

The phonemic awareness development of Setswana speaking children at an Afrikaans medium small-town school

**Sonja Brink
24666815**

Thesis submitted for the degree:

Doctor Philosophiae

in Curriculum Development
at the Potchefstroom Campus
of the North-West University

Promoter: Prof C Nel

October 2016

DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously submitted it, in its entirety or in part, for a degree at any university.

Sonja Brink

October 2016

LANGUAGE EDITING

The language editing was done by Prof C Nel (promoter) who is an applied linguist.

Prof Carisma Nel

October 2016

SUMMARY

Key words: *Phonemic awareness development; early literacy learning; second language learning; orthographic depth; early literacy instruction; teacher agency; parent agency.*

Literacy learning in a second language is a debated issue in the South African education scenario. Phonemic awareness is an essential component of early literacy learning. In this study the phonemic awareness development and early literacy learning of a group of Setswana speaking children learning to read in Afrikaans in a rural hamlet in the Gauteng province in South Africa came under the loop.

The closing down of a nearby Setswana medium school eight years ago meant that Setswana speaking children were quite suddenly transferred to a nearby small-town Afrikaans medium school. Despite a choice of other schools in the area the enrolment rate of Setswana speaking children at the school had remained the same over time. This seeming dichotomy, together with the apparent success with which the Setswana speaking children learn to read in Afrikaans lead to the following research question: *What is the phonemic awareness development profile of Setswana speaking grade one children within their peer group¹ at an Afrikaans medium small-town school?*

Two additional research questions aimed to capture salient aspects of the children's home environment which could impact upon their early literacy learning. These are: *How does their home environment support the children's phonemic awareness development?*, and, *what are the perceptions of Setswana speaking parents, of their children attending an Afrikaans medium small-town school, which could impact upon the children's phonemic awareness development?* Aspects of the children's school environment relevant to their early reading acquisition found expression in two more research questions, namely, *What school support is there for the phonemic awareness development of Setswana speaking children at an Afrikaans-medium small-town school?*, and *What are the experiences of the teachers and the principal at an Afrikaans-medium small town school, related to the development of literacy skills of the Setswana speaking children?*

¹ This study does not aim to give a statistical comparison between the Setswana speaking children and their Afrikaans speaking peers but rather a description of their phonemic awareness development profile based on their performance on some early literacy measures.

A review of some of the available literature explored language in education in South Africa, early literacy learning - especially in a second language, and phonemic awareness development as an important factor in early reading.

To gain a comprehensive understanding of the situation under investigation a mixed method design was employed. The quantitative component of the design comprises a translated version of an early reading assessment which would give a measure of the children's phonemic awareness development during their first school year.

Qualitative research methods included the administering of semi-structured interviews to the parents, the foundation phase teachers and school principal. The researcher collaborated with an experienced Setswana first language speaking field researcher assistant who conducted the interviews with the Setswana speaking parents in their home language. A self administered pencil and paper test was designed with the aim of gauging teacher knowledge of phonemic awareness. Researcher observations from a field log were used to substantiate data from other sources. School documents were analysed and used to the same end as the observations recorded in the researcher field log. Observations of literacy sessions were electronically recorded and used to compile an innovations configuration of the frequency of and depth of engagement in certain classroom activities during literacy sessions by the teacher and learners. Qualitative and Quantitative data which were gathered from diverse sources over a period of eighteen months were integrated and contribute to the validity of the inquiry.

The main finding of this inquiry is that during their grade one year, the Setswana speaking children's phonemic awareness development progressed at a level and rate which is on a par with that of their Afrikaans speaking peers. Furthermore the study showed that although aspects of the children's home environment did not necessarily support their phonemic awareness development and early literacy skills development in Afrikaans, parents chose the school for its perceived education quality and functionality over other schools in the area and employed various strategies to help enable their children's learning to read in a second language. The inquiry shows that the school is functional and child-centred. Despite the strictures imposed upon them by the various implementers of the national curriculum at provincial, national and local level, the educators at the school too, have devised various strategies to address the challenges of teaching Setswana speaking children to read and learn in Afrikaans. As elsewhere in the country the teachers and educators lack knowledge of phonemic awareness

development and how it should be instructed to optimise early literacy. This dearth of knowledge shows clearly in a focus on phonics, word recognition and writing activities during classroom literacy sessions. Despite this, Setswana and Afrikaans speaking children alike make significant progress in their literacy skills – presumably because of the transparency of the Afrikaans orthography.

AKNOWLEDGEMENTS

They say that it takes a village to raise a child. Certainly, it took one to ensure the successful completion of this thesis. To all my family and friends – thank you for carrying me through the process of completing this study. Thank you for logistic support, for the writing retreats and for your friendship and love throughout the time of my engagement with this material.

To the principal and the staff at the school where this research was conducted, thank you for your willingness to let me enter upon your professional education space. I salute this school, this principal and every member of staff for being an example to the country of how children can be supported to reach their full potential.

To Magda, for her kind hospitality during my extensive field visit - your devotion to your profession and your unconditional love for the children in your class served as a constant inspiration to me.

To my supervisor, Professor Carisma Nel, thank you for allowing me the freedom to engage with my subject in an exploratory way. This caused me to look for answers in ways which I would not have conceived of otherwise.

To Plantinah Mathikge, my co-researcher, thank you for your hard work and patience and dedication to this work.

To my daughter, Francí van der Vyver, thank you for assisting with the editing of the final document.

To our family physician, Dr. Dirk Lourens, for taking care of my health during the time of my study. Thank you also for moral support and for sharing your sense of humour. May good health be yours, always.

To Hannelie Hartman and the staff at the LifeStyle Pharmacies – for going way beyond the line of duty to support my wellbeing.

To Ian van der Vyver. The list is too long. You are my hero.

To Willemina Setlodi, who helped raise my children while I was away in the village doing research – truly, we are blessed to be a part of your life.

To my four children – Francí, Karel, Savuti and Rathla – you are my inspiration.

To my sisters Marietjie and Debbie and my brothers Rathla, Ronnie, Leon and Johann - for all the love, encouragement and help you gave me.

To my parents Tex and Daleen Brink and all the people who influenced my childhood - for raising me far from the madding crowd.

To God, the life force within us all for carrying me over the finishing line.

TABLE OF CONTENTS

DECLARATION.....	ii
LANGUAGE EDITING	iii
SUMMARY	iv
ACKNOWLEDGEMENTS	vii
TABLE OF CONTENTS.....	ix
LIST OF ADDENDA (ON COMPACT DISK).....	xvii
LIST OF TABLES.....	xix
LIST OF FIGURES	xxi
LIST OF ACRONYMS	xxiii
CHAPTER 1: OVERVIEW OF THE STUDY	1
1.1 INTRODUCTION: STUDYING AN ESSENTIAL COMPONENT OF EARLY LITERACY LEARNING OF SETSWANA SPEAKING CHILDREN AT AN AFRIKAANS MEDIUM SMALL-TOWN SCHOOL	1
1.2 BACKGROUND TO THE STUDY: THE BIGGER PICTURE OF LITERACY AND SECOND LANGUAGE LEARNING WITHIN THE SOUTH AFRICAN EDUCATION SCENARIO	6
1.3 RESEARCH APPROACH AND PARADIGM	111
1.3.1 A study of some of the available literature.....	111
1.3.2 Using quantitative and qualitative methods to gather and analyse data.....	122
1.3.3 Site selection and sampling of participants.....	12
1.3.4 Data collection and analysis	133
1.3.4.1 <i>DIBELS Next</i> assessments	144
1.3.4.2 Documents and artefacts.....	14
1.3.4.3 Observations	155
1.3.4.4 Interviews	155
1.3.4.5 Questionnaire.....	166

1.3.4.6	Electronically recorded data	166
1.3.5	Pilot interviews	16
1.3.6	Quantitative data analysis	177
1.3.7	Qualitative data analysis	177
1.4	RESEARCHER ROLE	17
1.5	RELIABILITY AND VALIDITY IN A MIXED METHOD STUDY	18
1.6	A COMPOSITE GAZE AT THE SITUATION OF THE INQUIRY	19
1.6.1	Heuristic framework	211
1.7	DEFINING AND CLARIFYING KEY CONCEPTS TO THIS STUDY: 'PHONEMIC AWARENESS', 'PHONOLOGICAL AWARENESS' AND 'PHONICS'	23
1.8	ORGANISATION OF THE THESIS	25
1.9	COMPLYING WITH ETHICAL STANDARDS	277
1.10	ENVISAGED CONTRIBUTION OF THE STUDY	27
1.11	CONCLUSION: ASSUMPTIONS AT THE OUTSET OF THE INVESTIGATION	27
	CHAPTER 2: LANGUAGE AND EDUCATION IN SOUTH AFRICA	29
2.1	INTRODUCTION	29
2.2	A CONCEPTUAL FRAMEWORK FOR THE LITERATURE OVERVIEW	30
2.3	LANGUAGES IN SOUTH AFRICA	32
2.3.1	Demographic distribution of languages in South Africa	33
2.3.2	Language in Gauteng schools	35
2.3.3	The languages in this study: Afrikaans and Setswana	37
2.3.3.1	Afrikaans	37
2.3.3.2	Setswana	40
2.3.4	Language in South Africa: Policy developments	41
2.3.5	Language in Education Policy (LiEP)	44
2.3.6	Curriculum policies	45
2.4	LANGUAGE IN SOCIETY	48
2.4.1	A language shift – straight to English	49

2.4.2	The value ascribed to different languages	50
2.5	SCHOOL CULTURE AND CULTURAL SENSITIVITY	52
2.5.1	Approaches to school integration	53
2.6	THE CASE OF MOTHER TONGUE EDUCATION	54
2.7	CHOOSING A SCHOOL AND/OR A LANGUAGE OF THE CLASSROOM.....	58
2.8	BILINGUALISM IN EDUCATION	59
2.8.1	Additive bilingualism.....	60
2.8.2	Subtractive bilingualism	60
2.8.3	Early exit/transition model	61
2.8.4	Late-exit/transition model	62
2.9	FACTORS WHICH INFLUENCE BECOMING PROFICIENT IN A SECOND LANGUAGE	62
2.9.1	The impact of the home environment on second language learning.....	63
2.9.2	The effects of schooling	64
2.9.3	School and learning in a second language.....	65
2.9.4	Code switching and code mixing	67
2.10	CONCLUSION.....	68
CHAPTER 3: PERSPECTIVES ON THE GENESIS OF LITERACY DEVELOPMENT.....		70
3.1	INTRODUCTION.....	70
3.2	PSYCHOLINGUISTIC GRAIN SIZE THEORY OF READING	71
3.2.1	‘Grain size’ as reflected in neuro-linguistic research	75
3.3	PHONOLOGICAL PROCESSING	79
3.3.1	Phonological processing in bilingual people	79
3.3.2	Delays in phonological processing	81
3.3.3	Phonological awareness	81
3.3.3.1	Syllables.....	83
3.4	PHONEMIC AWARENESS	85
3.4.1	Progression toward phonemic awareness.....	86

3.4.2	Phonemic awareness and learning to read	89
3.4.3	Phonemic awareness and writing and spelling	90
3.4.4	Phonemic awareness and orthographic depth.....	91
3.5	PHONEMIC, SYLLABIC AND PHONOTACTIC ASPECTS OF SPOKEN SETSWANA.....	93
3.6	THE AFRIKAANS ORTHOGRAPHY AND LEARNING TO READ IN AFRIKAANS	96
3.7	EARLY LITERACY AND THE HOME ENVIRONMENT	97
3.8	CURRICULUM GUIDELINES FOR PHONEMIC AWARENESS DEVELOPMENT INSTRUCTION	98
3.9	SCHOOL SUPPORT FOR PHONEMIC AWARENESS DEVELOPMENT	100
3.10	Teacher knowledge of phonemic awareness development	106
3.10.1	Assessment of phonemic awareness.....	108
3.11	CONCLUSION.....	109
CHAPTER 4: A PRAGMATIC STANCE IN THE DESIGN OF A MIXED METHOD INQUIRY		112
4.1	INTRODUCTION: THE DESIGN LOGIC OF THE STUDY.....	112
4.2	A RESEARCH GENRE AND FRAMEWORK FOR THE STUDY.....	119
4.2.1	The first generation of activity theory	119
4.2.2	The second generation of activity theory.....	121
4.2.3	The third generation of activity theory	123
4.2.4	Principles of CHAT.....	128
4.2.5	Tensions within the activity system	133
4.3	MIXED METHOD RESEARCH: A PRAGMATIC APPROACH TO RESEARCH	134
4.3.1	Background to mixed method design	137
4.3.2	Rationale and purpose of the design.....	137
4.3.3	Pragmatism as research paradigm.....	142
4.3.4	Value of mixed methods design	143

4.3.5	Choosing a specific mixed method design	144
4.3.5.1	Procedural considerations of choosing a mixed method design.....	144
4.3.5.2	Triangulation research design	145
4.4	QUANTITATIVE RESEARCH.....	147
4.4.1	Translated and adapted <i>DIBELS Next</i> assessments.....	148
4.4.1.1	Letter Naming Fluency (LNF)	149
4.4.1.2	First Sound Fluency (FSF)	151
4.4.1.3	Phoneme Segmentation Fluency (PSF)	154
4.4.1.4	Nonsense Word Fluency (NWF).....	157
4.4.1.5	DIBELS Oral Reading Fluency (DORF).....	160
4.4.1.6	<i>DIBELS</i> Composite Score	163
4.4.2	Reliability of <i>DIBELS Next</i> assessments	164
4.4.3	Validity	166
4.4.4	Pilot test.....	166
4.4.5	DIBELS Net analysis.....	167
4.5	QUALITATIVE RESEARCH.....	167
4.5.1	Sampling.....	170
4.5.2	Qualitative data collection methods.....	172
4.5.2.1	Questionnaire.....	172
4.5.2.2	Interviews.....	176
4.5.2.3	Interview schedule.....	177
4.5.2.4	Interview procedure.....	178
4.5.3	Researcher Observation	181
4.5.3.2	Classroom video recording as observation.....	182
4.5.3.3	Generating innovation configurations of classroom video recordings	182
4.5.4	Documents and artefacts	183
4.6	QUALITATIVE DATA ANALYSIS.....	184
4.7	RELIABILITY AND VALIDITY OF MIXED METHODS RESEARCH.....	185

4.8	ADMINISTRATIVE PROCEDURE AND ETHICS.....	186
4.9	CONCLUSION.....	189
CHAPTER 5: FROM GATHERING TO ANALYSING DATA.....		191
5.1	Introduction.....	191
5.2	Data sources	191
5.3	Quantitative data: Presentation and analysis	193
5.3.1	<i>DIBELS Next</i> assessment scores – data set 1	194
5.3.2	The theme derived from the quantitative data	200
5.4	QUALITATIVE DATA.....	200
5.4.1	Interview with parents – data set 2	2023
5.4.2	Interviews with teachers - data set 3	2166
5.4.3	Innovation configuration of classroom practice related to children's phonemic awareness development – data set 4.....	22222
5.4.3.1	Creating components	2244
5.4.3.2	Generating variations.....	225
5.4.3.3	Discussion of innovation configuration.....	2288
5.4.4	Teacher knowledge questionnaire – data set 5	2322
5.4.5	School documents - data set 6	2344
5.4.6	Researcher observations – data set 7	2366
5.4.7	Interview with school principal and the HOD following a monitoring and support visit by representatives of the DBE at district level - Data set 8	2433
5.5	QUALITATIVE DATA ANALYSIS: CONTENT CODES, CATEGORIES AND THEMES	2444
5.5.1	How the data was organised	2444
5.5.2	Coding of the data per source.....	2444
5.5.3	Deriving categories from codes.....	2455
5.5.4	Thematisation of categories	2455
5.6	The consolidated themes emanating from the analysis of qualitative data	2488

5.7	MERGING QUANTITATIVE AND QUALITATIVE DATA	25050
5.8	CONCLUSION.....	25151
CHAPTER 6: DISCUSSION AND CONCLUSION		2544
6.1	INTRODUCTION	2544
6.2	ASSUMPTIONS AT THE OUTSET OF THE INQUIRY	2555
6.3	DISCUSSING THE FINDINGS	2566
6.3.1	Parents of Setswana speaking children choose this school for their children's education	2566
6.3.2	Setswana speaking children's home environment does not support phonemic awareness development in Afrikaans.....	2599
6.3.3	Setswana speaking parents send their children to the Afrikaans preschool at the school in preparation for grade one.....	26161
6.3.4	Supporting learning in Afrikaans is perceived to be a challenge	2622
6.3.5	A school beyond mere functionality: Stakeholders' views	2655
6.3.6	The school adheres strictly to the DBE's directives, despite scepticism	27070
6.3.6.1	A vignette of events following a monitor and support visit by representatives of the DBE at district level	27171
6.3.7	The national curriculum is the teachers' strict guide	2733
6.3.8	Written work is seen as evidence of learning.....	2744
6.3.9	Literacy practice is limited to phonics and word recognition with no purposeful focus on phonemic awareness	2766
6.3.10	Teachers lack knowledge of phonemic awareness.....	2788
6.4	The findings in the balance	28080
6.4.1	Revisiting psycholinguistic grain size theory.....	2833
6.4.2	Tensions and agency – parents and teachers will	285
6.4.2.1	Tension between Tools and Signs and Community: Setswana speaking parents choose this school for their children's education	2866
6.4.2.2	Tensions between Tools and Signs and Division of labour: School is functional and child centered.....	2877

6.4.2.3	Tension between Tools and Signs and the Object of the activity: Teachers lack knowledge of phonemic awareness.....	2888
6.4.2.4	Tension between the Tools and Signs and Rules: The national curriculum is the teachers' strict guide.....	2888
6.4.2.5	Tension between Community and Rules: The school adheres strictly to the DBE's directives, despite skepticism.....	2899
6.4.2.6	Tension between Rules and the Object of the activity: Written work is seen as evidence of learning.....	2899
6.4.2.7	Tension between Rules and Division of Labour: Supporting learning in a second language is a challenge	29090
6.4.2.8	Tension between Community and the Object of the activity: Setswana speaking children's home environments do not support phonemic awareness development in Afrikaans	29191
6.4.2.9	Tension between community and division of labour: Setswana speaking parents send children to the preschool.....	2922
6.4.2.10	Tension between division of labour and the object of the activity: Literacy practice is limited to phonics and word recognition with no purposeful focus on phonemic awareness	2922
6.5	LIMITATIONS OF THE STUDY	2933
6.6	IMPLICATIONS OF FINDINGS	2944
6.6.1	Knowledge contribution.....	2944
6.6.2	Implications for policy.....	2944
6.6.3	Teacher education	2955
6.6.4	Assessment instrument.....	2966
6.6.5	Future research.....	2966
6.7	SUMMARY	2977
REFERENCES		2999

LIST OF ADDENDA (ON COMPACT DISK)

ADDENDUM A:	IQMS Whole School Evaluation Preliminary Report 2014
ADDENDUM B:	Scripted instructions – Phoneme Segmentation Fluency (PSF) assessment
ADDENDUM C:	Phoneme Segmentation Fluency (PSF) assessment
ADDENDUM D:	Nonsense Word Fluency (NWF) assessment
ADDENDUM E:	Scripted instructions – Nonsense Word Fluency (NWF) assessment
ADDENDUM F:	Scripted instructions – <i>DIBELS</i> Oral Reading Fluency (DORF) assessment
ADDENDUM G:	<i>DIBELS</i> Oral Reading Fluency (DORF) passage
ADDENDUM H:	Scripted instructions – First Sound Fluency (FSF) assessment
ADDENDUM I:	First Sound Fluency (FSF) assessment
ADDENDUM J:	Teacher knowledge questionnaire
ADDENDUM K:	Generic teacher interview schedule
ADDENDUM L:	Parent interview schedule
ADDENDUM M:	Example from researcher's diary
ADDENDUM N:	Invitation to parents' information session
ADDENDUM O:	Ethics clearance certificate
ADDENDUM P:	Letter of permission from school
ADDENDUM Q:	Letter of permission from Gauteng Department of Education
ADDENDUM R:	Parent information brochure
ADDENDUM S:	Parent consent form
ADDENDUM T:	Informal reading assessment: Instructions on how to use medicine – English and Afrikaans
ADDENDUM U:	Informal reading assessment: Recipe – English and Afrikaans
ADDENDUM V:	Informal reading assessment: School news letter – English and Afrikaans

ADDENDUM W:	Informal reading assessment: Magazine article – English and Afrikaans
ADDENDUM X:	Teachers' consent form
ADDENDUM Y:	GDE Monitoring Report

LIST OF TABLES

<i>Table 2.1</i>	Languages of South Africa	32
<i>Table 2.2</i>	Languages of Gauteng.....	34
<i>Table 2.3</i>	Language in Education in Gauteng.....	36
<i>Table 2.4</i>	school related factors impacting on learning.....	65
<i>Table 3.1</i>	Definition of phonemic awareness in the CAPS document.....	99
<i>Table 3.2</i>	Curriculum guidelines: time allocation for Afrikaans home language.....	99
<i>Table 3.3</i>	Suggested sequence of phonological awareness instruction.....	105
<i>Table 4.1</i>	Engeström's matrix of expanded learning.....	129
<i>Table 4.2</i>	Rationale and purpose of a mixed method research design.....	138
<i>Table 4.3</i>	Overview of Letter Naming Fluency	149
<i>Table 4.4</i>	Overview of First Sound Fluency (FSF).....	152
<i>Table 4.5</i>	Overview of Phoneme Segmentation Fluency (PSF).....	154
<i>Table 4.6</i>	Overview of Nonsense Word Fluency (NWF).....	157
<i>Table 4.7</i>	Overview of DIBELS Oral Reading Fluency (DORF).....	160
<i>Table 4.8</i>	Reliability of <i>DIBELS Next</i> tests.....	164
<i>Table 4.9</i>	Descriptions of some characteristics of qualitative research.....	167
<i>Table 4.10</i>	Issues to consider in the design of a self-administered questionnaire.....	172
<i>Table 4.11</i>	Rationale and purpose of interviews with parents and teachers....	180
<i>Table 4.12</i>	Types of validity and legitimisation in mixed method research.....	185
<i>Table 5.1</i>	<i>DIBELS Next</i> indicators and their alignment with early literacy skills.....	194
<i>Table 5.2</i>	Setswana speaking children's First Sound Fluency (FSF) and Phoneme Segmentation Fluency (PSF) scores.....	195

