. Language socialisation. *Annual Review of Anthropology*, 15 (1) 163.

Schwandt, T. A. 1997. *A qualitative enquiry: A dictionary of terms*. Thousand Oaks, CA: Sage Publications Inc.

- Scott Momaday, N. C. 2007. The alphabet of hope writers for Literacy on the value of literacy. (36).UNESCO Educational, Scientific and Cultural organisation: 7, Place de Fontenoy F- 75352 Paris 07S. Paris: United Nations. Available at: <http://unesdoc.unesco.org/images/0015/001529/152985e.pdf> Accessed 01/02/2010
- Secada, W. G., Chavez-Chavez, C.R., Garcia, E., Munoz, C., Oakes, J., Santiago – Santiago, I. & Slavin, R. 1998. U.S. Department of Education. *No more excuses: The final report of the Hispanic Dropout Project*. Washington, DC. Available at: <http://eric.ed.gov/ERIC.DOCS/data/ericdocs2sql/c> Accessed 05/15/2008.
- Selinker, L. 1972. Interlanguage. *International Review of Applied Linguistics*, 10(3): 209-231.
- Shanker, J. & Ekwall, E.2003. *Locating and correcting reading difficulties* (8th Ed.).Pearson Education Inc.
- Siraj-Blatchford, I. 1994. *The early years: laying the foundations for racial equality*. Stoke- on –Trent: Trentham Books.
- Skrtic, T. 1994. Changing paradigms in special education. Paper presented at the Excellence and Equity in Education International Conference. Toronto.
- Skrtic, T. 2005. A political economy of learning disabilities. *Learning Disability Quarterly*, 28: 149-155.
- Slavin, R. E. 2005. A synthesis of research on language of reading instruction for English language learners. *Review of Educational Research*, 75(2): 247 – 284.
- Smith, K.E., Landry, S.H. & Swank P.R. 2000.The influence of early patterns of positive parenting on children’s preschool outcomes. *Early Education and Development*, 11:147-169.
- Snow, C.E. 1993. Families as social contexts for literacy development. In: Daiute, W. (Ed.). *New directions for child development*. San Francisco: Jossey – Bass.
- Snow, C. E. 1996. The declining art of table talk: a key to child’s Literacy. *Boston Globe*, 30 January: 1.
- Snow, C. E., Burns, M. S. & Griffin, P. (Eds.). 1998. *Preventing Reading difficulties in young children*. Washington, DC: National Academy Press.

Snowling, J. M. Hulme, C. 2005. *The science of reading: A handbook*. Oxford, UK: Blackwell.

Snow, C.E. 1997. Foreward. In: Tabors, P. O. 2006. *One child two languages*. London: Paul H. Brookes.

Snow, C. E. 2001. Learning to read in "an" L2. *TESOL*, 35(4):599-601.

Snow, C.E., Tabors, P.O. & Dickinson, D. K. 2001. Language development in the preschool years. In : Dickinson, D.K. & Tabors, P.O. (Eds.). *Beginning literacy with language: Young children learning at home and school*. Baltimore: Paul H. Brookes.

Snow, C.E. 2002. Reading for understanding: Toward an R&D programme in reading and comprehension. *Rand Reading Study Group Science and Technology Policies*.47.

Spradley, J. 1980. *Participant observation*. New York: Holt, Rinehart & Winston.

Stahl, S. 1983. Differential word knowledge and reading comprehension. *Journal of reading behaviour*, 25: 33-50.

Stainback, S. & Stainback, W. 2000. *Inclusion: A guide for educators*. Baltimore, Maryland: Paul H. Brooks.

Standing, E.M. 1984. *Montessori: Her Life and Work*. Middlesex, England: Plume Printing.

Stanovich, K.E. 1986. Mathew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21: 360-407.

Statistics Canada, 2001. English Census: *Language: Mother Tongue Part B*. Available at: <HTTP://WWW.STATSCAN.CA/ENGLISH.CENSUS01/PRODUCTS/REFERENCE/DICT/POP082.htm>.
[accessed 17/11/2008](#) Accessed :17/11/2008.