<i>Table 5.3</i>	Nonsense Word Fluency (NWF) scores.....	196
<i>Table 5.4</i>	<i>DIBELS</i> Oral Reading Fluency.....	197
<i>Table 5.5</i>	Setswana children's <i>DIBELS</i> Composite Score.....	198
<i>Table 5.6</i>	<i>DIBELS</i> composite scores and the availability of household resources.....	201
<i>Table 5.7</i>	<i>DIBELS</i> composite scores and mothers' level of education.....	202
<i>Table 5.8</i>	Demographic information of participant in interviews with stakeholders at the school.....	218
<i>Table 5.9</i>	Themes of questions from interview schedules of interviews with teachers.....	219
<i>Table 5.10</i>	Combinations of recorded material selected for the creation of an innovation configuration of classroom practice.....	223
<i>Table 5.11</i>	Presentation of innovation configuration	226
<i>Table 5.12</i>	Demographic information of respondents: Teacher knowledge questionnaires	233
<i>Table 5.13</i>	Observations of video recorded literary sessions: First four school weeks	239
<i>Table 6.1</i>	Summary of evidence in the data of the school's functionality.....	267

LIST OF FIGURES

<i>Figure 1.1</i>	Research questions derived from the construct of the study.....	3
<i>Figure 1.2</i>	Situatedness of phonemic awareness within conceptual tiers of the larger education situation in South Africa.....	6
<i>Figure 1.3</i>	Interrelatedness of elements of second-generation activity theory.....	23
<i>Figure 2.1</i>	A conceptual framework for the literature overview.....	31
<i>Figure 2.2</i>	Distribution of the population that speaks an Nguni language as a first language.....	34
<i>Figure 2.3</i>	Distribution of the population that speaks a Sotho-Tswana language as a first language.....	34
<i>Figure 2.4</i>	The variable meaning of 'curriculum'.....	46
<i>Figure 3.1</i>	A schematic representation of the three main problems of reading, namely that of availability, granularity and consistency.....	73
<i>Figure 3.2</i>	Parallel word reading pathways.....	77
<i>Figure 3.3</i>	Phonemic awareness as a component of phonological awareness...	82
<i>Figure 3.4</i>	Hierarchical syllable structure	84
<i>Figure 4.1</i>	Purpose of the research.....	114
<i>Figure 4.2</i>	Research questions and aspects of the construct from which they derive.....	116
<i>Figure 4.3</i>	Research questions and aims aligned with data sources.....	118
<i>Figure 4.4</i>	Engeström's reformulation of Vygotsky's model of mediated action.....	120
<i>Figure 4.5</i>	A graphic depiction of Leont'ev's conceptualisation of collective activities.....	122
<i>Figure 4.6</i>	The interrelatedness of elements of second-generation activity theory.	124
<i>Figure 4.7</i>	Balance in the design of the mixed method study and the underlying support rendered by a pragmatic research paradigm.....	136

<i>Figure 4.8</i>	Convergence model of the triangulation mixed methods design.....	147
<i>Figure 4.9</i>	Letter Naming Fluency (LNF) assessment.....	151
<i>Figure 4.10</i>	First Sound Fluency (FSF) assessment	153
<i>Figure 4.11</i>	Phoneme Segmentation Fluency (PSF) assessment.....	156
<i>Figure 4.12</i>	Nonsense Word Fluency (NWF) assessment.....	159
<i>Figure 4.13</i>	<i>DIBELS</i> Oral Reading Fluency (DORF) assessment	162
<i>Figure 5.1</i>	Composite Score Status Report.....	199
<i>Figure 5.2</i>	Composite Score Histogram.....	199
<i>Figure 5.3</i>	The Setswana speaking learners in the grade one classroom within the larger situation of the school.....	217
<i>Figure 5.4</i>	Histogram of the incidence frequency of literacy activities.....	231
<i>Figure 5.5</i>	Coding of the data.....	245
<i>Figure 5.6</i>	Categories arranged underneath each data set.....	246
<i>Figure 5.7</i>	Categories arranged into preliminary themes.....	246
<i>Figure 5.8</i>	Inductive data analysis process.....	248
<i>Figure 5.9</i>	Quantitative and Qualitative themes derived from the construct of the inquiry.....	252
<i>Figure 6.1</i>	The findings in the balance	282
<i>Figure 6.2</i>	The main 'nodes' on the Cultural Historical Activity Theory diagram.....	286

LIST OF ACRONYMS

ABET	Adult Basic Education Training
CAPS	Curriculum Assessment Policy Statement
CHAT	Cultural Historic Activity Theory
DBE	Department of Basic Education
DET	Department of Education Training
HOD	Head of Department
IIAL	Second Additional Language
LIEP	Language in Education Policy
LoC	Language of the Classroom (see note below)
NCS	National Curriculum Statement
OBE	Outcomes Based Education

A note on the use of the term *language of the classroom* (LoC)

In this thesis the term *language of the classroom* will purposefully replace the ubiquitous and ambiguous term *language of teaching and learning*. It is the author's intent to steer away from a term which lops together the concepts *teaching* and *learning* as if the one by default brings about the other. After all, regardless of which language is used, just because a teacher is teaching doesn't mean that a child is learning from those declamations – no matter how impassioned they are delivered.

Children are taught in many different situations apart from the school. Being taught about safety at home by a parent or about one's family history by a grandparent in one's home language means the home language is one of the (many) languages of learning. Children learn a lot of the time - often without being taught.

Language of the classroom will refer to the language or languages which are used in the classroom activity by the teacher and learners.

CHAPTER 1:

OVERVIEW OF THE STUDY

1.1 INTRODUCTION: STUDYING AN ESSENTIAL COMPONENT OF EARLY LITERACY LEARNING OF SETSWANA SPEAKING CHILDREN AT AN AFRIKAANS MEDIUM SMALL-TOWN SCHOOL

This study looks at the phonemic awareness development of a group of grade one Setswana speaking children at a small-town Afrikaans medium school in Gauteng. The school's learner population comprised, at the time of the study, around 40% Setswana speaking learners. Apart from a much larger, English-Afrikaans parallel medium primary school, the school is the only Afrikaans medium primary school in the area. There are two other primary schools in the area which follow the early exit model – a language in education model which supports the sudden transition at the beginning of grade 4, from first language medium² of instruction to English or Afrikaans medium of instruction for content subjects.

Until eight years ago, the school had never been attended by Setswana speaking children. In 2008 the closing down of a nearby Setswana medium school necessitated the transfer of the children from there to the Afrikaans medium school. This meant that Setswana speaking children, who had previously learnt to read in their home language, now had to learn this skill in, what to them, is a second or third language. Although, at the time, Setswana speaking primary school children of all ages were transferred to the Afrikaans medium school, since then, all of those children have completed their primary education and have left the school – leaving Setswana speaking parents free to choose any other school in the area for their children's primary education. Despite this, the percentage of Setswana speaking children at the school has remained the same. This means, presumably, that the school had to implement strategies so as to be able to provide education in Afrikaans, to a mixture of Afrikaans and Setswana speaking children.

Many of the Setswana speaking children who currently attend the school live closer to the other public schools mentioned above - schools where they could easily learn to read in their home language. Many of these children come from low resource backgrounds which makes it hard for their parents to support their education. There are

² In the case of African languages

however, also Setswana speaking children from more affluent, middle class households - children whose parents could well afford to have them attend one of the many schools in nearby Johannesburg. It would seem, however, that despite factors such as distance from school and access to other, larger schools - this is the school of choice of many Setswana speaking parents from both resource poor and middle class households. At the time when preliminary observations were made for this study, it seemed that most of the Setswana speaking children at the school were making academic progress in the school. Indeed, upon leaving the school at the end of grade seven, most of them enrol in the Afrikaans stream of a large English-Afrikaans parallel-medium high school in the area. This seeming dichotomy, amid the current debate about language medium of education in South Africa (Banda, 2015; Brock-Utne, 2015; Posel & Zeller, 2015) is what sparked an interest in the topic of this inquiry and led to the formulation of the following research question:

1. What is the phonemic awareness development profile of Setswana speaking grade one children within their peer group³ at an Afrikaans medium small-town school? How does their home environment support the phonemic awareness development of the Setswana speaking children?

The following four questions aimed to capture the salient aspects of the situation, namely, aspects of the children's home and school environment which could play a role in their phonemic awareness development:

2. How does their home environment support the phonemic awareness development of the Setswana speaking children?
3. What are the perceptions of Setswana speaking parents, of their children attending an Afrikaans-medium small-town school, which could impact upon the children's phonemic awareness development?
4. What school support is there for the phonemic awareness development of Setswana speaking children at an Afrikaans-medium small-town school?

³ This study does not aim to give a statistical comparison between the Setswana speaking children and their Afrikaans speaking peers but rather a description of their phonemic awareness development profile based on their performance on some early literacy measures.

5. What are the experiences of the teachers and the principal at an Afrikaans-medium small town school, related to the development of literacy skills of the Setswana speaking children?

Figure 1.1 is a schematic presentation of the conceptual framework that will guide this inquiry. It shows the three main components of the study and how they relate to one another. These are: a) the Setswana speaking children, b) the Afrikaans medium primary school and c) the children's home environment.

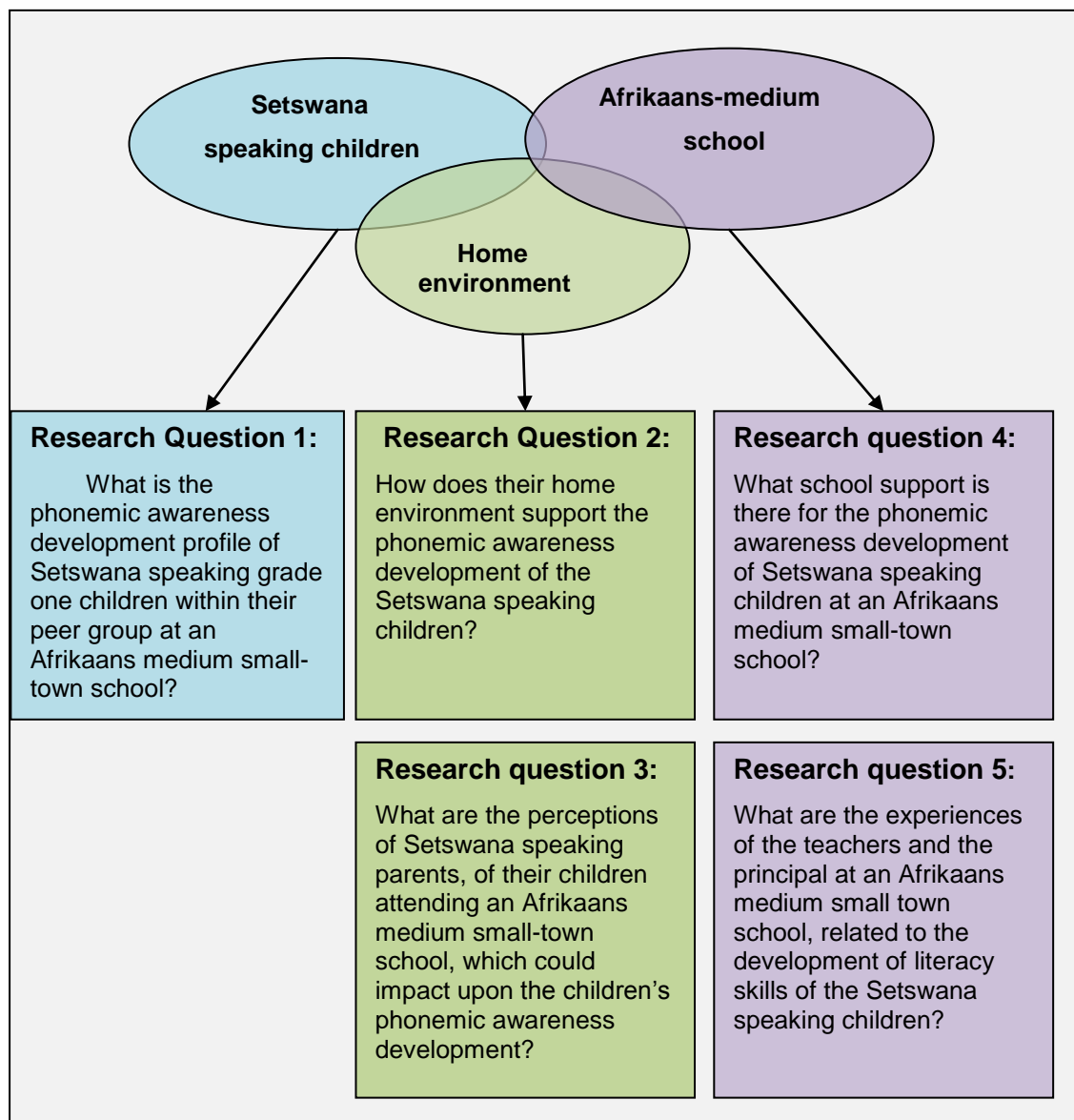


Figure 1.1 Research questions derived from the construct of the study

These research questions were operationalised into the following specific research aims:

1. To measure the phonemic awareness (and related early reading skills⁴) of all the grade one children at the school at the beginning, middle and towards the end of the school year in order to establish a measure of the performance of Setswana speaking children within their peer group.
2. To identify, describe and document aspects of their home environment that might impact on the children's phonemic awareness development.
3. To explore and document parent's perceptions of their children's attending the school which could relate to the children's phonemic awareness development in Afrikaans.
4. To describe the strategies, if any, employed by the school to promote phonemic awareness and other early literacy skills of Setswana speaking children.
5. To capture the challenges around early literacy instruction of Setswana speaking children at the school.
6. To explore and document the experiences related to the development of Setswana speaking children's literacy skills of teachers at an Afrikaans medium small-town school.
7. To explore and document teachers' knowledge related to the development of Setswana speaking children's literacy skills at an Afrikaans medium small-town school.

In the next section of this chapter the construct of the study namely, phonemic awareness development in a second language, will be briefly with reference to a sample of the available literature which was studied. It is important to note though, that most of the literature focuses on education research which was conducted on English and European languages as language of the classroom (LoC⁵). There currently seems to be a dearth of literature on children who are speakers of an African language who are

⁴ Phonemic awareness and beginning reading stand in a reciprocal relationship to one another (see section 3.4.1)

⁵ Please see explication of the use of this term on page xxiii

learning to read in Afrikaans. Considering the attention which language in education has been receiving in the South African press recently (see Owen-Smith, 2016), with the continued existence of Afrikaans schools and universities sparking student protests at a number of higher education campuses throughout the country, it is my opinion that this study adds a substantive voice to the discussion.

No single aspect of education can be viewed in isolation – away from the local situation - that of the school and the community within which education takes place. Nor does it exist apart from the aims of the education system of a country and how these aims manifest in the curriculum as well as on a regional and national scale. This is also true for an early literary skill such as phonemic awareness – a skill which for the purposes of becoming literate, the children in this study learn in a second or third language. Also, once children go to school, the development of phonemic awareness is mediated by a teacher who brings his or her own knowledge and interpretation of phonemic awareness development and early literacy learning to the classroom. The classroom comprises a learning environment situated within a specific education institution – the school – where the school management team has its own set of principles which was formulated according to their interpretation of the needs of the community it serves and the directives of the education department which it forms a part of. This nested situation of phonemic awareness development is depicted in Figure 1.2.

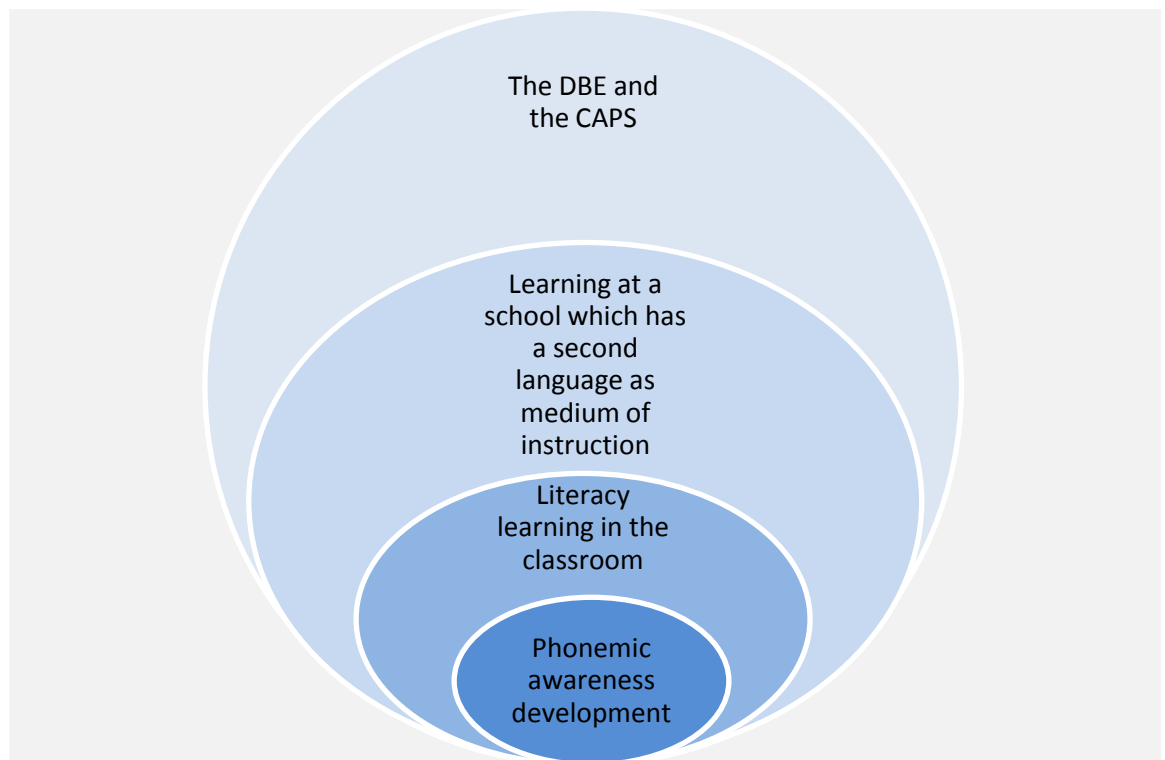


Figure 1.2 Situatedness of phonemic awareness within conceptual tiers of the larger education situation in South Africa

In the next section some of the background to early literacy learning in South Africa will be explored.

1.2 BACKGROUND TO THE STUDY: THE BIGGER PICTURE OF LITERACY AND SECOND LANGUAGE LEARNING WITHIN THE SOUTH AFRICAN EDUCATION SCENARIO

The literacy levels of South African children are very poor, as reflected by results from several large scale assessments such as the Annual National Assessment tests (ANA) and the Southern African consortium for monitoring education quality (SACMEQ).

Annual National Assessment (ANA) tests, which aimed to measure literacy and mathematics, were written by children in South Africa from 2011 up to 2014. The 2015 tests were postponed by the Department of Basic Education (DBE) due to pressure from teacher unions which objected to the tests on the grounds that it puts undue pressure on teachers and learners alike. At the time of the finalisation of this thesis (April 2016) the ANA tests, which were scheduled to have been written in February of this year, had not been written yet. These tests formed part of a national strategy by the DBE (Department of Basic Education), called *Action Plan to 2019: Towards the realisation of schooling 2030*. (DBE, 2015). This strategy aims to 'enable various tiers of education to use

findings to devise ways to improve education'. Given the strong criticism launched at the DBE on the validity of certain aspects of the tests (Van der Berg & Spaull, 2012 in press), it is clear that the Department of Basic Education faces a crisis with regard to school children's literacy levels. It also seems that this challenge is of such magnitude that a whole generation of learners might fall through the floorboards of an education system that, despite the money spent on assessing the problem through the costly administration of these tests, clearly fails to effectively address it. Whilst together with Van der Berg and Spaull (ibid), we gingerly assume that research projects such as the ANA tests are standardised and normalised for the South African situation, and that the tests are set at the same difficulty level every year, these expansive assessment projects still provide us only with generic findings and statistical descriptions which fail to identify the specific aspects of reading which need to be focused on in order to help children overcome the specific challenges they face in becoming literate. Even if we were to accept the results of these assessments at face value, the literacy rates reflected in the report for the 2013 ANA tests are alarming. The average literacy performance of grade three learners in their home language in that year was 51%.

Looking at the SACMEQ scores, in 2007, at 512 points, South African grade six children's literacy score was only twelve points above the SACMEQ II mean score of 500. Notably, only the two wealthiest provinces managed to score above the SACMEQ II mean – Gauteng with 573 points and the Western Cape with 583 points.