Statistics Canada 2006. *Immigration in Canada: A portrait of the foreign born population*. Statistics Canada , catalogue no. 97-557–XIE: 5 Available at: <http://www40.statscan.ca/101/cst/demo11c.htm>

Accessed :29/06/2008.

Stothardt, M. & Hulme, C. 1992. Reading comprehension difficulties in children: The Role of language comprehension and working memory skills. *Reading and Writing: An Interdisciplinary Journal*, 4 (3):254 -256.

Sweet, A.P. & Snow, C.E. 2003. (Eds.). *Rethinking reading comprehension*. New York: Guilford Press

Tabors, P. O. 2006. *One child two languages*. London: Paul H. Brookes.

Tabors, P. O., Snow, C. E. & Dickinson, D. K. 2001. Homes and schools together: Supporting language and literacy development. In: Dickinson, D. K. & Tabors, P. O. *Beginning literacy with language: Young children learning at home and at school* (Pp. 313 – 334). Baltimore, MD: Brooks Publishing.

Tabors, P.O. & Snow, C. E. 2003. Young bilingual children and early literacy. In: Neuman, S. & Dickenson, K. *Handbook of early literacy research volume 1*(Pp. 159 -178). New York, NY: The Guilford Press.

Tannenbaum, K.R. Torgeson, J.K. & Wagner, R.K. 2005. Relationships between word knowledge and reading comprehension in third- grade children. Manuscript submitted for publication. In: Wagner, R K., Muse, A.E., Tannenbaum, K.R. 2007. *Vocabulary Acquisition: Implications for reading acquisition*. New York\ London: The Guildford Press.

Tashakkori, A. & Teddlie, C. 1998. *Mixed Methodology: Combining qualitative and quantitative approaches*. Applied Social Research Series, 46. Thousand Oaks, California: Sage.

Teal , W. H. & Sulzby, E. 1986. *Emergent literacy: Writing and Reading*. Westport, Connecticut: Ablex.

Templin, M.C. 1957. *Certain language skills in children: Their development and interrelationships*. Minneapolis: University of Minnesota Press.

The Levin Institute, A project of the Levin Institute. no date available. *What is globalization101.org* http://www.globalization101.org/What_is_Globalization.html?PHPSESSID=82bb3b672c77a4460a14ad839c2fd359 Accessed: 11/05/2009.

The Rand Reading Study Group.2002. *Reaching for understanding: Toward an R & D program in reading comprehension*. Santa Monica, CA: Rand Corporation. Available at: www.rand.org/publications/MR/MR1455/ Accessed: 9/8/2007.

Thiessen, E.D. & Saffran, J.R. 2003. When cues collide: Use of stress and statistical cues to word boundaries by 7- to 9 month-old infants. *Developmental Psychology*, 39 (4):706-716.

Titone, R. & Danesi, M. 1985. *Applied psycholinguistics: an introduction to the psychology of language learning and teaching*. Toronto: University of Toronto Press.

Titone, R. & Danesi, M., cited in Landsberg, E., Kruger, D. & Nel, N. 1999. *Addressing barriers to learning: A South African Perspective*. Pretoria: Van Schaik.

Tomosello, M. 2003. *Constructing a language: A usage based theory of language acquisition*. Cambridge, MA: Harvard University Press.

Tomblin, J. B., Zhang, X., Buckwalter, P.& Catts, H. 2000.The association of reading disability, behavioural disorders, and language impairment among second- grade children . *The Journal of Child Psychology and Psychiatry & Allied Discipline*, 41(4): 473- 482.

Torgeson, J.K., Wagner, R.K., Rose, E., Lindamood, P., Conway, T. & Garvan , C. 1999.Preventing reading failure in young children with phonological processing disabilities: Group and individual responses to instruction. *Journal of Educational Psychology*, 91: 579-593.

Toronto School Board. 2008. *Our Children, our schools, our students*.2008: Available at: [www.documents/about us/environmental san 2007docs/3.ourstudents080902.pdf](http://www.documents/about_us/environmental_san_2007docs/3.ourstudents080902.pdf) Accessed: 05/10/2008.

Turner, M. 1993. Testing times. *Special Children*, 65: 12-16.