The statistics derived from the results of both the tests mentioned here (ANA and SACMEQ) highlight a very important aspect of the education situation in South Africa, namely, what Spaull (2012, p.4) calls the "bimodal distribution of achievement in the country" which refers to the roughly 25% of pupils from the most well-resourced schools in the country who perform well above the country's average on national assessments while the other 75% of pupils, those from resource poor schools, perform well below the countries' average score. For that reason Spaull (2011) cautions against reading too much into the 'average' of South African learners' literacy and maths performance on national assessments.

In addition to the obstacles which they face in becoming literate in their home language, South African primary school children are often confronted with the added challenge of having to learn to read in, what is for them, a second or third language. This issue forms part of a heated continent-wide debate regarding language of learning and teaching. Some research suggests that children benefit from mother-tongue based bilingual education programmes that help them to develop better language skills whilst enhancing

their overall academic performance and supporting positive self-esteem and cultural identity (Ball, 2011). In real life however, education takes place within complex political, social and technical situations which might not include the human and knowledge resources needed to ensure quality of mother tongue instruction for children from poverty backgrounds (Henning & Dampier, 2012). Parents' political will as well as intensive and extensive government support are important factors determining the success of education delivery in children's first language (Ball, 2011). The reality in South Africa is that children often attend schools where they learn to read in a language other than their first language because these schools are better resourced or are perceived to provide a better 'standard' of education than those schools where children receive instruction in their first language, at least until the end of grade 3 (Henning and Dampier, 2010). Furthermore, a lack of teacher knowledge on critical aspects of education, such as phonemic awareness, poses a significant challenge to children's early literacy acquisition (Moats, 1994; Moats & Foorman, 2003).

English currently seems to dominate as language medium of instruction in South Africa. This is because of its perceived utility value as language medium in the market place and academia. Despite this, data from several studies indicate that learners' ability to effectively use the language for academic purposes is poor (see Makgamatha, Heugh, Prinsloo & Winnaar, 2013; Posel & Casale, 2011a). There seems to be a parity of evidence in the literature on the academic performance of learners for whom Afrikaans is not their home language who attend schools where Afrikaans is the language of the classroom.

The current approaches to language of learning and teaching pose children and teachers with a number of challenges. The early exit mode, which is currently being followed in South African schools and which supports the sudden transition at the beginning of grade 4, to an English medium of instruction for content subjects means that children are not proficient enough in English to meet the requirements of the grade 4 syllabus (Henning & Dampier, 2012). Teachers teaching at resource poor schools are often not proficient enough in English to effectively facilitate this transition. These teachers often simply carry on teaching in the mother tongue while using English text books (Mashiya, 2011). There might also be an unrealistic expectation of the role of English as the key to educational and economic empowerment (Wolff, 2011; Ball, 2010). At the same time, it is thought possible that the elevated status of English and Afrikaans as target language of learning could undermine the self-concept and cognitive growth of African language speaking pupils after the initial years of first language instruction (Ball,

2010). This situation, according to Ball (ibid) is thought to equate to subtractive/transitional bilingualism for African language speakers - a model which is considered to be assimilative and to prevent equitable access to education. The late exit model, of gradually instructing learners in the end language, and fully so by grade 6 – 9, is, according to Koch, Landon, Jackson, and Foli (2009) more likely to support 'additive bilingualism' In contrast to these views, Henning and Dampier (2012) argue that the late exit model does not automatically secure effective literacy for children.

Despite the elevation in status of African languages to official languages of South Africa, teachers, especially those who teach at resource poor schools, introduce English as language of learning and teaching earlier than grade four, as they see proficiency in English as a 'passport to a better future' (Henning & Dampier, 2012). People who speak languages which are perceived as having a low status⁶ are thus forced directly or indirectly to develop skills in another language of higher status in order to become economically empowered (Prah, 2003).

The issue of language in education is a complex one, as is reflected in the attention it receives from large agencies such as UNESCO (Ball, 2010, 2011). In South Africa, with its 11 official languages however, the difference in orthographic 'depth' (see section 2.3) between languages, especially between children's first language and the language that they are instructed in at school, might be a significant factor in a child's literacy skills learning. It seems that whether a specific orthography writes what is said, or writes what is meant, makes a difference to a child's rate and success of lexical access via phonology (Ellis, Natsume, Stavropoulou, Hoxhallari, Van Daal, Polyzoe, Tsipa and Petalas, 2004). Very little research has been done, and there is almost no data available on this topic, in South Africa. According to Ziegler and Goswami (2005), children learn to read by learning to implement specific strategies that are closely linked to the orthographic depth of the language they are learning to read in. Given the challenges around language in education in South Africa it seems that research on this topic could prove valuable in devising teaching strategies that could help children who are learning to read in a second or third language to do so quicker and more effectively.

Phonemes are the smallest units of speech that make a difference to the meaning of words during communication (Yopp & Yopp, 2000). Phonemic awareness is a term that describes the process of an individual becoming aware that speech consists of a sequence of separate sound units and it has been shown to be an important predictor

⁶ In South Africa English and Afrikaans are generally considered to have a higher status than the other nine official languages (Ball, 2010)

for reading success for beginner readers of alphabetical languages (Yopp & Yopp, 2000). Because they attend an Afrikaans medium school, the Setswana speaking children in this case, are faced with the challenge of developing phonemic awareness, and to learn to read, in a language other than their first language. As Henning and Dampier (2012) succinctly put it, there is disparity between the 'ideal' of mother tongue instruction and that which is possible in South African schools. This study will investigate the phonemic awareness development of Setswana-speaking children who attend the foundation phase of an Afrikaans medium small-town school and thus, endeavour to provide a better understanding of aspects of the situation which play a role in the children's phonemic awareness development and early literacy skills development within this situation.

In South Africa, parent's perceptions about language of education, especially about English as a means to better job opportunities, social advantages and prestige (De Klerk, 2002) mean that many children learn to read in their second or third language. The constitution of South Africa (1997) and the language policy in education (1997) state that the 11 official languages shall be equal in status and that all languages spoken in the country should be seen as assets and not as problems (Alexander, 2003). This proposed 'no-problem' attitude however, is belied by the fact that many schools, even schools where an African language is supposed to be the medium of instruction for the first few years, make use of English and Afrikaans as medium of instruction. Language planning agencies and policy implementators, such as the Pan South African Language Board (PANSALB), and the National Language Service (NLS) (see section 2.3.4), have not yet managed to overcome the many challenges, such as the lack of political will and the lack of strategic clarity to promote the ideal of mother-tongue-based bilingual education (Alexander, 2003).

Many factors influence children's reading competence. For example, children who are exposed to literacy activities before going to grade one and who have experience with print outside of school tend to achieve grade level reading and writing competencies (Winsor & Pearson, 1992). A lack of access to written materials and education opportunities and a lack of parental involvement in promoting literacy have been shown to have a greater impact on children's literacy development than the effects of orthographic depth (Ellis, Natsume et al., 2004). Viewed against the backdrop of scarcity of physical and economic resources that many children in South Africa face (Biersteker & Dawes, 2008; Ngobese, 2006) it is clear that we are faced with a conundrum which, if not resolved in time could mean that most of an entire generation of children could quite

literally 'miss the bus' to a better future because sufficient attention is not paid to issues such as the language which is employed as medium of education for them and which aspects of early literacy need to be focused upon in order to help children learn to read more effectively. Language is part of culture⁷ and is a way of social and individual meaning-making and, as Soudien (2004) points out, it has the potential to continually create new forms of oppression and emancipation. This conundrum partially guides the research questions which will be discussed in the next section.

1.3 RESEARCH APPROACH AND PARADIGM

According to Cresswell (2009), the research approach is determined by the nature of the research questions. In turn, the research approach determines the strategies that would be applied to find answers to the research questions – the methods used to collect the data and the specific way the collected data is analysed and interpreted. Because this study will make use of both qualitative and quantitative research methods⁸, which will be merged after separate analysis of the data resulting from each method, as researcher I⁹ intend to take a pragmatic position with regard to this inquiry. Pragmatism is seen as a natural bedfellow of mixed method research. This is because the two components of mixed method design namely, quantitative and qualitative, spring from two different vantage points, namely, post positivism and interpretivism - which demands of the researcher to be able to constantly adapt the research approach to what is required by the research situation at any given point (Cresswell & Garrett, 2008).

1.3.1 A study of some of the available literature

An essential early step in any research project is to gain an understanding of a selection of the existing literature. Naturally, it is impossible to scrutinise all the available literature on a specific topic. For the purposes of this study I conducted a scholarly Google search using key words such as 'phonemic awareness development', 'early literacy learning' and 'early reading'. Then, because the children in this inquiry were learning to read in a second language, I searched by making use of key terms such as 'second language learning in the foundation phase', 'learning to read in a second language' and phonemic awareness development in a second language'. Thirdly, I investigated aspects of the

⁷ It is duly noted that culture is a complex term with variable meaning. It will not be unpacked in this thesis.

⁸ For ease of reference, from here onward, referred to as 'mixed method research'

⁹ To avoid some of the pitfalls of not using the first person, I sometimes use the first person pronoun for reasons explained in this blog of the American Psychological Association's website.
<http://blog.apastyle.org/apastyle/2009/09/use-of-first-person-in-apa-style.html>

two languages in the study, namely the children's home language – Setswana, and their target language – Afrikaans. I endeavoured to find information on research which might have been done on Setswana speaking children learning to read in Afrikaans. Furthermore, I drew upon some human knowledge resources, in particular, I consulted with my promoter and other academic persons who specialise in the field of applied linguistics and second language learning, to guide me in terms of literature pertaining to my investigation.

1.3.2 Using quantitative and qualitative methods to gather and analyse data

Because the primary aim of the investigation was to determine the phonemic awareness development of the Setswana speaking children at the school, and because phonemic awareness is a measurable construct, a quantitative component was added to the design of the inquiry in the form of translated assessments which derive from the *Dynamic Indicators of Basic Early Literacy Skills (DIBELS Next¹⁰)* which are standardised assessments which measure phonemic awareness along with other early literacy indicators (see sections 1.3.4.1; 4.4.1)

'Mixed method research' refers to a research design which involves the combination of quantitative and qualitative techniques and methods to effectively address the research questions (Cresswell & Plano Clark, 2007). The aim of a mixed method design is to draw from the strengths of both qualitative and quantitative methods and to minimise possible weaknesses of both (McMillan & Schumacher, 2006).

1.3.3 Site selection and sampling of participants

The unit of analysis in this study is the Setswana-speaking children, their home environment and school experiences and how these impact their phonemic awareness development at an Afrikaans medium small-town school. Sampling will therefore be by way of purposeful selection of the intact group that constitutes the case. The key participants are the Setswana-speaking children in the foundation phase of the school, their parents, the teachers and the school principal. These groups are direct samples and each of them were chosen because they could provide data that would help to address the research questions. Using multiple data sources is in alignment with the principle that a situation be experienced and described from multiple perspectives.

¹⁰ From here onward these assessments will be referred to as *DIBELS Next*.

Comparing data from more than one source or type often reflects areas of similarities and can help to confirm findings (Bryman, 2006).

1.3.4 Data collection and analysis

The three main categories of qualitative data gathering methods, according to Henning, Van Rensburg and Smit (2004) are documents and artefacts, observations and interviewing. Utilising diverse methods helps to enhance validity and reliability (Bryman, 2006). In addition to these, I made observations of the teacher's literacy practice in the classroom and I also used voice and video recordings in order to make thorough notes of data later on.

Data was collected by means of quantitative methods, namely:

- The administering translations¹¹ of *DIBELS Next* assessments in Afrikaans, by the researcher, with the assistance of the Afrikaans speaking grade one classroom assistant.

Data was collected by means of the following qualitative methods:

- Researcher's observation notes.
- Interviews with the principle and teachers in Afrikaans, by me - an Afrikaans first language speaker.
- Interviews with the Setswana speaking parents, in Setswana, by a Setswana speaking research assistant.
- A self administered pencil and paper questionnaire administered to the foundation phase teachers as well as the intermediate phase Afrikaans language teacher at the school.
- Video recordings of literacy sessions in the grade one classroom, and a voice recording of some of the interviews and of the session during which teachers completed the self administered questionnaire.
- Documents such as minutes of meetings, the national curriculum assessment policy statement and other documents relevant to the inquiry.

¹¹ I translated the tests, keeping as close to the configuration of the *DIBELS Next* as possible (see chapter 4).

In this study a variety of methods of data collection, both quantitative and qualitative, contributed to the overall reliability of the data. Next follows a brief discussion of the various data sources which were utilised.

1.3.4.1 *DIBELS Next* assessments

The *DIBELS Next* assessments were utilised as instrument of quantitative data gathering. This assessment tool forms part of a scheme which aims to assess some of the critical early literacy skills and to capture crucial indicators of a learner's phonemic awareness and early literacy progress (Adam, 2014). *DIBELS Next* is a general outcome measure (GOM) (Fuchs & Deno, 1994) which differs from commonly used formative assessment approaches such as, for example, 'mastery measurement' which are often administered in the form of a test after the completion of instruction of a certain unit or skill (Adam, 2014). In contrast, GOMs aim to measure whether progress is being made along a continuum toward a long term outcome such as, for example, phonemic awareness development (Kaminski, Cummings, Powell-Smith, & Good, 2008, p. 3).

In this inquiry an adapted and translated classroom based version of some of the *DIBELS Next* assessments was used. Although benchmarks exist for these assessments, because of the (non-standardised) process of translation, these benchmarks will not be used, although they will be described. Components of the assessments were administered at the beginning, middle and end of the year so as to capture whether or not progress had been made by the learners toward early literacy skills such as phonemic awareness. Because phonemic awareness is closely related to other early literacy skills (see section 3.4.2) learners' word attack skills, reading fluency and, toward the end of the year, their reading comprehension were also recorded. The phonemic awareness profile of the Setswana speaking children was formulated and their performance was related to that of their peers.

1.3.4.2 Documents and artefacts

In the process of conceptualising the formal design of the study I first took stock of the data I already had at my disposal. Documents can be rich data sources especially when they are not only used for their content value, but also in discursive analysis (Henning, Van Rensburg & Smit, 2004, p.98). This included some of the existing school records, minutes of meetings, the school language policy etc. These documents yielded rich data about the history of the situation and about school support for the

early literacy learning of the children. As these authors suggest, artefacts, such as photographs, class room posters etc. can be very useful sources of information, provided the researcher can see a link between them and the research question.

1.3.4.3 Observations

I kept notes of my observations and the process of the study in a *field log*. I made observations as participant researcher (McMillan & Schumacher, 2006). As Henning, Van Rensburg and Smit (2004) caution, it is not possible for a researcher to go into a research situation as an 'empty slate' (Henning, Van Rensburg & Smit, 2004, p.83) and insert herself into a group and hope to gain a view of the world through the eyes of the members of the group unless the researcher knows the language spoken within the situation and gathers data during a prolonged field visit (ibid, p.83). Together with these authors (ibid, p.83), I argue that the purpose of my observations as researcher was to 'capture what is available to (my) observation' and that this depended on what I already knew and understood about the people and the situation. It helped that, by the time the data gathering phase of the research commenced, I had been a parent at the school for a little over a year and that I speak Setswana fluently.

1.3.4.4 Interviews

The main purpose of interview data is to give information about people's thoughts, feelings and actions from the way they talk about their lives (Henning, Van Rensburg & Smit, 2004). This information is gained by the researcher by means of a structured discussion which the researcher manages and later analyses and puts into a research report (ibid). Interviews are always directed at 'making meaning' and are never mere tools to structure and 'scaffold' thinking (ibid). For this purpose, the interview schedule was designed purposefully so that interviews with parents and teachers would elicit responses about the meaning which the various role players make out of the situation - meaning which would help to address the research questions. The interviews were designed to gain data about the experiences of the Setswana speaking parents and the teachers and principal related to the children's early literacy development, i.e. phonemic awareness development. In designing these instruments I hoped to gain insight on what was being done at home and at school to help the Setswana children learn to read and how the different participants viewed the situation.

The interview questions to the parents of the Setswana-speaking children were designed in English. These interview schedules were then translated into Setswana

collaboratively by me and the co-researcher (see addendum L). After they had been translated the two of us further collaborated to ensure that each question retained the meaning that had been intended. The interviews were then conducted in Setswana, by the co-researcher, using a voice recorder. After each interview the voice clips were listened to and additional comments made by participants were noted down. The co-researcher and I then collaboratively translated the interviews from Setswana into English, constantly checking that we understood the meaning of what the interviewee was saying.

1.3.4.5 Questionnaire

A self-administered pen and paper questionnaire containing fixed and open ended questions was used as a tool to gauge teachers' knowledge of phonemic awareness, aspects of their classroom practice and some of their perceptions on early literacy instruction to Setswana speaking children.

1.3.4.6 Electronically recorded data

The generation of electronically recorded audio and visual material is a data gathering method which affords the researcher the opportunity to look at the data more than once and to make decisions, later on, as to which aspects of the research situation to focus on (Caldwell & Atwal, 2005). This method of data collection, according to these authors (ibid), also increases the credibility of research as it minimises selectivity and bias and gives the researcher the chance to employ more stringent strategies to enhance reliability.

Voice recorded data was used during some of the interviews. Similarly to visual material, audio material provides the researcher with the means to re-listen to interviews in order to capture information which there might not have been enough time to record during the interview (ibid).

1.3.5 Pilot interviews

A pilot of the interview schedule was administered to two Setswana speaking parents of children from a nearby primary school to make sure that the outline and formulation of the questions in the various sections of the interview schedule were comprehensive, reasonable and comprehensible. In accordance with Arthur and Nazroo, (2003), the results from the pilot interview gave feedback on whether respondents shared the same understanding of the different items in the interview schedules. By determining whether

similar opinions on other measures of the same construct were expressed it also served to validate whether participants were stating their true opinion (ibid). This gave me the chance to assess the completeness of the interview schedule and gave me an indication of whether the schedule allowed the participants to respond in a way that would yield rich data about the issue in question. I could then adjust the schedule so as to render it a clearer and more effective instrument (see section 4.5.2.3).

1.3.6 Quantitative data analysis

Test results were subjected to analysis by *DIBELS Net* which is a data analysis program specifically designed to provide feedback on the *DIBELS Next* assessments. These results were described after which a central theme, based on the children's test results were derived from the description of the data.

1.3.7 Qualitative data analysis

Although it was not exclusively seated in grounded theory practice, data analysis was done through qualitative content analysis by the coding and categorizing processes that originated from grounded theory practice (Strauss & Corbin, 1999). The validity of the process of inquiry was subjected to member-checking and reliability was optimised by way of using various data sources.

I will make use of content analysis because of the congruence between sets of data. Content analysis will help me to stay true to the participants' actual words, actions and lived experiences. My codes will be derived closely from the actual words the people used. The coding of the interviews will be done first separately and then collaboratively with the co-researcher, a strategy which supports the consistency of the data (Krefting, 1991 in Baxter & Jack, 2008).

1.4 RESEARCHER ROLE

According to Adler and Adler (1987), there are three ways in which a researcher can be involved as a 'member' of the group in the research situation. First of all, the researcher can be a 'peripheral member' – one who does not take part in the activities which define the group. Secondly, the researcher can be an 'active member researcher' or 'participant researcher' – one who engages with the group in its core activities without identifying completely with the groups goals and values. Finally, the researcher could be

someone who is already a member of the group or who unites with the group and its values during the research process.

As the mother of three children who attended the school in the study at the time, and as a member of the small-town community within which the school is situated, I would say that I engaged with the school and the participants as a participant researcher. Although the children and the teacher came to accept me as a part of the classroom set-up during my prolonged field visit which spanned 18 months, and although the staff at the school was comfortable with my presence during their formal and informal meetings and rituals, neither the children nor the teachers at the school treated me as ‘one of the teachers’. This is clearly reflected in the children’s discourse – they addressed me as “Tannie Sonja” (Auntie Sonja) and not as “Juffrou Sonja” (Teacher Sonja).

My responsibilities as researcher entailed the following:

- Designing instruments such as interview schedules.
- Making decisions about which existing quantitative instruments to use.
- Obtaining permission and conducting my study in accordance with ethical research principles.
- Training the Afrikaans speaking research assistant in test protocol relating to the *DIBELS Next* assessments
- Training the Setswana speaking research assistant in conducting interviews and focus group meetings with Setswana speaking respondents.
- Conducting interviews and focus group meetings with English and Afrikaans speaking respondents.
- Analysing the recorded data.

I also solicited the advice and assistance of colleagues from my faculty when interpreting the qualitative data and discussed findings before committing them to my written report.

1.5 RELIABILITY AND VALIDITY IN A MIXED METHOD STUDY

In quantitative research *reliability* deals with the consistency and stability of data over time. Reliability means that the gathered data do not vary because of shortcomings on the part of the instrument and that the method of conducting a study, or the results obtained from it, can be reproduced or replicated by other researchers. The reliability of findings is seated in the condition that if the same variable is measured under the same

conditions, a reliable measurement will produce the same or nearly the same measurements (Good, Kaminski, Dewey, Wallin, Powell-Smith & Latimer, 2011).

In qualitative research, *reliability* generally is about whether the results are consistent with the data collected (Merriam, 1995). Drawing on Merriam (1995), I therefore made use of different methods and sources of data collection in order to triangulate them. This can ascertain the dependability or consistency of data collected. Peer examination was also used to ensure that the interpretation of data is credible. An audit trail forms an important measure of reliability in this research. To ensure that data collected are consistent with the results, I report in detail on how the data was collected, how categories were derived, and how decisions were made throughout the research.