United Nations Educational, Scientific and Cultural Organization. (UNESCO). 1994. *The Salamanca Statement and Framework for Action on Special Needs Education*, Paris: UNESCO.

- United Nations Educational, Scientific and Cultural Organization (UNESCO). 2001. *Open file on inclusive education support materials for managers and administrators*. Paris: UNESCO.
- U.S. Department of Education Institute of Education Sciences National Centre for Education Statistics, 2007. Available at:
<http://nces.ed.gov/pubs2007/dropout05/NationalStatisticsDropouts.asp> Accessed: 01/15/2009.
- U.S. Department of Education, Institute of Education Sciences, National Centre for Education Statistics (NCES), 2007. Available at: <http://nces.ed.gov/surveys/SurveyGroups.asp?group=3>
Accessed: 16/7/2009.
- U.S. Department of Education, Institute of Education Sciences, National Centre for Education Statistics (NCES), 2007. Available at:
<http://nces.ed.gov/pubs2007/dropout05/NationalStatisticsDropouts.asp>
Accessed: 15/01/2009.
- Van den Aardweg, E.M.& Van den Aardweg, E.D. *Psychology of education: A dictionary for students* (2nd Ed.). 1993. Pretoria: E & E Enterprises.
- Veasey, S., A. 1999. *The identification and assessment of dyslexia/SPLD in pupils who have English as an additional language*. Unpublished MA. London: University of London.
- Venzke, S. 2002. The relationship between English proficiency in Grade 12 English results and the academic success of first year students. Unpublished MEd dissertation. Pretoria: University of Pretoria.
- Verhoeven, L.T. 1990. Acquisition of reading in a second language. *Reading Research Quarterly*, 25(2): 90-114.
- Verhoeven, L.T. 2000. Components in early second language reading and spelling. *Scientific Studies of Reading*, 4(4): 313-330.
- Vygotsky, L.S. 1978. *Mind and society: The development of higher mental processes*. Cambridge, MA: Harvard University Press.

Wagner, R. K., Muse, A.E. & Tannenbaum, K.R. 2007. *Vocabulary Acquisition: Implications for reading acquisition*. New York London: The Guildford Press.

Walsh, M. 2000. Text related variables in narrative picture books: Children's responses to visual and verbal texts. *The Australian Journal of Language and Literacy*, 23, 139 – 156.

Walton, E., Nel, N., Hugo, A. & Muller, H. 2009. The extent and practice of inclusion in independent schools in South Africa. *South African Journal of Education*, 29: 105-126.

Weichers, E. 2002. *Psychology of education* (BEd) Only study guide for OS1431-5. Unpublished study material. Pretoria: UNISA.

Weider, D. L. & Pratt, S. 1990. On being a recognisable Indian among Indians. In: Carbaugh, D (Ed.). *Cultural communication and intercultural contact*. Hillsdale NJ: Erlbaum and associates.

Weizman, Z. & Snow, C. 2001. Lexical input as related to children's vocabulary acquisition. Effects of sophisticated exposure and support for meaning. *Developmental Psychology*, 37, 265 – 279.

Whitehurst, G.J., Epstein, J.N., Angell, A.L., Payne, A.C., Crone, D.A. & Fischel, J.E. 1994. Outcomes of an emergent literacy programme in Headstart. *Journal of Educational Psychology*, 86: 542- 555.

Whitehurst, G. J. & Lonigan, C., J. 1998. Child development and emergent literacy. *Child Development*, 69 (3):848-872.

Whitehurst, G. J. & Lonigan, C. J. 1998. Emergent literacy: Development from prereaders to readers. In: Neuman, S. and Dickinson, D. K.2003.(Ed.). *Handbook of early literature research vol.1*. New York: The Guilford Press.

Wolf, M. 2007. *Proust and the squid*. New York: Harper Collins.

Wolf, M., Bowers, P.G. & Biddle, K. 2000. Naming speed processes, timing and reading: A conceptual review. *Journal of Learning Disabilities*, 37 (4):387-407.

Wong Fillmore, L. 1979. Individual differences in second language acquisition. In: Fillmore, C.J., Kempler, D. & Wang, W. S-Y. (Eds.). *Individual differences in language ability and language behaviour*. (Pp. 203 – 228). New York: Academic Press.

Wong Fillmore, L. 1998. Supplemental declaration of Lily Wong Fillmore. Available at: <http://www.humnet.ucla.edu/humnet/linguistics/people/grads/macswan/fillmor2.html>. Accessed: 23/10/2008.

Wood, B.S. 1981. *Children and communication: verbal and non verbal language development*. (2nd Ed.). Englewood Cliffs, NJ: Prentice Hall.

Woodcock, R. & Munoz-Sandaval, A. 1992. *Woodcock – Munoz Language survey comprehensive manual*. Boston: Houghton Mifflin.

Yaden, D. B., Rowe, D. & MacGillivray, I. 2000. Emergent literacy: A matter of (polyphony) of perspectives. In: Kamil, M., Mosenthal, P., Pearson, P. D. & Barr, R. (Eds.). *Handbook of reading research* vol. 111. Mahwah, NJ: Lawrence Erlbaum associates.

Zwaan, R. A. & Radvansky, G. A. 1998. Situation models in language comprehension and memory. *Psychological Bulletin*, 123:162-185.

APPENDIX A

A-1 PARENT CONSENT FORM - ENGLISH

I voluntarily and of my own free will consent to be a participant in the research study entitled ***Semiotic anomalies in English as a second language learner of immigrant parents***. I understand that the purpose of the research is to increase awareness of the comprehension difficulties second language learners have in the English only classroom.

I understand that there will be no penalty should I choose not to participate in this research, and I may withdraw at any time. I have also been assured privacy and that my name will not appear on any research document.

I understand that this research may be of benefit to English language learners acquiring first time literacy in English and I retain the right to ask and have answered any questions I have about the research.

The results of the reading analysis will be shared by the researcher with the parent/s once the reading analyses have been processed.

The assurances above have been provided to me by the researcher Claire Gien Snelgar.

I have read and understood this consent form

Participant: _____

Date: August 20th

APPENDIX A

A-1.1 PARENT CONSENT FORM - MANDARIN

同意書

我自願並同意參加名為「來自移民家庭且英語為第二語言學習者對英語認知困難的現象」的研究計劃。我了解這項研究計劃的目的是要增進英語為第二語言學習者在以英語為主的教室學習環境中造成理解力困難的察覺。

我了解如果在任何時候我決定不參加或終止這項計畫將不會有任何的罰款。我個人的隱私及名字將不會出現在任何的研究報告上。

我了解這項研究的計劃也許會對英語為第二語言學習者在第一次接觸英語閱讀時帶來好處，而我也保有針對這項研究計劃提出或回答任何問題的權利。

一旦這項閱讀分析的研究計劃開始進行之後，其結果將會由研究員和家長一起分享。

以上內容的確實性是由研究員 Claire Gien Snelgar 提供給我。

我已閱讀並了解這份同意書。

參加者簽名: _____ 日期: August 20th, 2009

APPENDIX A

A-2 PARENT INTERVIEW / QUESTIONNAIRE

Collecting Basic Information on Learner's Background

Introduction

Researcher:

Thank you for your participation in this research study. I do appreciate your time and support. I will explain the purpose of the research to you and why I will be asking the following questions.

Do you have any questions?

Researcher:

Have you signed the consent form and understood the contents? (Copy of Mandarin consent form available if required)

SECTION A:

Biographical Details

1. Age of learner and D.O.B.
2. Male or female?
- *3. Researcher: Where was the learner born?
4. Which School does the learner attend?
5. What grade is your child going into in September?

SECTION B

Family details:

- *6. How long have you been in Canada? / Have you resided in Canada for your entire life?
7. How many family members live in the home? Do they speak English?
8. How many brothers and sisters does the learner have?
9. Are the siblings older than the learner ?
10. Are they able to speak, read or write in English?

SECTION C

Socioeconomic details

11. What work does your husband do?
12. Do you work outside the home? If so what?

13. Researcher: What is your husband's educational background can you elaborate?

14. What are your qualifications and or background?

SECTION D

Cultural background

16. Which festivals and customs are observed in the home?

SECTION E

Language Profiles

*18. What language/s do you speak at home? (English as mother tongue spoken at home?)