In planning this study I aimed to find a valid way to address the research questions. I therefore planned the study with its main construct constantly in mind, and looked for elements of the construct and examining their currency in the literature (Morse, Barrett, Mayan, Olson & Spiers, 2002). In thinking about construct validity one deliberates about tools to find and analyse data that are, presumably, going to address the research questions as directly as possible. Put simply, if the research process as a whole does not lead to findings that address the research question it can be said the construct may not have been valid (ibid). In the qualitative part of this study, I thus aimed to operationalise the constructs of 'language of instruction', 'learners background' and 'school situation' into real, observable phenomenon such as 'parents who talk about their children attending an Afrikaans-medium school'; 'teachers who talk about teaching Setswana speaking children in the language medium of Afrikaans'; 'teachers who worry about aspects of their work'; 'a principal talking about managing a school attended by Setswana speaking and Afrikaans speaking children' etc.

Because this study was conducted according to a mixed method approach, the validity of the research is increased through the convergence of results from the different methods, thus, in my opinion, and for this particular research situation, providing more comprehensive evidence than what either quantitative or qualitative approaches could do on their own.

1.6 A COMPOSITE GAZE AT THE SITUATION OF THE INQUIRY

I want to propose at the outset of this section, that given the evidence from research that in support of a strong relationship between phonemic awareness and early reading (Ziegler & Goswami, 2005), one has to be careful of adopting an overly mechanistic

view of early literacy learning. Specific factors have been found to influence and enhance the development of phonemic awareness as an essential part of early literacy learning. As scholars, at this point in time, we have the benefit of a considerable body of research on this topic which can help inform policy and practice to optimise the mastery of early literacy skills by young readers. Further to this, I would like to invite the reader to look at the education situation in South Africa, as well as at the specific situation described in this study, beyond that of which epistemology - theories and practices - could be applied to ameliorate the poor language and reading performance of school children in the country.

A focused scholarly Google search showed that there currently seems to be very little data available on the development of phonemic awareness and of early literacy skills by Setswana speaking children. One study, by Lekgoko and Winskel (2008), focuses on Setswana children's phonemic awareness in Setswana and English (see section 3.5) but none that I could find, on the phonemic awareness of young speakers of this African language who are learning to read in Afrikaans. A dearth of data limits the researcher's access to what Trafford and Leshem (2008) consider one of the purposes for studying the literature – different scholarly perspectives on the intended topic of investigation. Although this means that this study stands a fair chance of making an initial or early contribution to the corpus of knowledge on its topic of investigation, the paucity of literature on the topic still poses a challenge to the researcher in terms of navigating some necessary aspects of research which a surveillance of the literature usually contributes to. These include making decisions about design and data gathering and looking for patterns or order within the data once it has been gathered (Van der Vyver, 2012a).

Because of a parity of data on the topic of this study, which leaves the researcher with little in the way of ideas and models on which a conceptual framework can be based (Trafford and Leshem (2008), I argue that making use of a heuristic might prove useful. Applying a conceptual lens to the study could support the researcher in maintaining a certain focus, and to view education research as an activity instead of a fixed state (Van der Vyver 2012b). I had previously applied the work of Engeström (1987; 1991; 2001) on CHAT to research which I had conducted at an early childhood development centre at a rural settlement community (see Van der Vyver 2012a). Because of the value I deemed it could add to my current research I decided to broaden my existing knowledge of this framework by reading more expansively about it than what I had done before. I now invite the reader to apply a multifocal perspective to language acquisition, literacy

learning and literacy instruction. I propose a heuristic by means of which to view literacy learning (and teaching) as an activity, namely that of cultural historical activity theory (CHAT) as put forward by Engeström (2001).

1.6.1 Heuristic framework

I used CHAT (cultural historical activity theory) as a conceptual lens through which to view the different role players and components within the study and their interactions with one another. This framework serves to elucidate what turned out to be a complex interplay between the *subject* of this study - the Setswana speaking children - and their parents and home environment on the one hand, and their teachers and the Afrikaans medium school on the other. Furthermore, upon widening the view on the situation somewhat, all of these role players and aspects of the situation together fit into a larger background namely, that of the community within which the school is situated as well as that of the country's education, social, economic and political dynamic. Using CHAT as theoretical lens helped me as researcher to make better sense of the situation of this study and to view it as a process or activity instead of as a static situation (Van der Vyver, 2012b).

According to Engeström's (2001) model of an activity system (in Beatty & Feldman, 2009), the *subject* in the activity system is described as the viewpoint of analysis or as the person or sub-group whose actions we seek to understand. The Setswana speaking children can be seen as the 'point of view' of the study or the 'person or group whose actions we seek to understand' (Beatty & Feldman, 2009, p.4). Central to this view is the understanding that the term *activity* does not refer to a single act or action, but, instead, to the notion of collective 'busy-ness' by a group of people (ibid).

The *object* in this research situation, that which 'motivates' the actions of the subject and 'upon' which the action is lodged, is the phonemic awareness development of the Setswana speaking children in this case. The *outcome* of the subject's acting on the object - the Setswana speaking children undergoing a process of early literacy learning - is the development of certain skills such as phonemic awareness. The *outcome* refers to the idea of 'children who have acquired sufficient literacy skills in Afrikaans, upon which to base their further academic careers'.

The *subject* in an activity system makes use of *artefacts* or *tools* by means of which they direct their *action* toward the *object* to bring about the desired *outcome*. The *tools* are mediational means, and they are inherently semiotic, carrying the norms and signs of

the culture - especially in as far as these norms and signs are embodied in language. *Tools* can be physical, for example, the school environment, but they can also be cognitive, as in the case of teaching methods. Symbolic *tools* and *signs* used by teachers include language and how it is used in the classroom; discourse, pictures, and also the national curriculum, which is one of the main *tools* used within educational settings.

The notion of *community* in this system refers to the participants who are engaged in the *collective activity* with the *subject*, together with other stakeholders in the *object* of the activity. The teachers, principal, parents, as well as institutional stakeholders, for example, the Gauteng Department of Education (GDE) as local representative of the Department of Basic Education (DBE) all have an interest in the children's literacy skills development.

The concept of a *division of labour* within an activity system has a horizontal and vertical component to it. The *horizontal* division of labour refers to how and by whom certain tasks are carried out in the *community*, while the *vertical* division of labour refers to how relationships of power and status are perceived by the members of the community (Beatty & Feldman, 2009). The vertical division of labour thus refers to the management and the hierarchical relations within the community. In this case, the different roles played by the teachers and by the parents, in supporting the Setswana speaking children's phonemic awareness and early literacy development could be seen as an example of both the horizontal and the vertical division of labour in the situation. The Setswana speaking parents might, for various reasons, such as, for example, a lack of proficiency in the children's target language, or because of socio-economic factors, not be able to effectively support their children's literacy skills development. This could be viewed as a cause of disequilibrium in the system which could lead to tension within relationships of power and status.

The *rules* in an activity system can be 'implicit' or unexpressed, such as traditional customs and beliefs, or 'explicit' and stated in detail such as in policies, laws and regulations. Either way, *rules* within an activity shape the behaviour of community members (Beatty & Feldman, 2009). Examples of explicit rules within the activity system include the country's language of education policy, and also that of the school. Implicit rules could include beliefs (by the community) about for example, Afrikaans as medium of instruction and about what is believed to constitute 'good' literacy instruction at the school.

Figure 1.3 shows how the different aspects of the inquiry fit into the CHAT model. This gives one a view of some of the dynamics between the different aspects of the study according to Engeström's (2001) depiction of the elements of third generation activity theory and how elements relate to one another.

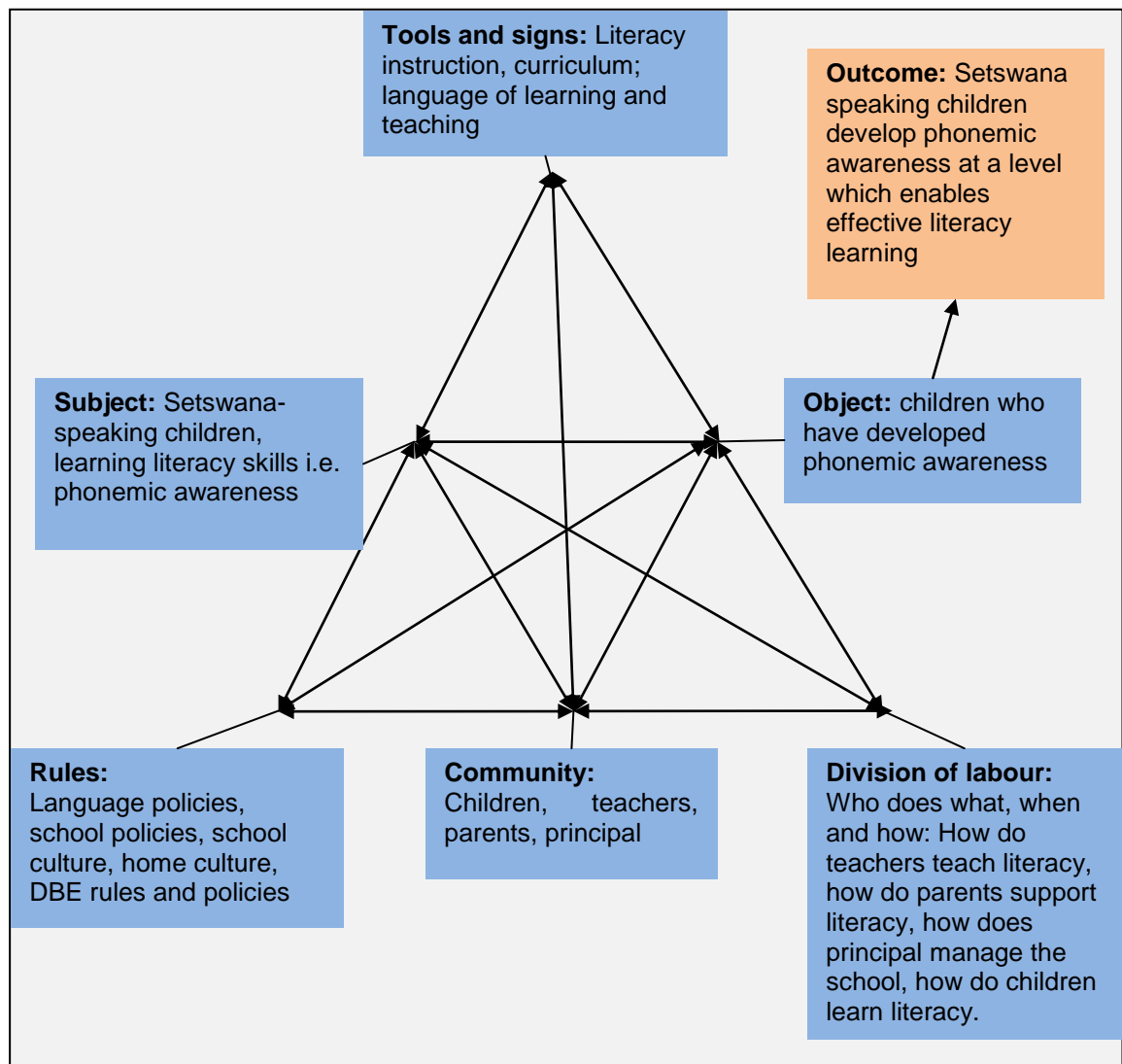


Figure 1.3 Interrelatedness of elements of second generation activity theory.
After Engeström (1987)

1.7 DEFINING AND CLARIFYING KEY CONCEPTS TO THIS STUDY: 'PHONEMIC AWARENESS', 'PHONOLOGICAL AWARENESS' AND 'PHONICS'

Phonemic awareness, phonological awareness, and phonics are terms which are regularly used in the literature on early reading. These terms are often used

interchangeably and this could cause confusion - especially when these terms and their meanings are confounded in a document such as the Curriculum and Assessment Policy Statement (DBE, 2012) in which, indeed, they are (see section 3.8). This section will clarify the difference in their meaning.

Phonemes are the elementary speech sounds of a language (Griffith & Olsen, 1992). A phoneme is defined as the smallest unit of sound that makes a difference to the meaning of a word (Yopp & Yopp, 2000). For example, when you exchange the first phoneme in the word 'hat' from /h/ to /c/ and so create the word 'cat' – the meaning of the word is changed (ibid) and, essentially, so is the image that it provokes (De Saussure, 1916). When referring to 'phonemes' it can, according to De Saussure (ibid), only be in relation to the spoken word and never in relation to the written word. This according to that author (ibid) is because the signs of a language are signifiers that exist purely for the purpose of signifying a concept that we know by the sounds we associate it with in the particular language we speak.

According to Griffith and Olsen (1992), phonemic awareness is a critical prerequisite for learning to read alphabetical languages since it means that the child knows that letters represent the sounds of spoken language. Armbruster, Lehr and Osborn, (2003) describe phonemic awareness as the ability of an individual to focus on and identify the separate, individual sounds in words while Manning and Kato (2006) see it as the ability to understand that individual sounds can be put together to form words and Shaywitz (2003), that words can be broken down into these smallest of sound units.

A learner with phonemic awareness has, for example, the ability to hear the repetition of the same consonant sound at the beginning of several different words used in a sentence (alliteration), and is able to blend phonemes to form words and to segment words into their component phonemes (Kurtz, 2010). According to Winsor and Pearson (1992), there are mainly three tasks that signify phonemic awareness namely; phoneme segmentation, phoneme blending and phoneme deletion. Phoneme segmentation refers to the ability to break words up into phonemes, phoneme blending refers to the capacity to link different phonemes together in order to achieve the usual pronunciation of words and phoneme deletion is the ability to leave out one or more phonemes when uttering a word. Bentin, Hammar and Cahan, (1991) view the assessment of phonemic awareness as the process of testing how well the person can isolate and manipulate individual phonemic segments in words.

Whereas phonemic awareness refers only to sensitivity to the smallest sound units in words, phonological awareness involves a learner's ability to recognize how sound units of different size - phonemes, syllables, rhyme and words - function in spoken language (Gillon, 2004). Phonological awareness will be dealt with in greater depth in section 3.3.3

Phonics refers to the relationship between phonemes and graphemes - how letters represent sounds in words (Manning & Kato, 2006). It is possible for a phoneme to be represented by a single letter, but it could also be represented by two or more letters such as /th/ and /ck/ in 'thick' or /igh/ in 'high', or /ough/ in "dough". Phonics refers to the teaching of letter-sound relationships (Konza, 2011). The purpose of phonics instruction is to help learners understand how to map the sounds of spoken language onto their corresponding letters or letter patterns in order to be able to read and write words (Gillon, 2004). Phonics instruction involves teaching the correspondence between speech sounds and the letters that signify them.

1.8 ORGANISATION OF THE THESIS

This thesis is organized into six chapters. Chapter one addressed the background to the investigation, the problem statement and the purpose of the research as well as a sample of the literature pertaining to phonemic awareness development in a second language.

Chapter two offers a theoretical framework, and orientates the reader to the background construct of this inquiry, namely, language in education and second language learning. The languages which are relevant to this study, namely Afrikaans and Setswana, are discussed after which a few different approaches to language in education is offered with specific reference to mother tongue instruction. Finally, factors which impact on second language learning and early literacy are discussed in terms of the learner, the home environment and the school.

Chapter three offers some views from the literature on the role of phonemic awareness development in learning to read and how children learn to decode words when learning to read in a second language. A theory of learning to read in orthographies of differing depth is offered as well as a few approaches to early literacy instruction. Once again referring back to the three foci of this inquiry – the children, their home environment and the school – influences of aspects of these on phonemic awareness development are explored in the literature.

Chapter four outlines the research methodology and design of the study including the research paradigm, the research approach, participants, data collection methods and procedures, the analysis of the data and the trustworthiness of all procedures. Dynamic Indicators of Basic Early Literacy Skills (*DIBELS Next*) is introduced and discussed as instrument with which to measure the phonemic awareness development of the children. This chapter also offers the reader a conceptual lens through which to gain a deeper understanding of the situation in the study. Cultural Historical Activity theory is explicated at the hand of aspects of the inquiry.

The data which was generated through the research process together with the processes of analysing quantitative and qualitative data are presented in chapter five. From this the quantitative and qualitative findings are synthesised and merged.

The final chapter of this thesis comprises a discussion of the findings of the research after which each of the ten findings is conceptually examined in its relation to specific aspects of CHAT. Conclusions are drawn from the integrated research process – literature, theory, methodology, and findings of the research. Possible implications for knowledge, policy, future research and teacher education are discussed and some recommendations are made.

An outline of the chapters is offered here, after which the ethical aspects of the research will be discussed briefly and the assumptions which were made at the outset of the inquiry will be mentioned. Finally, the envisaged contribution of this research project will be presented.

Chapter 1: Introduction

Chapter 2: Literature overview: Language in education in South Africa

Chapter 3: Literature Overview: Phonemic awareness

Chapter 4: Research Design and Methodology

Chapter 5: Empirical research, analysis of data and results

Chapter 6: Discussion of the findings of the inquiry and situating these according to CHAT.

1.9 COMPLYING WITH ETHICAL STANDARDS

Because this inquiry was conducted within a real-life situation involving children, as researcher, I had to constantly keep ethics in mind during my work (Morton, 1999). In accordance with Merriam, (1998, p. 216-218) in this work I account for the following ethical aspects: Informed consent; protection from harm; honesty and trust; as well as privacy, confidentiality and anonymity. I adhered, at all times, to the codes of ethics as prescribed by the North West University's Code of Ethics.

One of the most important ethical considerations in this study was around the balancing of my role as parent of three children at the school and my role as researcher. I informed the Setswana speaking parents about the ethical aspects of the study and that their participation, as well as that of their children, would be voluntary. To ensure that the participants fully understood what they would be agreeing to I constructed the ethical letters in plain English so that it would be easily understandable to people whose use of that language is limited. This was be complimented by a verbal explanation during a presentation, of what the letters constitute and what participants were in fact agreeing to. The co-researcher also explained the content of the letters in Setswana before each interview with the parents. Because observations of the children formed part of the data gathering for the inquiry, I explained this aspect of the research to the parents and made sure that they understood the conditions under which observations would take place before they signed the consent forms.

1.10 ENVISAGED CONTRIBUTION OF THE STUDY

The study could contribute to the theoretical body of knowledge on phonemic awareness development of Setswana speaking children who attend Afrikaans medium primary schools. The findings may raise several considerations for teacher education on the topic of reading instruction for children learning to read in a language other than their mother tongue. The findings of this study could also contribute to knowledge that could inform policy formulation pertaining to the topic of language of learning and teaching.

1.11 CONCLUSION: ASSUMPTIONS AT THE OUTSET OF THE INVESTIGATION

When this research was conceived of, despite my observations that Setswana speaking parents seemed to exercise their right to selecting a primary school of their choice for children's education, my two main assumptions were, first of all, that the Setswana

speaking children would not develop phonemic awareness in Afrikaans at the same rate or level than their Afrikaans speaking peers. The second assumption which I worked from was that there would be a dynamic of tensions within the situation that I expected would impact negatively on the phonemic awareness development and early literacy learning of this group of children. The notion of tensions within an education setting was one which I had become familiar with during the research for my masters dissertation - which focused on the development of an early childhood education curriculum at a rural informal settlement community (Van der Vyver, 2012a). To some extent, therefore, my previous research had prepared me for the tensions and complexities I would encounter within the dynamic of my new research situation.

Chapter one stated the research questions as well as the purpose and the proposed process by which these questions might be addressed. The remainder of this thesis is the narrative of how, guided by the research questions, through a study of some of the literature on the topic of my investigation, I came to design a mixed method inquiry during which data was gathered. From that analysis toward a set of salient themes – some of which I had anticipated at the outset of the study, and others which amounted to a few quite unexpected outcomes.

CHAPTER 2: LANGUAGE AND EDUCATION IN SOUTH AFRICA

2.1 INTRODUCTION

This chapter consists of a discussion of some of the literature on language and language of education in South Africa. Because the focus of this study is on Setswana speaking children learning in a language other than their mother tongue, the literature overview will commence with the demographic details of the different languages in South Africa and the history of language in education in the country. Different aspects of language in society will then be discussed according to some of the voices in the field. Mother tongue education will then come under the loop and a few arguments - some in favour of and some against - will be put forth. Next, this overview of the literature will explore some of the approaches to language medium of education with specific attention paid to the issue of bilingualism and how it is dealt with as an aspect of education. Finally, the factors which impact upon second language learning will be discussed in terms of the main constructs of this study - the learner, their home environment and the school - and how these relate to phonemic awareness development.

Literacy is one of the most important conditions for academic learning (Madiba, 2013). Being able to read is considered, at least from the perspective of the current education viewpoint, a prerequisite for making progress in the current formal education system, in South Africa as in most countries around the world (Christie, 2008). According to that view, making the required academic progress and, in South Africa, obtaining a matriculation certificate is deemed to advance an individual's chances to enter the job market and to effectively take part in the economy (ibid).

Of course, the current education viewpoint constitutes only one within a wide spectrum. According to Pence and Marfo (2008), the Western education perspective on early childhood development (birth to nine years) has severe limitations in its application to various African childhood environments. According to these authors (ibid), this is because the Western position rests upon a knowledge base of child rearing and education that might not be relevant or applicable to local situations. Referring specifically to the issue of language, Wolff, (2011) points out that the perception that entry into the labour market is the most important goal for language acquisition prevails within a discourse dominated by Western economists and social scientists. That author

(ibid) goes on to say that the significance of language as a critical factor in social development discourse is largely overlooked by these specialists. Having paid due cognisance to this very important criticism, for the purposes of this study, the focus will be on language in education. Thus, whilst the strong link between education and social development (Van der Vyver, 2012a; Christie, 2008) is duly acknowledged, this relationship will not be further explored here.