*19. Are both you and your husband able to read and write in your home language/s? (Mother tongue)

*20. Have you or your husband had any English language tuition?

*21. Are you and/or your husband able to read or write in English?

SECTION F

History

23. Has the learner experienced any trauma from his/her experiences of a new culture/language/educational change ?

24. Does the learner appear to be happy at school?

*25. Does he/she have English speaking friends? (Is your child exposed to English via friends?)

26. Why did you leave your country of birth?

27. Has the learner ever been diagnosed as having a learning difficulty?

SECTION G

Community support

28. To what extent do you have support within the community?

29. To what extent has the school offered support to you as a family?

30. Is the family isolated?

31. How much time does the learner spend away from Canada? If yes where?

32. Does the learner receive any schooling when away from Canada? If so in what language?

33. What is your profession? (note if different from work done in Canada) qualifications?


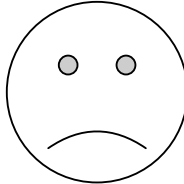
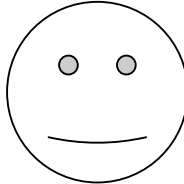
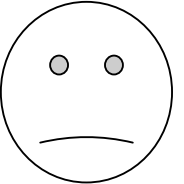
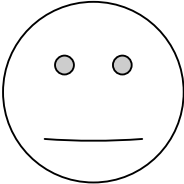
APPENDIX B

B-1 DIFFERENTIAL LIKERT SEMANTIC SCALE FOR YOUNG CHILDREN

Name: _____

Researcher: How do you feel when you are asked to read in English?

Learner: Relevant feeling to be marked with an x or pointed to with a finger.

happy	sad	okay	don't care	scared
				

APPENDIX B

B-2 STRUCTURED OBSERVATION CHART

Reading Behavioural Observations

Behaviour	None	Noticeable	Excessive
Reluctance to begin reading			
Fidgeting			
Rubbing eyes			
Pulling at reader			
Twisting of pages			
Head movements			
Other observations			

Observations made by researcher prior to and during the reading analyses

APPENDIX C

C-1 TABULATED CHART BASED ON THE STRUCTURED QUESTIONNAIRE

TABULATED DATA

QUESTIONS	PARTICIPANTS																	
SECTION A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	7.11	8.7	7.5	8.6	8.11	7.10	7.5	7.5	7.6	7.4	8.2	7.3	6.4	6.1	6.7	7.8	7.5	6.4
2	M	M	F	F	F	F	M	F	F	M	M	F	F	M	F	M	F	F
*3	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
4	G	G	G	G	G	G	P	G	G	P	G	G	G	P	G	G	G	G
5	2	3	2	3	3	2	2	2	2	2	3	2	1	1	2	3	2	2
SECTION B																		
*6	8.4y	9.2y	7.3y	8.9y	9.1y	8.3y	7.9y	7.8y	7.5y	7.9y	8.7y	7.6y	7.4y	6.7y	7.3y	8.1y	7.8y	7.1y
7	3N	2N	3N	5N	4N	4N	8N	4N	3N	6N	5N	4N	1N	3Y	5N	1N	4N	5N
8	1	1	1	2	1	2	3	2	1	3	2	1	3	2	2	1	2	1
9	N	N	N	N	Y	N	N	N	N	N	N	N	N	Y	N	N	Y	N
10	N	N	N	N	Y	N	N	N	N	N	N	N	N	Y	N	N	Y	N
SECTION C																		
11																		
12	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
13																		
14	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
15																		
SECTION D																		
16	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
17																		
SECTION E																		
*18	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
*19	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
*20	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
*21	YN	YN	YN	YN	YN	YN	YN	YN	YN	YY	YN	YN	YY	YN	YN	YN	YN	YN
22																		

Continued

QUESTION	PARTICIPANTS																		
SECTION F																			
23	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
*25	N	Y	N	N	N	N	N	N	Y	N	N	Y	Y	N	N	N	Y	N	
26	W	W	W	W	W	W	W	W	W										
27	N	N	N	N	N	N	S	N	N										
SECTION G																			
28	N	S	N	S	N	N	N	N	N										
29	Y	Y	Y	Y	Y	Y	Y	Y	Y										
30	N	N	N	N	N	N	N	N	N										

Median age ELL/LEP learners 7.8

Median age Monolingual learners 6.8

Median Age ELL & Monolingual learners 7.4

Table legend:

Question 3 - C – China

Question 18 – M – Mandarin

Question 19/20 - Y/N – Yes/No

Question 21 Husband/Wife – Y/N – Yes-No

Question 25 – Y - Yes

APPENDIX C

C-1.1 TABULATION FOR STRUCTURED QUESTIONNAIRE/PERCENTAGES

QUESTION	ELL/LEP	MONOLINGUAL	NOTES
3	100%	100%	
6	7%	100%	median 7yrs
18	100%	100%	
19	100%	100%	
20	100%	100%	
21	50%	100%	9/18
25	22%	100%	4/18

APPENDIX C

C-2 FREQUENCY TABULATION FOR ELL STRUCTURED READING OBSERVATION

Participants	Reluctance to begin reading	Fidgeting	Eye rubbing	Pulling at reader	Twisting of pages	Head movement	Head down	Mumbling
1	*				*			
2								
3	*	*			*			
4	*		*		*			
5								
6				*	*			
7								
8					*			
9	*	*		*				
10								
11					*			
12					*			
13								
14	*			*				
15					*			
16				*				
17					*			
18								

APPENDIX C

C-2.1 FREQUENCY TABULATION FOR MONOLINGUAL STRUCTURED READING OBSERVATION

Participants	Reluctance to begin reading	Fidgeting	Eye rubbing	Pulling at reader	Twisting of pages	Head movement	Head down	Mumbling
1								
2								
3								
4								
5	*							
6								
7								
8								
9								
10								
11								
12								
13	*			*	*			
14								
15								
16								
17								
18								

APPENDIX C

C-2.2 FREQUENCY CHART ELL STRUCTURED READING OBSERVATION

Behaviour	None	Noticeable	Excessive
Reluctance to begin reading		///	
Fidgeting		//	///
Rubbing eyes		/	
Pulling at reader		///	
Twisting of pages		/////	
Head movements			
Other observations I. Head down II. Mumbling III. Fiddling with hands IV. No eye contact with researcher		I./////	

Observations made by researcher prior to and during the reading analyses

APPENDIX C

C-2.3 FREQUENCY CHART MONOLINGUAL STRUCTURED READING OBSERVATION

Behaviour	None	Noticeable	Excessive
Reluctance to begin reading		//	
Fidgeting			///
Rubbing eyes			
Pulling at reader		/	
Twisting of pages		///	
Head movements			
Other observations I. Head down II. Mumbling III. Fiddling with hands IV. No eye contact with researcher		I. // II. III. IV.	

Observations made by researcher prior to and during the reading analyses

APPENDIX C

C-2.4 TABULATION FOR READING ANALYSIS OBSERVATION CHART

OBSERVATIONS	ELL Tallies	MONO Tallies	ELL %	MONO %
1	5	2	27.7	10.53
2	2	0	11.0	0
3	1	0	5.5	0
4	4	1	2.2	5.26
5	9	3	5.5	15.7
6	0	0	0	0
6.1	8	2	4.4	10.52
6.2	7	0	38.8	0
	18 learners	19 learners	18 learners	19 learners

Legend:

1. Reluctance to begin reading
2. Fidgeting
3. Rubbing eyes
4. Pulling at reader
5. Twisting of pages
6. Head movements
 - I. Head down
 - II. Mumbling

APPENDIX C

C-3 READING AND COMPREHENSION DATA (ELL - NARA)

READING AND COMPREHENSION DATA TABLE

ENGLISH LANGUAGE LEARNERS (ELL)

NEALE READING ANALYSIS (NARA)

Data for Reading and Comprehension Ability Correlation (ELL Subjects NARA) outliers included