2.2 A CONCEPTUAL FRAMEWORK FOR THE LITERATURE OVERVIEW

A conceptual framework for this discussion of selected authors' work is offered in Figure 2.1. The construct of language in education and second language learning will be dealt with first. As discussed in chapter one, a nested construct is conceived of for this inquiry (see Figure 1.2) Since it is a function thereof, the notion of literacy learning is embedded within that of second language learning (Carrell, 1991), which takes place within the larger education situation in South Africa. Figure 2.1 shows the order in which the different issues that will be explored in this literature study will be dealt with and also how they fit with the different components of the study of language namely, sociolinguistics, psycholinguistics and applied linguistics. According to Heugh (2007), the objective of learner proficiency in a second language with the aim of academic progress cannot be attained without careful consideration of all three these components of linguistics. The reasons for this, according to that author, are as follows: First of all, in order to design effective language in education policies and make informed decisions about which languages will serve which purposes within education, it is essential to draw from *sociolinguistics* through a close examination of the relationship between language and society. For effective policies to be implemented, this relationship needs to be taken into account, especially in terms of how communities are organised with regard to language and power, their language rights and their political agency in utilising resources to manage these rights. Secondly, in order to design courses and material and train teachers on the methodology of language teaching, it is important to employ a sound knowledge of the principles of *applied linguistics*. Thirdly, a sound knowledge of *psycholinguistics* - the study of the relationship between language and cognition and how children learn languages within their local environments is essential if we are to learn what conditions are needed for children to learn a language in the formal education environment.

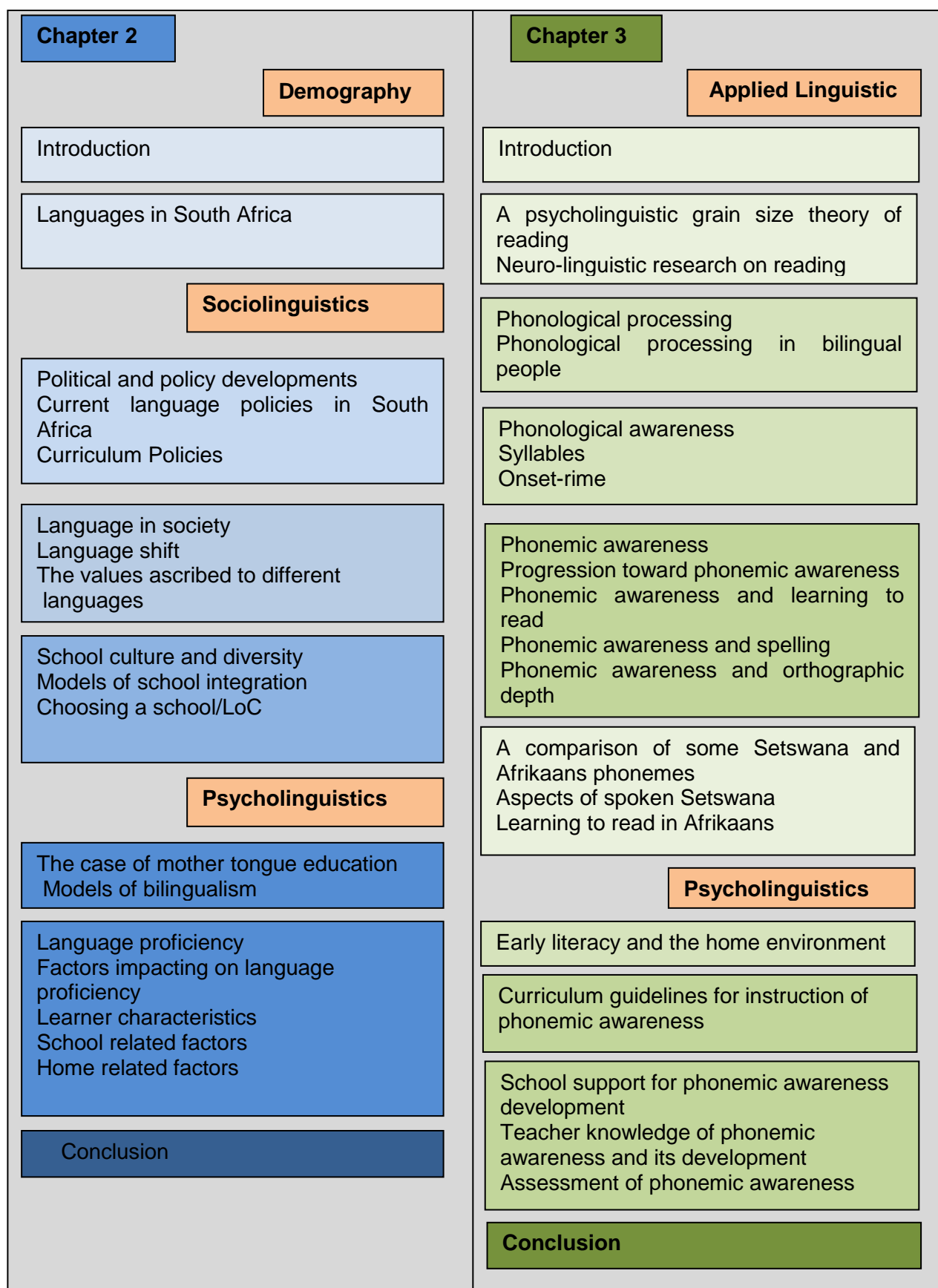


Figure 2.1 A conceptual framework for the literature overview

This discussion of the literature, which spans two chapters, will move from a perspective of general, broad topics to more specific ones, with the central argument being that for young children (in a setting such as the one in this study), to learn to map the sounds of a language to their written counterparts is a multi-faceted and, in many ways, confounding terrain. To this end I will examine the bigger picture of language in education in South Africa - with the meanings of the word *language* on the one hand, as that of a sign system used by humans as a means of communication (Shahhoseiny, 2013), and on the other, as a 'tongue' spoken by a certain group of people at a certain time (Funk & Wagnalls, New Practical Standard Dictionary of the English Language, 1949). In chapter 3 the argument will continue by looking at some aspects of *applied linguistics* and language and also the often unconscious knowledge that its users have of it (Shahhoseiny, 2013). The focus in that chapter will be on aspects related to phonemic awareness development and its primary aim, namely early reading acquisition.

2.3 LANGUAGES IN SOUTH AFRICA

A variety of languages are spoken as home language in South Africa. The country's current constitution, which came into effect on 4 February 1997, recognises 11 official languages, to which it guarantees equal status (South African Constitution, 1996). Table 2.1 presents the latest figures available for users of each language as a home language (Census, 2011, p.23).

Table 2.1 Languages of South Africa

Language	Number of speakers	% of total	Rank by nr.
IsiZulu	11 587 374	22.7%	1
IsiXhosa	8 154 258	16%	2
Afrikaans	6 855 082	13.5%	3
English	4 892 623	9.6%	4
Northern Sotho	4 618 576	9.1%	5
Setswana	4 067 248	8%	6
Sesotho	3 849 563	7.6%	7
Xitsonga	2 277 148	4.5%	8
SiSwati	1 297 046	2.5%	9
Tshivenda	1 209 388	2.4%	10

IsiNdebele	1 090 223	2.1%	11
Other	828 258	1.6%	12
Sign language	234 655	0.5%	13
TOTAL	50 961 443	100%	

Note: From Census (2011, p. 23)

2.3.1 Demographic distribution of languages in South Africa

The majority of African language users in South Africa speak a language from either one of two principal branches of the African languages represented in South Africa: The Sotho–Tswana branch (Sesotho, Northern Sotho, Setswana), and the Nguni branch (isiZulu, isiXhosa, siSwati, isiNdebele). For each of the two groups, the languages within that group are for the most part intelligible to a native speaker of any other language within the same group.

According to the 2011 census, isiZulu is the most commonly spoken home language in the country - spoken by just over 22% of the population. It is followed by isiXhosa at 16%, Afrikaans at 13.5%, English¹² at 9.6% and Northern Sotho at 9.1%. Although isiZulu is the most common home language spoken in the country, it is important to note that the distribution of speakers of isiZulu- and other languages from the Nguni branch of languages populate predominantly the South Eastern parts of South Africa (see Figure 2.2), while speakers of languages from the Sotho-Tswana language group populate mainly the central and North Western parts of the country which includes the North Western part of Gauteng, where the school in this study is situated (see Figure 2.3). Darker green areas indicate higher proportions, percentage wise, of speakers of the particular language family.¹³

¹² An analysis conducted by the SA Institute of Race Relations (SAIRR) in 2013, based on Census 2011 results, show that black households account for a quarter of the people who indicated that they speak English as their first language. This figure was more than twelve times that of a decade ago.

¹³ (https://en.wikipedia.org/wiki/Languages_of_South_Africa).

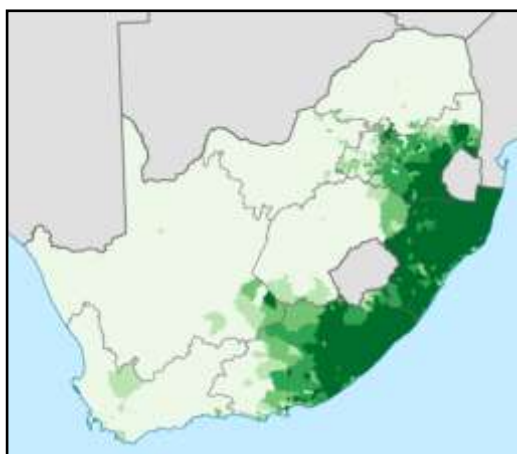


Figure 2.2 Distribution of the population that speaks an Nguni language as a first language



Figure 2.3 Distribution of the population that speaks a Sotho-Tswana language as a first language

Gauteng is the most linguistically heterogeneous province, with roughly equal numbers of Nguni, Sotho and Indo-European language speakers. After the province of Kwa-Zulu Natal, where 80.9% of the population speak isiZulu, Gauteng is the province with the highest number of isiZulu speaking people. Over 18% of isiZulu speakers are to be found in Gauteng, with its speakers making up 19.79% of the provincial population (see Table 2.2). Northern Sotho, which is closely related to Setswana, is spoken by 10.62% of the population in the Gauteng province with roughly a third of the total Northern Sotho speaking population residing in this province (see Table 2.2). Setswana speaking people make up 9.06% of the population in Gauteng and also inhabit the Southern Free State, the North West Province, areas of the Limpopo province, Botswana and Namibia (Snail, 2011).

Table 2.2 Languages of Gauteng

Language	Number of speakers*	% of total	Rank by nr.
isiZulu	239 0036	19.79%	1
English	1 603 464	13.28%	2
Afrikaans	1 502 940	12.45%	3
Sesotho	1 395 089	11.55%	4
Northern Sotho	1 282 896	10.62%	5
Setswana	1 094 599	9.06%	6
isiXhosa	796 841	6.60%	7

Xitsonga	796 511	6.60%	8
isiNdebele	380 494	3.15%	9
Other	371 575	3.08%	10
Tshivenda	272 122	2.25%	11
SiSwati	136 550	1.13%	12
Sign language	52 744	0.44%	13
TOTAL		100%	

Note: From Census (2011, p.25)

2.3.2 Language in Gauteng schools

Because Gauteng is the smallest of the nine provinces of South Africa, logistics around provisioning of text books and other education materials to schools as well as communication between the provincial education department and schools are relatively simple (Maringe & Prew, 2014). In larger provinces distance and rural settings of schools are more likely to impact negatively upon resource provisioning and communication. Even so, as discussed by Van der Vyver (2012a), some aspects of rural conditions, such as low rates of employment, low levels of parent education, as well as poverty related factors such as poor nutrition and high prevalence of HIV/Aids do impact negatively on parent's ability to support their children's education in the area where the school is situated in.

Having taken due cognisance of some of the factors which might influence the education experience of the children in the study, the remainder of this section will deal specifically with the demographic distribution of the different languages used as language of the classroom (LoC) in schools in the Gauteng province as well as with the distribution of learners in schools, according to their first language.

Table 2.3 Language in Education in Gauteng¹⁴

Language	Learners by home language	Learners by LoC	Learners by preferred LoC	Discrepancy between home language and LoC	Discrepancy between home language and preferred LoC	Discrepancy between LoC and preferred LoC
isiZulu	463 045	125 058	126 204	337 987	336 841	- 1 146
English	218 758	1 401 350	1 366 969	-1 182 592	-1 148 211	34 381
Afrikaans	209 435	232 799	254 432	- 23 364	- 44 997	- 21 635
Sesotho	265 195	55 935	51 148	209 267	214 047	4 787
Northern Sotho	208 876	58 777	60 290	150 099	148 586	- 1 513
Setswana	218 377	52 016	57 647	166 361	160 730	- 5 631
isiXhosa	143 846	22 009	27 338	121 837	116 508	- 5329
Xitsonga	100 777	17 014	17 259	83 763	83 518	- 254
isiNdebele	51 309	4 457	6 229	46 852	45 080	- 1 772
Other	N/A					
Tshivenda	36 887	3 792	4 843	33 095	32 044	- 1 051
SiSwati	33 050	424	1 122	32 626	31 928	- 698
Sign language	N/A					
TOTAL	1 949 555	1 973 633	1 973 508			

Note: (DBE, 2015)¹⁵

As indicated by the statistics in Table 2.3, there is a clear discrepancy between the home language of children in Gauteng and the language medium of instruction of the schools they attend. Whereas English was listed as the home language of only 7% of pupils in public schools, 64% of all pupils in the province chose to be taught in English. Interestingly, English and Sesotho seem to be the only languages where a number of children (34 381 for English and 4787 for Sesotho) seem to attend schools in these language media despite it not being their preferred language of the classroom. Although this figure, for English, constitutes only 2.5% of children, it still means that one out of every 40 children in English medium schools would, by preference, be taught in another language. Since there are 2056 schools in Gauteng, with a learner-school ratio of 804:1 (DBE, 2015), this amounts to an oversupply of English schools in the province and means that the equivalent of just under 43 schools full of children attend English

¹⁴ The total number of learners in Gauteng for each of the variables indicated differs in the table in the document of the Report on the 2009/2010 Annual Surveys for Ordinary Schools (DBE, 2010). For this reason the numbers, especially in the columns indicating discrepancy should be taken as an estimate.

¹⁵ This table was compiled from various data in this document .

medium schools when they would, in fact, prefer another medium of instruction. This begs the question of whether the shift to English is not, to some extent, an assumption and whether there is not an oversupply of English schools in some areas – leaving people with little choice as to the language medium of the school their children attend.

Of the 218 377 learners who speak Setswana at home, roughly a quarter attend Setswana medium schools. Judging by the preferred LoC as stated by parents upon enrolment it seems that the language in education needs of 5631 (2.58%) of Setswana speaking children are not being met. This, according to the average learner-to-school ratio mentioned above, translates to one in forty children whose language needs are not being met or, a deficit of at least seven Setswana schools in the province.

With regard to the statistics for Afrikaans it seems that roughly 23 364 children who are not Afrikaans home language speakers attend Afrikaans medium schools. That means that the equivalent of 29 Afrikaans medium schools operate in order to provide these children with an education in their preferred LoC. Furthermore, there is a demand for another 21 635 children who are not Afrikaans first language speakers to attend Afrikaans medium schools. This figure, according to the average learner-to-school ratio above, translates to a demand of the equivalent of 27 Afrikaans medium schools in the province. This data stands in sharp contrast to the current trend of abolishing Afrikaans medium schools. According to MEC Panyaza Lesufi, 124 Afrikaans medium schools in Gauteng are set to be converted to parallel medium Afrikaans-English schools (Lesufi, 2015).

2.3.3 The languages in this study: Afrikaans and Setswana

This section briefly outlines the history and use of the two languages which form part of this study, namely Afrikaans and Setswana. For the sake of uniformity, this part of the literature review will make use of information from the UNESCO World Language Report Survey Questionnaire (2000) each of which was completed by a respondent who is considered an expert on each of the languages, namely S.J.C. Slabbert (Afrikaans) and R.M. Malimabe (Setswana).

2.3.3.1 Afrikaans

Afrikaans is a language which developed from a non-standard variety of Dutch which was the official language in the Cape from 1652 to 1795 and again from 1803 to 1806. It is a West Germanic language from the Germanic group, belonging to the Indo-European

family which was influenced by the slave community in the Cape and the Khoi-Khoi (Van Rensburg, 2013).

Afrikaans only developed into a written language fairly recently with the earliest examples of Afrikaans in writing appearing in the middle of the 18th century in a Dutch newspaper which published letters in Afrikaans which dealt with the political situation in the Eastern Cape at the time (Davids, 1987, p.46). Concurrently to this, the Muslim-Afrikaans language movement produced some of the first pieces of written Afrikaans, when the Cape Muslim leader, Abu Bakr translated a number of Islamic works into Afrikaans for the Muslim community in the Cape (Davids, 1987). Abu Bakr also started a Muslim Afrikaans-medium school in the Cape at that time.

Afrikaans is a standardised language. Standardisation of the language started in 1874 when S.J. du Toit of the *Genootskap van Regte Afrikaners* (GRA) compiled the seven spelling rules which were adhered to in the subsequent translation of the Bible in Afrikaans – a process which started with the translation of the book of Genesis, which was completed in 1893 and which culminated in a full translated version of the Bible in 1933. Afrikaans language was first recognised as medium of instruction by the Provincial Education Departments in 1914 and this event led to its standardisation from 1925 onward (Van Rensburg & Jordaan, 1995, p.118). Creating technical terminology in Afrikaans was one of the major challenges of standardisation, but by 1995 in excess of 127 Afrikaans technical publications had been published.

On Afrikaans as language in education, S.J.C. Slabbert writes the following as a response to the UNESCO World Language Report Survey Questionnaire (2000)¹⁶:

It is a well known fact that many Coloured people in the higher socio-economic groups have shifted home language in favour of English as a reaction to the high economic status of English, as well as the stigmatisation of Afrikaans as the language of apartheid. Many Afrikaans medium Coloured schools in Gauteng, in particular, have changed to dual or English medium as a result of the influx of Black/African children.

This commentary reflects the current move toward English as preferred language of education. To what an extent this move is facilitated by the oversupply of English schools and the shortage in, among other language media of instruction, Afrikaans-medium schools (see 2.3.2), is not clear from the literature. Judging by the statistics for

¹⁶ <http://salanguages.com/unesco/afrikaans.htm>

Gauteng, it might be prudent to investigate what many authors seem to take for granted – that people want their children to attend English medium schools. It might be that the historical and political stigma attached to Afrikaans as language of the oppressor is not, at least at grassroots level, quite as pronounced as people might think (Maimane, 2015 in press). Certainly, the very topic of this study would not be under investigation were it not that, in an area where there are several other schools, offering Setswana and English as LoC, Setswana speaking parents chose to put their children in the only Afrikaans medium school in the area. On Afrikaans, I offer the following words, of Steve Biko - a prominent anti-apartheid activist during the 1960s and 1970s – spoken in court, about the challenges faced by a black man in learning Afrikaans and English (quoted by Woods, 1978, p. 219, cited in Snail, 2011):

You feel things rather than say them, and this applies to Afrikaans as well. Much more than English, Afrikaans is essentially a language that has developed here, and I think, in many instances, it is idiom. It relates much better to African languages, but English is completely foreign, and therefore people find it difficult to move beyond a certain point in their comprehension of the language (p. 219).

Biko went on to say that although this “closeness of idiom” (Snail, 2011. p.66) would indeed make it easier for African people to learn Afrikaans rather than English, Afrikaans bears certain political connotations which incites a rejection from black people. Some of the factors which contributed to this view are discussed in (2.3.4).

I offer this quote, not in defence of the atrocities committed by a certain group of Afrikaans-speaking political orchestrators who acted from the paradigm of apartheid¹⁷, nor in deference to those, such as Biko, who stood up against the oppression brought about by that ill conceived ideology. Instead, together with Snail (ibid), who, in his article on how the perpetrators of apartheid succeeded in using Afrikaans to construct their version of nationalism and to create policies of division, points out that “it is not the language, but the social evils connected with it which needs extirpation” (p.66). I will now turn to describing some aspects of spoken Setswana and of the Afrikaans orthography in order to draw some outlines according to which this study of Setswana speaking children learning to read in Afrikaans can be situated.

¹⁷ An Afrikaans word meaning ‘segregation’

2.3.3.2 Setswana

Setswana is a language from the Tswana-Sotho sub-group, which belongs to the Eastern Bantu group of languages and the Bantu family of languages (Otlogetswe, 2001). Setswana is an indigenous language of South Africa and has seven dialects. Because of the contact with English and Afrikaans, it has assimilated a number of words from those languages (ibid).

Nfila (2002) mentions Cole (1955), Moloto (1964), Janson and Tsonope (1991), as well as Andersson and Janson (1997) as prominent authors on the history of Setswana¹⁸. Drawing upon the work of those authors, Nfila (2002) states that Setswana was the first language from the Sotho group to be written. This was done for the first time, by Heinrich Lichtenstein in 1806 when he wrote *Upon the Language of the Beetjuana*. Next, John Campbell wrote *Boothuana words* in 1815 which was followed by *About Botswana*, by William John Burchell in 1824. Dr. Robert Moffat from the London Missionary Society built the first school for Batswana circa 1818 and as a result of his teachings and the need for material it brought about, translated *The Gospel according to Luke* in 1830, *The New Testament* in 1840 and the Old Testament in 1857. The first Setswana speaking person who contributed to written Setswana was Sol D.T. Plaatje, who in collaboration with a Professor Jones, wrote *Tones of Secwana Nouns* in 1929.

Setswana is a standardised language. However, different orthographies were developed by the missionaries who first wrote the language and who worked with communities of speakers of different dialects of Setswana. Furthermore, the orthography was influenced by the first language of the transcribers (Nfila, 2002).

On Setswana as language in education, R.M. Malimabe writes the following on the UNESCO World Language Report Survey Questionnaire (2000)¹⁹:

English is busy replacing Setswana because it is viewed as a language of the educated and it is associated with economic growth and a passport out of poverty, (and) low status to national and international recognition. With the acceptance of Black learners into (the then Model C schools), which today is called multiracial schools, many middle class parents send their children to these schools and these children avoid speaking African languages at home. The parents are also encouraged

¹⁸ These authors are all referenced in Nfila, 2002

¹⁹ <http://www.salanguages.com/unesco/setswana.htm>

by the teachers to communicate only in English with their children so that their English could improve. Unfortunately, some of them cannot communicate in any African languages.

2.3.4 Language in South Africa: Policy developments

Language policy has played a significant role in determining the languages used to teach children in schools. What follows is a brief discussion on the political developments which have influenced language policy development in the country.

Historically, language in education in South Africa has been a politically laden issue. Barely two decades ago, during the apartheid era, a language in education plan was used by the Nationalist government to promote separate and unequal social and economic development of the marginalised minority (Snail, 2011). The principle of mother tongue instruction was conveniently applied to further division between communities (Heugh, 1995). This author (ibid) speculates that the publication of the UNESCO report: *The use of vernacular languages in education* (1953) coincided conveniently with the Bantu Education Act of that same year. This document was based on the largely untested belief, at the time, that formal schooling would be most successful when children learnt in their mother tongue. Mother tongue instruction was coupled with an impoverished curriculum for children in the Bantu education system and remained even after the renaming of that department to the Department of Education and Training in 1977. Separate departments of education were established for different ethnic groups which served to further emphasise the differences in the allocation of resources for education delivery for the different groups.

Prior to 1953 children received instruction in their mother tongue for the first four years of schooling (Christie, 2006). The Bantu Education Act however, required children to receive mother tongue instruction for the first eight years, until standard six, where after they would receive instruction for half of their subjects in Afrikaans and half in English. In 1975, the duration of the period of mother tongue instruction was reduced by a year. The inflexible enforcement of this policy led to the 1976 student uprising in Soweto. In 1979, the education and training act required mother tongue instruction for the first four years up to the end of standard two (ibid).

After South Africa became a democracy in 1994, the South African education system was redesigned to reflect values of equality and democracy (Soudien, 2004). This reorganisation caused the landscape of South African education to change drastically.

Significant migration occurred from the ex-DET (attended by African children) schools to former Indian and English medium schools (ibid) This challenged schools, which had up to that point, been fairly homogenous in their population with regard to language, culture and race, to educate children from different backgrounds. Soudien (2004) argues that post-apartheid South Africa has not ended race and social differences but has effectively sustained them, as schools struggled to integrate children from various cultural backgrounds and language groups and find ways to navigate important educational issues such as language of instruction and school culture in ways which children from diverse language and culture backgrounds would benefit from.

In South Africa, the idea of mother tongue instruction is tainted by a link to previous language policies implemented within education – policies which served the ideology of separate development conceived by the apartheid government. According to the concurrent, yet divergent language policies of the day, English and Afrikaans were the official languages of instruction from the 1950s to the 1970s in previous model C schools (attended by white learners). During this period, mother tongue instruction was mandatory for African learners for the first eight years of schooling, after which schools could choose to use either English or Afrikaans as language medium of instruction. The Bantu education policy with its strictures relating to language of instruction for African learners, together with an inferior curriculum for non-whites, was thus used as one of the primary tools to prevent the majority of people from taking part in the economy (Sherer, 2000).

A Language Plan Task Group (LANGTAG) was appointed in 1995, to advise government on developing a National Language Plan for the country and to advise government on the development of a language policy that would counter the trend toward monolingualism. In 1996, the LANGTAG Report, constituting a framework for the development of language policy and planning, was presented to government (Phillipson, 1997). As a result of this report an independent body which served as a language policy advisory panel, namely, PanSALB (PAN South African Language Board) was appointed to use the LANGTAG Report as basis from which to draft the official language policy and plan. This body was also tasked with monitoring the implementation of practices which relate to constitutional language issues (Moller, 2013).

By using the LANGTAG Report, PanSALB, was instrumental in providing goals to promote multilingualism in the country by creating conditions for the equal use of all eleven official languages (Moller, 2013). This board promoted the use of languages other than English and Afrikaans, and especially minority languages such as sign

languages and the Khoisan languages. Since the inception of PanSALB, other language bodies such as the nine Provincial Language Committees (PLCs), whose task it is to assist with language policy formulation and implementation at a provincial level; the thirteen National Language Bodies (NLB's), tasked with the compilation of technical, translation and monolingual dictionaries and eleven National Lexicography Units (NLU's) have been instituted to promote the use of all official languages (Phillipson, 1997)

A first draft of the Language Policy and Plan for South Africa as well as a draft for the South Africa Language Bill (SALB) was produced by PANSALB in 2000 (Janks, 2010; Moller, 2013). In 2003, the National Language Policy Framework was developed which consists of a Policy Statement, an Implementation Plan and the South African Languages Act (Janks, 2010; Moller, 2013).

The Constitution of the Republic of South Africa, (1997, Section 29(2)) states that everybody has the right to receive education in the official language or languages of their choice in a public institution where that education is responsibly practised. The South African Schools Act 1996 puts the responsibility of formulating appropriate language policies and choosing a language of instruction in the hands of the provincial government and school governing bodies.

The South African Language in Education Policy (LiEP) was introduced in 1997 (DoE, 1997). This policy aimed to promote full participation in society and the economy through equitable and meaningful access to education and to promote and develop all eleven official languages. As a means to realising this noble idea additive bilingualism was implemented as the primary approach to language in education in the country. The envisaged outcome of applying this model was that learners would have the opportunity to develop their mother tongue whilst learning a second and even a third language at school. This policy also propounds to support the teaching and learning of all other language required by learners or used by communities in South Africa, including South African Sign Language, Alternative and Augmentative Communication, as well as those languages used for religious purposes and those that are important for international trade and communication. The policy states as its priorities: The development of programmes for the re-dress of previously disadvantaged languages and; countering the disadvantages resulting from the so called mismatch between learners' first languages and those used in their education.

A recent development on the language in education scene has been the conception and implementation of the Incremental Introduction of African Languages (IIAL) Policy

(Department of Basic Education, 2013). This policy means that in addition to a school's chosen language of instruction and a first additional language (either English or Afrikaans), the learning of a second additional language, which will be an African language, will be mandatory. The policy was piloted in selected Grade one classes in government schools in 2014 (DBE, 2014) and is being incrementally introduced in the period between the years 2015 to 2026, by which time it will be offered to the first tranche of matric learners.

In response to the implementation of this policy, the Minister of Higher Education, Dr. Blade Nzimande sees the long term goal of this policy as that of transcending the mere functional use of African languages for communication into developing these languages as languages that could be used for teaching and research in tertiary institutions (Moller, 2013). To this end, Dr. Nzimande appointed a ministerial advisory panel tasked with identifying obstacles to the implementation of effective language policies and practices at higher education and training institutions. The report indicated that factors such as the limited availability of academic learning materials in African languages and a lack of numbers among the ranks of foundation phase teachers that are trained to teach in their mother tongue certainly pose challenges to the realisation of this aim (Moller, 2013).

The next section will take a brief but critical look at the newly implemented IIAL and its intended outcomes. It will also explain the LiEP and its implementation and the effects thereof since its inception 18 years ago.

2.3.5 Language in Education Policy (LiEP)

The South African Language Policy is deemed to be one of the most progressive in the world (Probyn, Murray, Botha, Botya, Brooks, Westphal, 2002). The additive bilingualism model upon which it rests has, at its core, and in the true spirit of democracy, the decentralisation of decision making power to parents and local decision making structures (Posel & Casale, 2011). However, as these authors point out, in reality this overt handing over of the baton into the hands of parents might have had the opposite effect with the educational landscape actually having become increasingly monolingual (ibid). School governing bodies often choose English over other languages as language medium of instruction (Heugh, 1999; Probyn et al., 2002; Probyn, 2009).

For most African children in South Africa, English is the language of instruction - mostly from grade four onward, but sometimes from as early as grade one (Posel & Casale, 2011). It has been found though, that even when African children are supposed to be

taught in their home language, teachers 'smuggle in' English as LoC because they feel that it would be to the benefit of the children to be exposed to English as early on as possible (Masjiya, 2014). After grade four, when children are supposed to be taught in English, the impact of factors such as educators' lack of proficiency in the use of English means that most classes are still taught in a combination of English and an African language.

Referring to the intentions of the implementation of the LiEP, as set out in the policy document (1997), Heugh (2000) asserts that although the plan had been to advance multilingualism in the country, and to improve the status of African languages, evidence shows that this is clearly not the case. Instead, the country's institutions, including its education system have become increasingly monolingual with English having become the dominant language of government and business (ibid). Authors such as Posel and Casale (2011) indicate that there is clearly a disparity between language policy and its practice, and call for policy makers to urgently address inequalities caused by English as language of instruction. Offering a different perspective in their aptly named article *English with or without g(u)ilt*, Granville, Janks, Mphahlele, Reed, Watson, Joseph and Ramani (1998, p.10) propose that although increased access to English might overtly strengthen its position of power, English is "a language of the educated middle classes and acts as an effective social and economic gatekeeper." Encouraging a view of English as a resource, instead of as a problem, these authors (ibid) soberly point out that when everyone has equal access to English, the language would no longer constitute a commodity for use by a select few.

2.3.6 Curriculum policies

Although this will not be explored in detail in this thesis, I deem it worthwhile, at the outset of this section, to draw the reader's attention to the variable meaning which at least one author, namely Maringe (2014) assigns to the term 'curriculum'. I will then indicate how the term will be used in this study (see Figure 2.4).

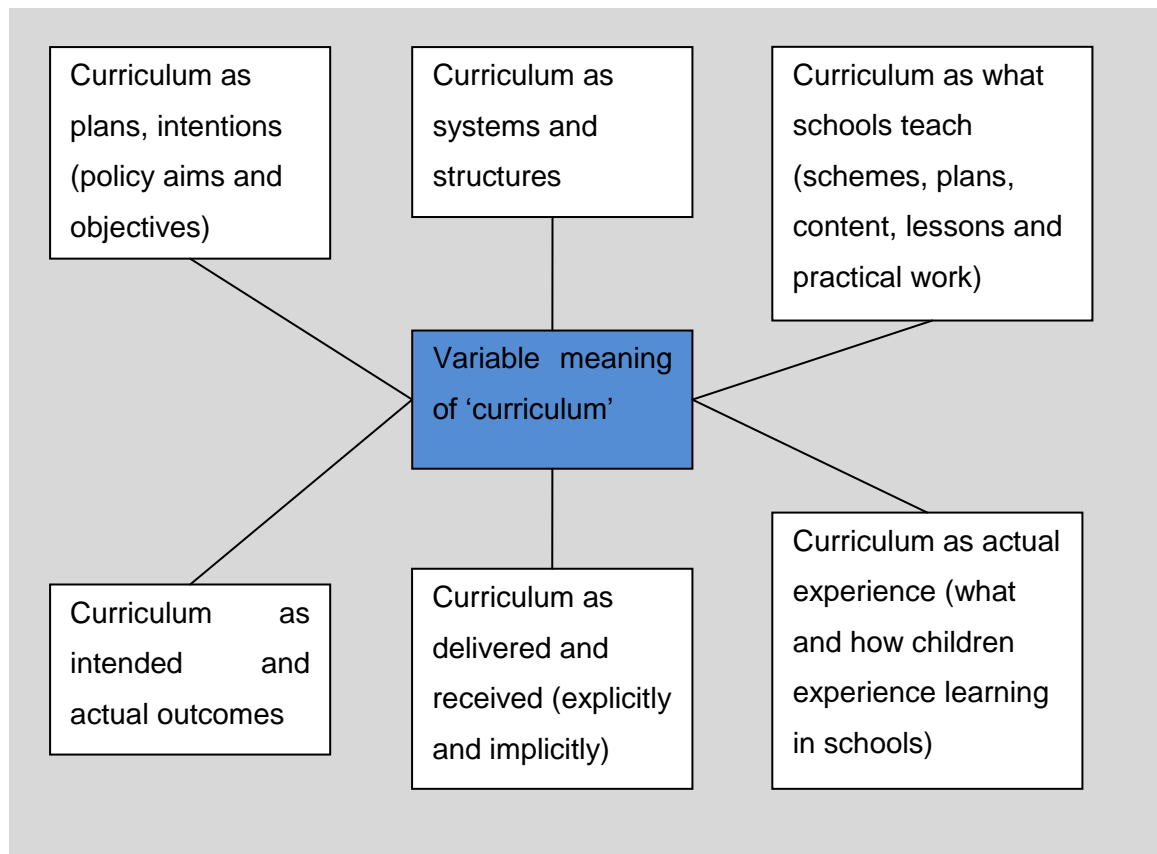


Figure 2.4 The variable meaning of ‘curriculum’

After Maringe (2014)

For the purposes of reporting on the empirical part of the study, two meanings of the term ‘curriculum’ will be used, namely that of curriculum as ‘systems and structures’ and that of curriculum as ‘what schools teach (schemes, plans, content, lessons and practical work)’. These will be differentiated as follows: ‘Directives by the DBE’ or ‘departmental directives’ will be used to refer to ‘systems and structures’. These include administrative protocols, procedures and processes. ‘Curriculum’, in this thesis, will refer to the content of the CAPS, as well as its prescriptions in terms of time frames, lessons etc. As far as the literature which is discussed here is concerned, the meaning of the term should be clear from the frame of the description it appears in.

The South African education system has undergone several curriculum policy changes since 1997. In that year Curriculum 2005, which was based on the Outcomes Based Education (OBE) approach, was implemented with the aim of simultaneously promoting mother tongue education and multilingualism (Moller, 2013, Janks, 2010). After a review of this curriculum, the National Curriculum Statement (NCS) was instated with the

objective of promoting additive multilingualism (Janks, 2010) so that South Africans would become proficient in at least two languages, of which English would be one, but not necessarily the LoC (Moller, 2013; Janks, 2010). The implementation of these well-intentioned curricula proved more challenging than anticipated and therefore, in 2009, a review of the NCS led to the inception of the Curriculum and Assessment Policy Statement (CAPS) which was phased in from 2011 and which is still in use today.

Of the current curriculum it has been said that, despite its overt aim of “sanitising a once dehumanised and splintered education system into a singular narrative of social justice and creative, problem-solving individuals” (Davids, 2015), it actually compromises educator autonomy in delivering quality education (Ramatlapanana & Makonye, 2012). This, these authors (ibid) assert, is because of its overly prescriptive nature. Also, says Davids (2015), its focus is trained so narrowly on the assessment of learning that it has all but lost sight of the activities of teaching and of learning - outside of what can be quantified. Moreover, Naidoo and Muthukrishna (2014) suggest that many teachers experience feelings of discomfort and tension as a result of having to deal with curriculum directives on the one hand, and the reality of the classroom within which they teach on the other. Some teachers, Mattson and Harley (2001, p. 293) suggest, cope with this dissonance by employing a “strategic mimicry” of following policy directives while not really engaging with the content of the policy at all.

The curriculum statement requires that seven to eight hours are spent on the first language in grade 1 (see Table 3.2). From 2012 onward it also requires all grade R to grade 3 learners to take English (or Afrikaans, where English is the first language) as a first additional language. Currently, the time allocated for the first additional language is two to three hours per week in the prescribed timetable for grade 1 and grade 2.

The Second Additional Language (IIAL) pilot project is currently being implemented in several schools across the country. This second additional language would be an African language spoken in the region within which the school lies. As a result of the introduction of this third language component to the curriculum, the prescribed timetable for grade one and grade two learners has had to be extended from 23 hours per week to 25 hours per week (DBE, 2013).

2.4 LANGUAGE IN SOCIETY

This study has, as its subject, learners from a specific language background, namely Setswana, interacting for the duration of the school day with educators from an entirely different language background, namely, Afrikaans, in a classroom where the LoC is Afrikaans. Furthermore, the school in the study is situated within the complex social dynamic of what constitutes the 'community' (Sen, 1990; Skogen & Krangle, 2003; Cleaver, 1999) of a small town. Thus, it is important to take notice of Norton's (1997) premise that speech, speakers and social relationships are inseparable.

Some of the indices of cultural diversity in South Africa are: Race, language, class, gender, religion, ethnicity (Lemmer, Meier & Van Wyk, 2006). For the purposes of this study, only the interface between language and culture will be looked at and only in as much as it pertains to the specific construct of the inquiry. This section therefore does not portend to be an exposition on the topic of culture and language. It will, instead, have a version of the principle of Chekhov's gun²⁰ applied to it and aim to reflect nothing that is deemed superfluous to the elucidation of the topic at hand.

Apart from being a medium of communication and of the transfer of knowledge, language is a critical component of cultural identity – both at the individual and collective level (Ball, 2011). In times of political change and upheaval, language claims are among the first to be voiced - often in support of a certain language or languages being used in the public domain (i.e., schools and legal institutions) (ibid). Language in education is one of the most significant aspects of any society – it is the medium through which knowledge and skills are imparted and therefore the repository within which knowledge is contained - and thus often also the language of hegemony and power (Prah, 2003).

Children who go to school for the first time, such as the Grade 1 children in this study, enter a social space much different from the one they are used to at home. Henning and Dampier (2012) suggest that going to school changes the social status of the children when they start the process of becoming 'a learner in a school' or a 'pupil in a classroom' (ibid). These authors make it clear that this social transformation does not happen all at once. Instead, for a few months at least, the new learners are in a state of being in 'limbo' (or perhaps, since it is such a dynamic change - 'in transit'²¹) between the informal social space of their home lives, or pre-school lives, and the more formal

²⁰ Chekhov's gun is a dramatic principle that requires every element in a narrative to be irreplaceable, with anything else removed.

²¹ Author's own note

social context of school (ibid). As part of this entering of a new phase in their lives, children also have to learn how to navigate the cultural practices at school (ibid) – in other words, how to behave in the classroom, at assembly, during break time or when the principal enters the classroom.

At school children encounter other children who might be from home and language backgrounds that are quite different from their own. Moreover, depending on where the school is situated, there might be children from a vast array of different social and language backgrounds in the same class. And upon going to school, all children have to learn a new language – the ‘language of the classroom’ which, in the case of children attending a school where the LoC is not their first language, entails the learning of an entirely different ‘tongue’ than their mother tongue.

According to West (1992), a person’s identity is strongly linked to their desire for recognition, affiliation, safety and security. These desires, West believes, can, in the real world, not be separated from the distribution of material resources in the society within which a person lives. Power and privilege belong to those who have access to a wide range of resources. The question ‘who am I?’ can therefore not be separated from the question ‘what am I able to do?’ And since phonemic awareness is a necessary skill needed to become literate in a language which is often not the same one than what the learners speak at home, this question of identity bears relevance to the subjects in this study.

2.4.1 A language shift – straight to English²²

‘Language shift’ is a sociological phenomenon whereby the individual or community undergoes changes with regard to the degree of language use of a certain language or languages (Appel & Muysken, 1987. p. 32). The extent to which a language is used, or is not used, in the public institutions of a society is a powerful determinant of the pace of language shift (De Klerk, 2002).

As has already been noted (see sections 1.2; 2.2.3.1; 2.3.2; 2.3.4), English has become the dominant language of many formal institutions in South Africa. According to Braam (2004), societal pressure has set proficiency in English as a requirement for access to various social, political and economic aspects of society. In some cases, such as the one described by a study of the effect of schooling in the Anglicisation of Afrikaans

²² A pun on the term straight-to-English which is used to refer to a subtractive model of bilingualism whereby English is the LoC right from the start of school to the exclusion of learners’ mother tongue.

speaking Grade 7 learners of primary schools in the Western Cape, the language shift happened within the span of one generation (Plüddemann, 2004). It would appear, from research cited by Braam (2004), that as early as the year 2000, the shift toward English had been noted on a national level by researchers such as Alexander (2003) and Heugh (2000).

2.4.2 The value ascribed to different languages

Every spoken language belongs to a certain group of people – its speech community - which uses that language for the purposes of communication and social cooperation (Barber, 1964). Vygotsky (1978; 1987) viewed language as containing cumulative social constructions of any community of people that serves as a powerful vehicle for values, information and worldviews. Most people tend to have strong views on the promotion of different languages, especially in as much as status and prestige are attributed to them (Wolff, 2011. p. 55). Language attitudes show how people view their society and culture (ibid). Many African people, some of whom are the very users of a language, display negative attitudes toward their home language, thus opposing its promotion (ibid). This opposition is ascribed by Obanya (1999), to a deep fear of social change directed toward the empowerment of certain parts of the population - such as women, children and illiterate people – with a concomitant experience of a loss of power by post-colonial elite. Phillipson (1992) uses the term ‘linguicism’ – meaning the ideas, practices, structures and rationale used to justify the differences in resources and power that serves to divide groups on the basis of language and its use.

To signify the historically and socially constructed relationship between a person who is learning a target language and the learner’s often ambiguous desire to learn it, Norton (1997) uses the term ‘investment’. In other words – what are the social, economic or political gains perceived by the learner (or in the case of this study, by the learners’ parents) that carry enough weight to incentivise a choice of school where the target language would be different from the mother tongue. Often people see this ‘investment’ in the learners’ target language as investment in their social identity. For this reason many people in South Africa, at this point in time, English seems to be the language they prefer their children to be educated in.