Subject	C/Age	R / Age	C / Age	Raw/R	Raw/C	Stand/R	Stand/C	R / %	C / %
1.	7.11	11.2	6.10	74	9	122	87	93	20
2.	5.10	6.5	4.0	20	0	104	0	60	1
3.	8.7	9.10	8.1	62	16	108	94	70	34
4.	7.5	8.1	6.10	42	9	106	91	66	28
5.	8.6	9.10	6.2	69	17	112	97	78	42
6.	8.11	11.4	6.2	75	17	113	94	80	34
7.	7.10	11.5	8.10	76	20	123	108	94	70
8.	7.5	10.1	6.5	64	7	120	87	91	20
9.	7.5	7.2	6.1	31	5	98	83	45	13
10.	7.2	<6	2.0	5	1	72	0	3	1
11.	7.6	7.10	6.1	39	5	102	81	55	11
12.	7.4	8.10	8.7	51	18	112	110	78	74
13.	8.2	9.0	7.4	53	12	106	90	60	26
14.	7.3	7.7	6.7	36	8	102	89	55	24
15.	6.4	7.2	6.4	30	6	108	99	70	48
16.	6.1	7.0	4.0	28	2	110	89	74	24
17.	6.7	7.2	6.1	31	5	106	90	66	28
18.	7.8	7.7	6.10	36	9	100	89	50	24
19.	7.5	7.9	6.7	38	8	103	89	58	24
20.	6.4	6.11	6.4	27	6	106	99	66	48

Note: (i) Subject number 2 chronological age 5.10

(ii) Subject number 10 special needs learner; comprehension 0

APPENDIX C

C-3.1 READING AND COMPREHENSION DATA (MONOLINGUALS - NARA)

READING AND COMPREHENSION DATA TABLE

COMPARISON (MONOLINGUALS)

(NARA DATA)

Data for Reading and Comprehension Ability Correlation (Monolingual comparison NARA) Outlier included

Subject	C/Age	R / Age	C / Age	Raw/R	Raw/C	Stand/R	Stand/C	R / %	C / %
1.	8.2	9.04	<6.0	57	4	109	74	72	4
2.	8.4	8.09	8.07	50	18	102	101	55	52
3.	6.7	6.11	6.10	27	9	103	102	58	55
4.	7.2	7.11	7.09	40	15	107	107	68	68
5.	8.9	10.6	10.4	68	26	110	108	74	70
6.	8.5	9.01	9.10	54	24	105	109	63	72
7.	7.0	7.08	7.00	37	10	105	98	63	45
8.	6.9	8.04	8.07	45	18	113	115	80	84
9.	7.10	8.03	8.01	44	16	103	102	58	55
10.	8.4	8.11	8.08	52	19	104	102	60	55
11.	8.2	9.09	9.10	61	24	111	111	77	77
12.	8.9	9.04	8.10	57	20	103	100	58	50
13.	7.7	8.01	7.08	42	14	104	101	60	52
14.	7.3	8.05	8.07	46	18	109	110	72	74
15.	7.2	9.00	8.01	53	16	115	109	84	72
16.	6.5	6.11	6.05	27	7	106	102	66	55
17.	6.8	7.00	6.10	28	9	104	102	60	55
18.	6.10	8.00	7.04	41	12	110	105	74	63
19.	8.2	8.10	8.07	51	18	105	103	63	58
20.	7.11	7.09	7.07	38	13	99	96	48	40

Note: Subject number 1: An English speaker who attends a French Immersion school

APPENDIX C

C-4 RECEPTIVE VOCABULARY DATA (ELL - PPVT)

RECEPTIVE VOCABUALRY DATA TABLE

SUBJECTS (ELL)

PPVT DATA

Data for Receptive vocabulary (ELL Subjects PPVT) Outliers included

PPVT Subjects (ELL)					
Subject	Chron/Ag e	Vocab/Ag e	Raw/Scor e	Stand/Sco re	Percentile
1	7.5	5.7	107	90	25
2	7.1	6.7	136	109	73
3	7.4	4.7	74	74	4
4	7.6	8	129	105	63
5	7.4	6.9	135	112	79
6	7.5	4.6	68	71	3
7	5.1	5.2	71	83	13
8	7.11	6.1	127	100	50
9	8.6	8.2	131	96	39
10	8.7	8.4	133	98	45
11	8.7	7.3	119	89	23
12	7.5	6.5	106	90	25
13	7.3	6.7	109	92	30
14	6.4	6.4	104	99	47
15	6.1	5.2	83	88	21
16	6.7	5.9	94	89	23
17	7.8	7.2	118	96	39
18	7.5	6.6	107	90	25
19	6.4	6.3	102	98	45
20	8.2	7.2	118	92	30

APPENDIX C

C-4.1 RECEPTIVE VOCABULARY DATA (MONOLINGUALS - PPVT)

RECEPTIVE VOCABULARY DATA TABLE

COMPARISON (MONOLINGUALS)

PPVT DATA

Data for Receptive vocabulary (Monolinguals comparison PPVT) Outlier included

PPVT Monolinguals (comparison group)					
Subject	Chron/Age	Vocab/Age	Raw/Score	Stand/Score	Percentile
1	8.2	9.7	148	116	86
2	8.4	9.1	142	108	70
3	6.7	6.6	116	107	68
4	7.2	5.6	89	83	13
5	8.9	9.1	142	101	53
6	8.5	9.1	142	109	73
7	7	6.1	99	88	21
8	6.9	9.2	143	126	96
9	7.1	8.4	133	106	66
10	8.4	8.6	135	101	53
11	8.2	9.4	145	113	81
12	8.9	9.3	144	103	58
13	7.7	7.1	126	102	55
14	7.3	8.1	130	108	70
15	7.2	8.3	132	112	79
16	6.5	7	116	109	73
17	6.8	6.11	115	103	58
18	6.1	8	128	111	77
19	8.2	8.8	137	106	66
20	7.11	8.2	131	104	61

APPENDIX C

C-5 RAPID AUTOMATIC NAMING DATA (ELL - RAN)

RAPID AUTOMATIC NAMING DATA TABLE

SUBJECTS (ELL)

RAN DATA

Data for Rapid Automatic naming (ELL subjects RAN) Outliers included

Subject	Chron/Age	RAN/Age	Raw/Score	Stand/Score	Percentile
1.	7.5	7.3	35	104	61%
2.	8.6	10.0	26	105	63%
3.	8.7	14.0	23	115	40%
4.	8.6	11.3	24	110	75%
5.	5.10	6.0	59	104	61%
6.	7.11	13.6	23	125	95%
7.	7.4	8.0	30	110	75%
8.	7.6	7.0	36	97	42%
9.	7.2	6.0	56	81	10%
10.	7.5	7.0	37	100	50%
11.	7.5	9.0	27	119	90%
12.	7.10	14.0	24	119	90%
13.	7.3	7.9	32	108	70%
14.	6.4	6.9	42	109	73%
15.	6.1	6.6	43	113	81%
16.	6.7	6.9	41	105	63%
17.	7.8	8.0	31	104	61%
18.	7.5	7.0	32	108	70%
19.	6.4	6.9	40	111	77%
20.	8.2	8.9	26	108	70%

APPENDIX C

C-5.1 RAPID AUTOMATIC NAMING DATA (MONOLINGUALS - RAN)

RAPID AUTOMATIC NAMING DATA TABLE

COMPARISON GROUP (MONOLINGUALS)

RAN DATA

Data for Rapid Automatic Naming (Monolingual Subjects RAN) Outlier included

Subject	Chron/Age	RAN/Age	Raw/Score	Stand/Score	Percentile
1.	8.2	11.00	25	113	81
2.	8.4	8.06	28	104	61
3.	6.7	6.09	39	107	68
4.	7.2	7.06	33	107	68
5.	8.9	14.0	24	111	77
6.	8.5	8.06	28	104	61
7.	7.0	7.06	33	106	65
8.	6.9	8.00	31	114	82
9.	7.10	7.09	32	103	58
10.	8.4	10.0	26	108	70
11.	8.2	12.03	25	112	79
12.	8.9	9.00	27	103	58
13.	7.7	8.03	29	106	65
14.	7.3	8.03	29	111	77
15.	7.2	8.06	28	114	82
16.	6.5	6.03	49	102	55
17.	6.8	6.09	42	104	61
18.	6.10	7.03	35	109	73
19.	8.2	8.06	28	105	63
20.	7.11	7.03	35	98	45