Despite its dominance and the negative impact which English seems to have upon the status of the other languages in South Africa, Casale and Posel (2011) show that proficiency in English also has a direct and positive effect on returns in the labour market. Even when controlling for an individual’s level of education, there is a

considerable wage premium for black South Africans associated with being fluently literate in English (ibid).

However, not everyone sets the value of a language by its capital returns. Whilst soberly pointing out that it would be near impossible to oppose the dominance of English, which the author describes as a result of market forces, Matentjie (2010) makes a strong case for actively opposing the hegemony of English, and calls for a counter-hegemonic strategy so that over a period of at least two generations some of the African languages would be able to compete with world languages such as English. Prah (2003) posits that having a language other than a mother tongue as LoC merely serves to further entrench neo-colonial elitism in Africa. This author goes on to criticize these so called elites for accepting a slow death to their mother tongue in favour of a colonial language, and cautions that most of the continent's languages are included in the estimated 95% of languages that are envisioned to disappear within the next 100 years of the writing of that article (2003).

An argument that is often leveraged against the promotion of African languages for political, scientific, technological, economic, cultural and social purposes is that these languages are limited in terms of vocabulary and conceptual terminology (Wolff, 2011). However, that author (ibid) posits that there is no evidence that proves that poor performance in, for example, mathematics can be ascribed to the use of an African language as LOC (ibid) and finds it regrettable that although these incorrect premises have long since been refuted by linguists, this knowledge has not filtered into the consciousness of the general population yet (ibid).

Speaking to the tendency of especially African people in South Africa to see English as a means to accessing power and privilege, Matentjie (2010) suggests that African people in this country aspire not only to learn to speak English, but to *become* English and that in the minds of many of them this notion, albeit not consciously, equates to getting the best jobs, to having authority over others and to enjoying a higher status than those who do not have a good command of English.

In her study on isiXhosa speaking parents who support the assimilation of their children into the Western paradigm by choosing to send them to English schools, De Klerk (2002) cites Edwards' (1984) argument that to exercise a choice toward assimilation and a loss of a language as an aspect of group identity should not necessarily be seen in a negative light. According to De Klerk (ibid), people have a constitutional right not to choose their home language over English and thus to select those aspects of their group

identity which they value most and those which they feel they can do without. De Klerk continues, rather soberly, to point out that those children would most likely become part of a future 'linguatocracy' (Pendley, 1983) – and thus be able to gain access to positions of leadership and power.

2.5 SCHOOL CULTURE²³ AND CULTURAL SENSITIVITY

McKinney and Soudien (2010) state that multicultural education in South Africa is defined by the post-colonial and post-apartheid historical situation from which it stems. According to Coovadia (2013), it is meant to be more than simply that part of the curriculum which aims for learners to learn about the different aspects of culture such as gender, ethnicity and race but instead, is meant to be a core value which underpins all aspects of education. Banks (2008) lists five requirements for true multicultural education. These will be discussed next.

Firstly, learners need to understand how perceptions, cultural perspectives and assumptions impact *knowledge construction*. Secondly, *prejudice reduction* happens when learners develop an appreciation for those from backgrounds other than their own, and when myths and misconceptions about different social groups are dispelled. Thirdly, *equity pedagogy* refers to educators' sensitivity to diversity in the classroom and their adjustment of their teaching practice accordingly. Fourthly, *content integration* in the classroom is facilitated when examples and content from different cultural and ethnic groups are used in a natural way to illuminate subject content in the classroom. Finally, an *empowering school culture and social structure* requires schools to create an environment where learners from diverse cultural groups all have an equal chance of making progress in school. One such support system to assist learners, educators and schools with effective implementation of inclusive education is the notion of School-based Support Teams (SBSTs). This structure was announced by the DoE in the Education White Paper in 2001. All schools in the country were required to implement this through the services of 'site based' support teams consisting of the principal and educators at each school (ibid).

On the topic of language, Alidou, Boly, Brock-Utne, Diallo, Heugh & Wolff (2006) proposes that mother tongue education could help create a culturally sensitive curriculum and could help children form a positive perception of their home culture.

²³ This section does not portend to offer a detailed exposition on the term 'school culture' which is a complex notion which, although encompassing language in education, lies outside of the scope of this inquiry.

Balfour (2012) suggests that educators could serve as 'cultural mediators' in the classroom using their understanding of learners' home culture and home language to facilitate a better understanding of the school's culture.

2.5.1 Approaches to school integration

After the country's democratisation in 1994, the South African education system was redesigned to reflect the values of equality and democracy. This reorganisation caused the landscape of South African education to change drastically. A significant migration of African children occurred from the ex-DET (Department of Education and Training) schools to former Indian and English medium schools Soudien (2004). This challenged schools, that had up to that point, been fairly homogenous in their population with regard to language, culture and race, to integrate children from different backgrounds. Ten years after the country had become a democracy, Soudien (2004) argued that post-apartheid South Africa had not ended race and social differences but that it had, up to that point, effectively sustained these inequities, as schools struggled to integrate children from various cultural backgrounds and language groups and to find ways to navigate important educational issues such as language of instruction and school culture in such a way that children from diverse language and cultural backgrounds would benefit.

According to Soudien (2004), there are three approaches to school integration namely, assimilation, multiculturalism and an anti-racist approach. Assimilation is the least accommodative and the least integrative of these approaches. The values, customs and traditions of the dominant group frame the culture and social context of the school. This approach is often based on the assumption that the subordinate group represents a threat to the standards of the dominant group and that the dominant group is culturally superior. As explained by (ibid), assimilation was the main approach to integrating children from different background into schools in South Africa. The second of these approaches, namely multiculturalism, is based on the belief that all cultures are equally valid and that schools have to accommodate different cultures (ibid) while the third approach, anti-racist education, reflects a perspective that encourages direct engagement with processes that make meaning and that attacks the 'othering' implicit in dominant culture.

In the next section of the literature, the factors which influence the decisions made by parents on which LoC they would like to expose their children to in their schooling are examined.

2.6 THE CASE OF MOTHER TONGUE EDUCATION

Lee (2004) defines mother tongue as the language a child acquires from birth. The mother tongue is spoken fluently and spontaneously, and the individual has intuitive knowledge of it and identifies with the community who uses the same language.

Researchers such as Auerbach (1993) and, more recently, Butzkamm (2003), have opposed the notion of mother tongue education. They have argued that, since the transition to English later on in their schooling would be inevitable for learners wishing to benefit from its presumed social and academic advantages, the sooner they were exposed to English the quicker they would learn the language. This view has since been contested by researchers who propose that mother tongue education in the first few years of schooling is to the benefit of learners' later academic performance because it facilitates cognitive and communication skills and a better understanding of language rules and grammar (Ncgobo, 2013; Heugh, 2011; Nel & Theron, 2008; Brock-Utne, 2007; Alidou, Boly, Brock-Utne, Diallo, Heugh & Wolff 2006; Brock-Utne, 2005; Brock-Utne & Desai, 2003; Butzkamm; 2003). A large body of research thus seems to converge upon the premise that mother tongue education is most advantageous as language medium of instruction. Mother tongue instruction, according to those authors (*ibid*), holds significant cognitive, psychological, cultural and identity benefits for learners. It also enhances pedagogy by validating curriculum assessment. The next few paragraphs will expand upon the proposed benefits of mother tongue education suggested by some of the proponents of this notion.

On the cognitive advantages of learning in a familiar language, the psycholinguistic theory of Cummins (1991) explains that the development of linguistic competencies and conceptual proficiency in the mother tongue results in higher academic performance levels. This, according to Malone (2003) is because learners who have a good command of their mother tongue are better equipped to transfer knowledge from their mother tongue to an additional language. Cummins (2000) refers to this as 'common underlying proficiency' (CUP) which indicates the set of skills and linguistic knowledge that a learner learns in one language that can be used as a foundation for subsequent languages. Cummins goes on to explain that conceptual knowledge gained in one language helps to make the other language more comprehensible. With specific reference to phonics, Iyamu and Ogiegbaen (2007) say that learners learning to read in a language that they understand find it easier to map letter sounds to graphemes.

The pedagogical advantages of mother tongue education, according to Alidou, Boly, Brock-Utne, Diallo, Heugh & Wolff (2006), lies in the promotion of mutual communication between educators and learners. This, these authors (ibid) propose, leads to better teaching and better learning which results in learners being more alert and eager to participate in classroom activities and feeling less intimidated by their educators.

Some researchers (Ouane & Glanz, 2011; Donald, Lazarus & Lolwana, 1997; Prah, 2003) suggest that there are psychological advantages for learners who attend educational settings where they learn in their mother tongue. Some of the benefits to learners proposed by these scholars (ibid) are: Positive experiences by learners in terms of self-esteem and motivation; a sense of empowerment; and finally, learners tend to display more confidence and are more comfortable expressing their feelings in their mother tongue in the classroom.

Finally, in terms of assessment, it has been suggested that when learners are assessed in a language they are not proficient in, it is difficult for them to demonstrate their knowledge and thus render an inaccurate reflection of what they know or can do (Kanze, 2009; Nel, Nel & Hugo, 2013). These authors (ibid) suggest that various assessment strategies besides written and oral tasks be utilised to ameliorate this effect.

Wolff (2011) asserts that all available evidence indicates that continued maintenance of the first language as language medium of instruction, with the additional teaching of a second language, by skilled educators will ensure quality education. However, Henning and Dampier (2012) question this widely accepted premise and point to the paucity of research on the autochthonous languages of South Africa and to the lack of any longitudinal data that has direct application to South African situations.

In their argument, Henning and Dampier (2012) refer to the work of Cummins (1979; 2008) whose writing on language proficiency is based upon the distinction between what he termed basic interpersonal communication skills (BICS) - the ability to speak a language fluently for conversational purposes, and cognitive academic language proficiency (CALP) which includes listening, speaking, reading and writing about subject content matter and which gives learners access to conceptual knowledge in order to compare, identify, classify, write and critically interpret subject matter as part of academic learning.

Henning and Dampier (2012) emphasise that Cummins' theorising on second language acquisition has by no means reached a conclusive point yet and, despite scholars often

taking his earlier work as the last word on the subject, that Cummins is still in the process of developing his theories. To emphasise this, they make use of Lems, Miller and Soro's (2009, p.41) explanation of Cummins more recently developed views about BICS and CALP (2003; 2008) which includes a third aspect of language skills which encompasses phonology, literacy and grammatical knowledge. Although these skills can be learnt together with BICS and CALP, to do so effectively requires teachers to make use of explicit instructional methods to explain the exact working of certain language features. Furthermore, these authors (ibid) explain that contrary to what many scholars take for granted, CALP also does not transfer directly between languages because the logic of CALP is embedded in syntax and also in some morphology (Henning & Dampier, 2012). It follows, therefore, that fluency in a first language is not, as it was previously believed to be, a prerequisite for learning a second language and that CALP in any language depends on knowledge of the very language in which proficiency is sought (ibid).

Furthermore, argue Henning and Dampier (ibid), when learners are exposed to their target language of learning from the beginning of their school careers, they learn the register of academic language. Snow and Ucceli (2009) agree that discourse which has features of academic language is important for achieving the required levels of proficiency in the use of academic language. So children get used to cognitively processing everyday details in that language, and so "learn to use higher order skills that are communicated in specific registers (of academic language)" (Henning & Dampier, 2012). This, these authors (ibid) assert, happens because the educator speaks to learners in the target language all the time, and in a specific way, about subject content. Learners therefore come to understand, that the LoC is the 'language of the classroom', the 'language of learning', as distinct from the 'language of the playground' or 'the language we use at home'. This, these authors suggest, might give learners a better chance, with less disruption, to acquire the level of CALP they will need for conceptual understanding of subject content when they reach the higher grades. In higher grades, subject content is assimilated by reading with comprehension and is assessed by how well the learner can express his or her understanding of those concepts in academic speech or writing (Pretorius, 2014).

Henning and Dampier (ibid) conclude their argument as follows:

We argue that it may well be that mother-tongue instruction can be one of the roots of our educational problems, not because the African languages of this country cannot capture concepts, but because their use in classrooms seems to

be inconsistent at a time when young children, on the threshold of formal education, desperately need linguistic consistency (p.116).

The issue of language in education is clearly very complex and as these authors (ibid) and others, such as Ball, (2011) urge, more in-depth and longitudinal research is needed to establish, more precisely, the factors which impact most acutely on children's learning. Although language has been the topic of heated debate in the literature (see Wolff, 2006; 2011), research could shed light on the possibility that specific aspects of teaching could surmount the perceived obstacles in the way of children learning to read effectively. I want to suggest the possibility that resources and the efforts of role players in the country's education system might be better applied in seeking to ameliorate those factors, which have already been identified in research, which impact negatively on children's reading. Apart from the dire need for addressing the strong link between the socio-economic status of learners and their education progress which Spaul (2011) mentions in his *A preliminary analysis of SACMEQ III South Africa*, he also provides quite a comprehensive list of factors that impact on the mathematics and reading performance of grade 6 learners. School socio-economic status is one of the factors which this author (ibid) mentions as a prominent element in education outcomes. Preschool education and access to reading material is another (ibid). Although teacher subject knowledge does not have a significant impact upon the performance of grade six learners (ibid), teacher knowledge of beginning reading has been shown to have quite a profound effect on learners' early reading success (Moats, 1994; Schuele & Boudreau, 2008).

Although language is a factor in learning it is by no means the only, or the most prominent one. It is my view that it might behove all education decision makers to shift their focus to addressing that which might very well lie at the root of the problem - the dichotomous realities of education in South Africa which Spaul (ibid) suggests: At one end of an education spectrum characterised by vast inequalities, lie schools of affluence, functionality and the capacity to optimise education for learners (ibid). These schools are usually former model C schools with English and/or Afrikaans as language media of instruction. At the other end lie poor schools, often in rural areas - dysfunctional with a deficit of physical and knowledge resources to provide learners with what they need in terms of literacy and mathematics education (ibid).

2.7 CHOOSING A SCHOOL AND/OR A LANGUAGE OF THE CLASSROOM

It is often assumed by decision makers and agents of education that parents want their children to receive their formal education in an official language. Wolff (2011) posits that this is a myth, refuted by evidence to the contrary – most parents would prefer their children to attend a school where the home language is the LoC, but that several perceptions influence their decision. Braam (2004), however, cautions that there is a difference between language choice and language preference. This is explored in the next few paragraphs.

In South Africa, where parents and school governing bodies have been granted considerable agency in choosing the LoC, it seems that parents perceive the early-as-possible exposure to English, propounded by Auerbach (1993), to be best. Reasons for this perception have been explored in research and seem to vary among different groups of people. In a study by De Klerk (2002b), affluent isiXhosa-speaking parents had made a conscious decision to exercise their right to have their children make the language shift from isiXhosa to English (see section 2.4.2). Because of political, economic and educational motivations they want to see their children assimilated into Western culture despite the fact that this is not easy for them and although it would affect a loss of a part of their culture for their children.

Language is not the only criteria according to which parents decide on a particular school for their children, though. In South Africa school choice comprises a complex interplay of influences and factors which are not easy to define (Maile, 2004). However, most people, even from rural communities, set a high value on education (Wolff, 2006). People try their best to access what they perceive as good quality education for their children. This is evident in the choices they make about schools. Often this decision is strongly influenced by perceptions of how quality of education and the level of support are offered to learners and parents by the schools in a particular area (Van der Vyver, 2012a). Thus, in many instances, language is seen as a mere by-product of parents' choice of school for their children. Pragmatics often wins the day over sentiment. The paucity of school books in African languages, the lack of properly educated African teachers, especially in rural areas, and the resultant poor quality of education they deliver, are factors that not only the educated elite are aware of (De Klerk, 2002). Furthermore, a safe school environment is another important factor in parents' perceptions of the suitability of a school for their children (Van der Vyver, 2012a). All people tend to aspire to a better quality of life for their children and the drive to realise

this aspiration is generally the same in parents from low literacy and resource-poor environments and those from more affluent middle class or upper middle class households (De Klerk, 2002; Msila, 2009). Some of the parents' major considerations when choosing a school have been found to be; high pass rates (Msila, 2009), the availability of activities such as sports and basic educational resources and, in the case of at least one former Afrikaans-medium school, the associated reputation that children will be well disciplined there (Evans & Cleghorn, 2014).

2.8 BILINGUALISM IN EDUCATION

The advantages of being proficient in more than one language are well documented (Ouane & Glanz, 2010; Ball, 2011; Marian & Shook, 2012). Educationists such as Ouane and Glanz (2011) suggest that when learners acquire literacy skills in more than one language it allows them to conduct themselves more effectively within a multilingual society where multilingualism could be a factor which could advance the individual's ability to achieve personal goals and take part in leadership structures in a diverse community. Moreover, Wolff (2011) points to the significant body of literature cited by Oskar (1988; 1989) reporting on pedolinguistic and psycholinguistic studies that have been conducted over the previous eight decades suggesting a number of benefits of a child being exposed to more than one language from the earliest stages of development. Apart from it enhancing cognitive and analytical skills and flexibility, the research indicates that bilingualism also increases a child's ability to reflect on the structural properties of the two languages that they are exposed to – which then makes it easier for them to learn a third language. Bilingual children learn to read and write in both languages early on – sometimes by the age of four or five years already.

According to Heugh (2011), some authors, such as Garcia and Baker (1996) and Baker (2002) prefer to refer to additive models of bilingualism as 'strong bilingual models'. This means that the use of the first language as LoC is never interrupted and when the second LoC is taught by a specialist teacher (and in the case of utilizing a dual medium of instruction, as described above) when the first language is primarily used as LoC for at least four or five, but preferably six years. After this period, the use of the second LoC is incrementally increased to constitute up to, but not more than half of the school day or not more than half of the school subjects by the end of schooling. These same authors (ibid.) prefer to apply the term 'weak bilingual models' to subtractive and early exit transitional models.

2.8.1 Additive bilingualism

Additive models of bilingualism aim to add one or more languages to a learner's repertoire and thus to promote a learner's proficiency of his/her home language whilst at the same time facilitating the learning of a second language. This model rests on the assumption that the learner's conduct of his/her first language will develop without being impeded by the addition of the additional language or languages and so create an environment within which both languages or sets of languages can contribute positively to the social and cognitive development of the learner (Nel & Nel, 2012; Ouane & Glanz, 2010).

The implementation of a model of bilingual education can, according to Heugh (2011), be implemented in the following two ways. Either the learner's first language is used as language medium of instruction throughout with the second language taught as a subject, or the first and the second language are used equally as media of instruction throughout the period of schooling. Since the first language is never removed as LOC, the envisaged outcome of this model is a high level of proficiency in both the first and the second language.

Talking about English second language learners, Heugh and Prinsloo (2013) and Nel and Theron (2008), say that helping learners become proficiently bilingual means that, because their proficiency in their mother tongue is well-established, language skills are easily transferred between languages. This could improve academic performance for those learners to such an extent that their second language skills exceed those first language speakers whose conduct of their mother tongue is poor (Heugh & Prinsloo, 2013).

2.8.2 Subtractive bilingualism

The goal of subtractive bilingualism is to expose learners who are second language speakers of the LoC, to that language as soon as possible after a learner starts school and to the exclusion of other languages (Heugh, 2011). This is called a straight-for-second language approach (ibid). In some instances some provision is made for remedial teaching to orientate learners to the LoC but often it happens along, what is known as the submersion model, where children are submerged, as thoroughly as possibly, in the LoC of the school which they attend (ibid). In South Africa, this model promotes learners' development of the second language at the expense of the first (Nel & Nel, 2012; Patterson, 2008).

According to Ball (2010), subtractive bilingualism may impede a learner's social and cognitive development and lead to poor academic progress. Some researchers claim that this model is the cause of the lack of mother tongue proficiency in many learners and that excluding the use of learners' mother tongue by exclusively using a second language as LoC is done at the expense of learners' development of a command over their mother tongue (Keeves & Darmawan, 2007; Heugh, 2007).

2.8.3 Early exit/transition model

The objective of transition models of bilingualism is similar to that of subtractive models: By the time a learner completes his or her schooling he or she will be fluent in the second language. Although learners initially have the home language as LoC, the objective is that through a gradual process they would transition to having the second language as LoC. In terms of how long this transitional period might take for it to be labelled early exit/transition, Heugh (2011) distinguishes between well-resourced education contexts (one to three years) and poorly-resourced education contexts (one to four years).

Most learners in South Africa are taught in their mother tongue from grade one to grade three after which many of them experience a sudden transfer to a LoC of either English or Afrikaans from grade four onwards (Brock-Utne & Holmasdottir, 2004; Nel & Nel, 2012; Nel & Theron, 2008). This transition is thought to have an adverse effect on the academic performance of learners from grade four onward (Pretorius, 2014). This, some authors say, is because by the end of Grade three, many learners have not yet attained sufficient proficiency in their mother tongue to be able to transfer academic concepts into another language (Henning & Dampier, 2012; Pretorius, 2014). This means that their previous exposure to a second language is, at that point, not sufficient to enable them to start learning conceptually in that language (Fleisch, 2008; Brock-Utne and Holmasdottir, 2004).

Reading as a skill is a crucial requirement for, among other human activities, academic progress (Fleisch, 2008; Linnakyla, Malin & Taube, 2004; Howie, Venter & Van Staden, 2008). Referring to learners who attend schools where English is the LoC, Fleisch (2008) says, that at the end of Grade three, learners often do not have adequate reading skills or competence in reading comprehension in their mother tongue, which results in limited reading ability in their LoC. Furthermore, especially at schools where learners transition to English at the beginning of Grade four, educators often lack the levels of proficiency in English required for effective teaching. The combination of poor second

language proficiency of learners and educators at this important juncture of children's education is a concern voiced by authors such as Henning and Dampier (2012) and Pretorius and Machet (2004).

2.8.4 Late-exit/transition model

When the transition from first language to second language as LoC is made later than by the fourth year of the learner's school career, in other words, in South Africa, from grade five onward, it is referred to as late-exit or late transition model (Heugh, 2011). According to Nel and Nel (2012) and Brock-Utne (2007), if the mother tongue is maintained sufficiently as LoC, it is possible for the learner to receive the same benefits as from the additive bilingual model because they would be better able to transfer knowledge from their home language to the LoC.

2.9 FACTORS WHICH INFLUENCE BECOMING PROFICIENT IN A SECOND LANGUAGE

Language proficiency can be defined as the ability to speak, read, write and comprehend a language. Academic language proficiency refers to the ability to speak, read, write and comprehend academic language, which entails content specific vocabulary related to subject-area knowledge and terminology, interpretation and analysis of academic data or text and using and applying complex sentence structures (Jordaan, 2015; August & Shanahan, 2006).

When learners fail to achieve a certain level of academic language proficiency in the LoC, they find it hard to meet the cognitive demands of academic activities (Jordaan, 2015; Fleisch, 2008). This is borne out by the poor performance of South African Grade one learners in literacy in the Annual National Assessments (ANA) in 2011 and 2012 (DBE, 2012). There also seems to be a large gap between the literacy performance of learners who attend schools where their first language is the LoC and those who attend school where a language other than their mother tongue is the LoC (Christie, 2008) with a resultant high dropout rate (Iyamu & Ogiegbaen, 2007; Bell, 2006; Foley, 2004).

According to Fitzgerald (1995), the age at which a learner is expected to acquire a second language impacts significantly on second language learning. However, there seems to be some disagreement about this in the literature (Wolff, 2011). Other factors include the level of motivation of the learner to learn the new language, his or her aptitude for and self-confidence about learning the language as well as the learning

strategies which the learner employs in the process. In the next few paragraphs factors from the home environment and the school environment respectively, which impact on second language acquisition and proficiency, will be discussed.

2.9.1 The impact of the home environment on second language learning

Language and communication skills are first and foremost acquired and shared at home, within the family and its cultural situation (Hart & Risley, 1992). Children's home and social environment therefore plays an important role in their becoming more proficient in a second language. It is easier for parents to support their children's education when the LoC is one the parents or primary care givers are proficient in (Pfleppson, 2011; O'Connor & Geiger, 2009) However, in South Africa, this is often not the case - as is borne out by statistics which show a significant discrepancy between learners' home language and the language medium of instruction of the schools they attend (DBE, 2010). The value which families set on knowledge as a valuable resource in its own right also plays a role in supporting the cultivation of more complex discourse which could facilitate the transition into academic language for children (Snow & Ucelli, 2009).

Apart from some deep rural areas of the country, where most members of the community speak the same language, very few children in the country grow up in homogenous language environments (Henning & Dampier, 2012). Gauteng province is the most linguistically heterogeneous province in South Africa (see section 2.3.1) and children in the urban areas of Gauteng are exposed to various languages within their home environment before they go to school (Aycard, 2010). Taylor (2006) lists home related factors such as reading opportunities at home and doing homework as some of the most prominent issues that could improve learner achievement at school.

Children learn a second language as a result of the environment (Omego, 2014). Sometimes though, educators do not allow the use of the child's mother tongue in the classroom (Omego, 2014). In anticipation of this happening when their children start school and in a bid to advance their children's LoC proficiency, parents often speak the target language at home with their children from a very young age and often to the exclusion of the mother tongue (ibid). This strategy is often applied at the cost of exposure to the language or languages of the child's home environment (Omego, 2014), and because parents are often not proficient in the target language they might cause the same pitfalls as educators who teach in a language they are not fluent in themselves (ibid).

Parents, even those with no knowledge of linguistics and child development, can be valuable resources in their children's acquisition of a second language at school since achieving educational outcomes, specifically with regard to literacy also depends on the support learners receive at home (Herold, 2011). The most important activities to promote the acquisition of oral language in a child are listening activities, language instruction, communication strategies and consistent amplification (Hay & Fielding-Barnsley, 2009, Cole; 2008). Parents can also give educators valuable information about their child and his or her language skills (Hauerwas & Stone, 2000) and about any special language delays that the parent might have become aware of, through observation of the child over time (ibid). Although teachers cannot control the amount of time that a learner is exposed to the target language, teachers and parents should collaborate on and communicate about what could be done at home to enhance the learner's second language acquisition – this forging a home-school partnership to support the child's learning of the LoC.

2.9.2 The effects of schooling

Although the focus of this study is on phonemic awareness development, it is important to keep in mind that for school going children, this skill is situated within conceptually tiered systems of education (see Figure 1.2) and ultimately cannot be separated from second language learning. A myriad of factors can impact upon children's schooling. Hattie (1999) identified 165 258 such effects - many of which could impact upon children's ability to develop phonemic awareness and early literacy. This, according to Christie (2008) applies especially to children in developing countries such as South Africa where the effects of schooling on the general development of children has a more pronounced effect on children's development than in developed countries.

Despite this, and referring to the South African situation, Taylor (2006) estimated that approximately 80% of South African schools were effectively dysfunctional. Moreover, these schools were the ones supposed to serve children from resource poor African communities. Going to school has a positive effect on learners' achievement over time, although this effect is more pronounced at the level of the classroom, while individual teachers have the largest effect on learners' performance. Some of these school-level factors, which are mentioned in the literature by three prominent South African educationists, are listed in Table 2.4.

Table 2.4 School related factors impacting on learning

Author	Factors
Pretorius (2014)	Basic organisational functionality and good governance. Manageable class size. Teacher professionalism. Appropriate authority relations and discipline. Safety and security. Focus on learner needs. Accountability and high expectations.
Christie (2008)	Race and gender discrimination. The value set on home language of learners. Strong leadership with a curriculum focus. Clear goals and high expectations of staff and students. Emphasis on quality of teaching and learning. A supportive school environment. A culture of monitoring and evaluation. Parental involvement and support.
Taylor (2006)	LoC and learners home language are the same. Managing books, stationary, materials. Quality assurance measures. Time management Monitoring assessment of learner progress.

At the level of the classroom and the individual teacher, Hattie (1999) has found the following effects to be most significant: Reinforcement; instructional quality; instructional quantity; direct instruction; remediation and feedback; class environment; bilingual programmes; and; teacher style. Of these, Hattie (ibid) considers feedback to be the most important.

2.9.3 School and learning in a second language

Where schools are under-resourced, and where there is not enough learning material, this lack of resources might be detrimental to learners acquiring new vocabulary and forming new concepts in the LoC (Heugh & Prinsloo, 2013). This is because learning material can help them to gather, process and present information in the classroom (ibid). To enhance their literacy skills in their home language and the LoC, Ball (2009)

says that it is essential that learners have access to adequate learning material. In South Africa there seems to be a parity of learning material, especially in some of the African languages – a parity which has certainly served to entrench English as the most widely used LoC in South Africa (Heugh & Prinsloo, 2013). It is heartening that some effort seems to be made toward addressing this – for example, the DBE has produced graded readers for all 11 home languages and also for the IIAL (McKay, personal communication, 2015). The South African Institute for Distance Education (SAIDE) has developed a number of online readers and The Molteno Institute for Language and Literacy has recently developed a large series of graded readers (ibid).

Unfortunately, in some classrooms the use of their home language by learners is forbidden (Dar, 2013) by classroom or school rules. Since this regulation of language use creates an environment within which the child learns that the sooner he or she acquires the target language, the better, it often dissuades the child to use the home language and motivates him or her (and parents) to use the target language outside of the situation of the school (ibid). Clear tension exists in the literature between the perceived benefits of learning in the chosen LoC and the implications this has for the maintenance of the learner's home language.

Educator proficiency in the LoC has been shown to advance the development of language skills in learners (Howie, Venter & Van Staden, 2008). Some researchers assert however, that educators find it difficult to explain concepts and to offer academic support when they are second language users of the LoC. Especially with regard to English, evidence shows that phonological and spelling errors were frequently made by learners when educators used sound and intonation erroneously, pronounced words incorrectly, and modelled incorrect spelling (Nel & Müller, 2010). Furthermore, educators need sound knowledge of sounds, letters and letter combinations, and a lack of knowledge could lead to unreliable assessment of learners' knowledge of these aspects of language (Howie et al., 2008). Teacher absenteeism, erroneous interpretation of the curriculum by teachers, and ineffective teaching of reading by teachers are, according to Taylor (2006), detrimental to children's progress in literacy.

South African teachers often lack knowledge on how to link language teaching and cognition in the second language classroom (Abel, 2003; Taylor, 2006). This is because teachers are not explicitly trained to make this link and results in many learners not acquiring the cognitive skills and abilities needed for academic progress (Abel, 1997; Abel & Rhodes, 2001). An example of this is when grade one teachers found it difficult to explain how verbs such as *identify*, *explain*, *describe*, *compare*, *categorise*, *judge*,

predict, and *create* could be taught in the classroom and modelled to learners (Cognition in Education Reference Group, 2000). The importance of educator knowledge of specific aspects of linguistics, and of how these could be taught to the greatest effect will be examined in chapter three (see. 3.9).

2.9.4 Code switching and code mixing

After Henning (2012), I will use the term ‘code-switching’ in this discussion to include the notion of ‘code-mixing’ as used by Muysken (2001, p.1). Therefore, here, it will indicate the use of the linguistic strategy of alternating between a first and a second language and of inserting words or phrases of one language into another. It will also indicate “congruent lexicalisation” (Muysken 1997, p. 362) – making use of bilingual strategies by filling in lexical gaps in the secondary language with elements of the first. Congruent lexicalisation is often used when the first and secondary languages have similar grammatical structures (ibid).

In South African classrooms children often speak a diverse range of languages as first language (Theron & Nel, 2005). In an attempt to facilitate a better understanding of concepts, especially African language speaking educators teaching in English, might switch between languages regularly throughout the day (Probyn, 2009; Arthur & Martin, 2006; Brock-Utne, 2005). Educators may use many short switches between the LoC and the learners’ mother tongue or switch over to the mother tongue for a longer period of time in order to explain a concept (Probyn, 2009; Arthur & Martin, 2006; Brock-Utne, 2005). Research suggests that in classrooms where the LoC is English, educators often make use of code-switching when their command of English is limited, or when they lack the necessary vocabulary and when they are not sure of the correct use of grammar in that language (Probyn, 2009).

There are different views on the usefulness and desirability of code switching in the classroom. Some scholars deem it a useful tool in promoting communication and discussions between learners and educators (Ferguson, 2009; Setati, 2007). This is because educators’ use of code-switching helps learners engage in problem solving with more understanding when it is employed to explain new concepts (ibid). It has furthermore been suggested that code-switching offers learners some psychological benefit in that it appears that they experience less anxiety when they are allowed to use code switching in their discussions, which in turn seems to increase their self confidence and enhance their positive experience of the LoC (Ríos & Campos, 2013), thus

enhancing their academic achievement (Benson & Kosonen, 2013; Brock-Utne, 2005; 2013).

To the contrary, Cummins (2005) views code-switching as a largely ineffectual language activity. This is supported by Littlewood and Yu (2009) as well as by Ellis and Shintani (2013) who see it as limiting the frequency and quality of interaction in the LoC. Littlewood and Yu (ibid) suggest that when learners too easily resort to speaking in their first language it limits opportunities to practice communicating in English. This practice is called 'safe talk' by authors such as Rubagumaya (2003) and is deemed counter-productive in providing learners with the knowledge of their LoC that they need for academic progress and assessment (Fleisch, 2008). According to Setati, Adler, Reed and Bapoo (2002), code-switching does not always have the desired effect. For instance, although it causes learners to engage in more elaborate classroom talk, this practice might have an adverse effect on learners' ability to produce academic writing in their target language (ibid). Henning (2012, p.70) puts forth a strong argument for a "stable pedagogy" - one which could support learners' academic language development and which enables "semantically and semiotically unambiguous and systematic classroom communication" (ibid), especially in the foundation phase.

According to Cummins (2005) and Carless (2007), a clear separation between the LoC and the learners' first language could prevent cross-contamination. This would allow for the development of a new linguistic system and it would be to the benefit of learners to have minimal reference to their mother tongue in the classroom. This, these authors affirm would prevent interference from their mother tongue, which is believed to inhibit the language learning process.

2.10 CONCLUSION

It is clear from this overview of some of the available literature on the topic that the social, political and knowledge issues which influence language in education in South Africa are complex. Mother tongue education should therefore not be viewed as a universal nostrum to be applied to the current affliction of poor literacy performance of learners within different situations of education in the country. The possibility that mother tongue as language medium of instruction might be at the root of this problem has been boldly posed and educationists cannot ignore that this might indeed be the case. It seems that we have not yet come to a conclusive answer to the question of what approach to language in education would best serve the majority of our learners.

However, apart from some much needed research in this field - to which this inquiry hopes to make a contribution, a sound knowledge base of language in education seems essential. Knowledge, specifically of those components of language development and linguistics that pertain to second language acquisition and early literacy, not in general, but specifically within the South African social and education context, could enhance the efforts of education policy and curriculum designers, as well as educators and parents towards ameliorating the current literacy crisis afflicting learners in the formal education sector in the country. In the next chapter phonemic awareness development, together with those aspects of applied linguistics that bear specific relevance to language and literacy skills development, will be investigated.

CHAPTER 3: PERSPECTIVES ON THE GENESIS OF LITERACY DEVELOPMENT

3.1 INTRODUCTION

The focus of this study is on the phonemic awareness development of a group of children who are required to learn, communicate and learn to read in a second language. As outlined in the conceptual framework, which was offered at the beginning of the previous chapter (see Figure 2.1) in this second part of the review of some of the literature on the topic, the focus will be on those aspects of linguistics which form part of the corpus of knowledge about early literacy development, although other language skills such as speaking, listening and writing will be included as well. As Snow and Uccelli (2008) suggest, it is essential to understand that early language skills are important precursors to the achievement of academic language skills which require the learner to learn from text.

This chapter will offer interpretations from the literature on the role of phonemic awareness in reading acquisition. Then, because learning to read in a second language is an integral part of the construct of this study (as discussed in chapter 2), the views of experts in the field of applied educational linguistics on how children learn to decode words in a second language, will be considered. Furthermore, some perspectives on the role of the child's home environment as well as the role of the school, the teacher and classroom instruction in promoting phonemic awareness development will be discussed.

There is considerable support in the literature for the premise that phonemic awareness does not develop to any significant extent without explicit instruction and that it comes about as an effect of learning to read (Wimmer, Landerl, Linortner & Hummer, 1991; Perfetti, Beck, Bell, & Hughes, 1987). Because they offer the most comprehensive framework from whence to explore the subjects of phonological development (of which phonemic awareness development forms a part), and of early literacy learning and learning to read in a second language, this investigation will be anchored by Ziegler and Goswami's (2005) theory of psycholinguistic grain size (see section 3.8.4). In addition to this framework, some reflections from the field of educational neuroscience will be used to elucidate some aspects of linguistics and early literacy. On this topic, Hruby and Goswami (2011) caution that it is still too early to generalise the findings from neuro-

scientific research directly to instructional methodologies for early literacy. However, these authors (ibid) also mention some important findings from research on the biological basis of basic speech processes in the brain – information which is enhancing the understanding of how sound is coded at the neural level and which indicates the importance of the development of awareness of certain phonological units prior to reading.

Together with Henning and Ragpot (2014), I want to propose that some empirical knowledge of how the human brain learns to read is crucial, not only for education researchers and policy makers but especially for those important scholars at the very crux of education - the teachers - who facilitate children's early literacy learning and academic language development. As Vygotsky (1929, quoted in Van der Veer and Valsiner, 1991, p.320) prognosticated nearly nine decades ago:

History, changing the human type, depends on the cortex; the new socialist man will be created through the cortex; upbringing is, in general, an influence upon the cortex.

Although there is a wealth of literature available on phonological awareness development in English, not a lot of research has been done on phonological awareness development in African languages (Pretorius & Mampuru, 2007; Diemer, Van der Merwe & De Vos, 2015) or of phonological development in Afrikaans. In the search for literature to inform this study, no relevant literature could be found on cross language transfer between Setswana and Afrikaans. For that reason some research on cross language relationships of phonological and phonemic awareness skills between other languages will be discussed here. Because of the relatively close relationship between Dutch and Afrikaans, where possible, reference will be made to studies of Dutch speaking children.

3.2 PSYCHOLINGUISTIC GRAIN SIZE THEORY OF READING

Psycholinguistic grain size theory was developed by Ziegler and Goswami (2005). Utilizing the citations, research and the descriptions of the different elements of the theory which these authors use in their article, I will first of all clarify some of the concepts used by these authors after which I will highlight the salient points of their theory.

According to Rayner, Foorman, Perfetti, Petetsky and Seidenberg (2001), reading success depends on the resolution of three problems that pose challenges to the

beginning reader. Ziegler and Goswami (2005) state that the success with which an individual learns to read depends on how effectively these problems can be overcome.

The first of these problems is the issue of availability. Although some phonological units, such as rhyme are available to the child before reading starts, others, in particular phonemes, are not that readily available. This means that the beginner reader can only learn that phonemes exist and that they map onto certain aspects of the orthography once reading instruction commences (Ziegler & Goswami, 2005).

Secondly, there is the issue of consistency (Ziegler and Goswami, 2005). The consistency problem manifests in two characteristics displayed by some orthographies. The first of these is that some orthographic units can be pronounced in multiple ways, such as the 'a' in English which can be variably pronounced in, for example, the words 'car', 'ball' and 'make' and 'apple' and that some phonological units have multiple graphemic representations (e.g., in English /f/ can be represented by the graphemes 'f', 'ph', 'gh' and 'ff'). This inconsistency is also known as 'many-to-many' or 'homomorphic mappings' (Jacobs, Rey & Ziegler 1998, in Grainger and Jacobs 2013). This inconsistency appears in sharp contrast to the 'closer to one-to-one' or 'isomorphic mappings' (ibid) of more transparent orthographies. Because these inconsistencies exist to varying degrees across different languages and orthographic elements, it seems probable that they will cause variation in literacy development for readers of different languages (Ziegler & Goswami, 2005).

Finally, there is the problem of granularity. This refers to the learning load brought about when the access to phonological units favours larger grain sizes over smaller units. For example, the number of units within an alphabetic language decreases drastically from the level of the word to the syllable, then to the rime, then the grapheme, and finally the letter. This means that in more transparent orthographies, where there is a strong correspondence between phoneme and grapheme, children only need to learn the relatively few sounds and their corresponding graphemic representations to be able to read (see Figure 3.1).

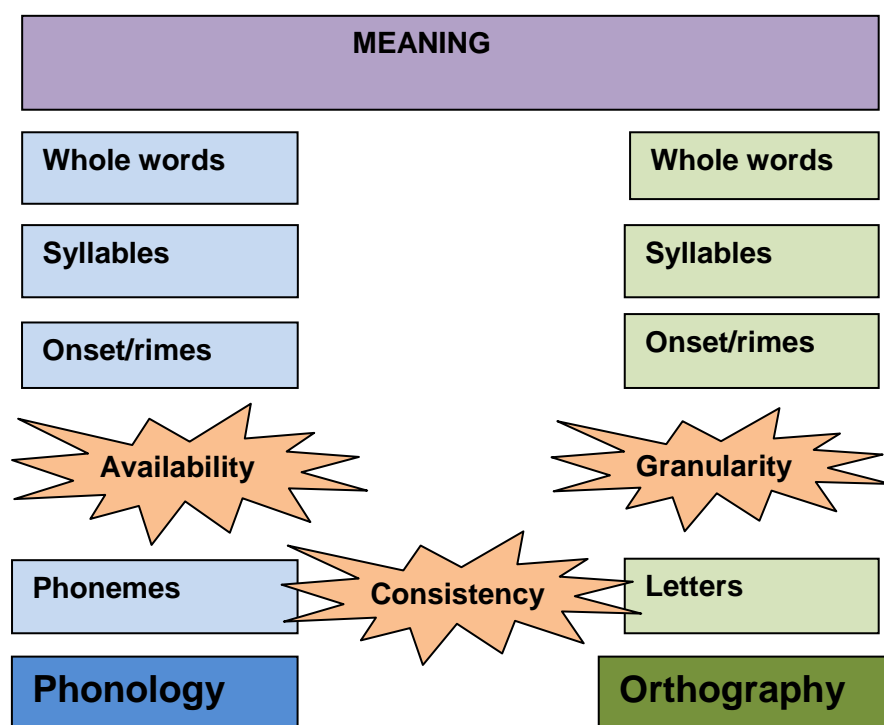


Figure 3.1 A schematic representation of the three main problems of reading, namely that of availability, granularity and consistency. After Ziegler and Goswami (2005, p.4)

On the topic of the relationship between consistency and granularity Ziegler and Goswami, (2005) cite Treiman, Mullenix, Bijeljac-Babic and Richmond-Welty (1995) to point out that inconsistency is more pronounced at smaller grain sizes than for larger ones, especially in English. In more opaque orthographies smaller grain sizes are not that reliable. This means that children might have to implement different reading strategies for the different sizes of phonological units, which might take longer than learning to use a single strategy. It seems that children who learn to read in more opaque orthographies tend to use strategies which afford them access to larger grain sizes. There is evidence that French and English speaking children benefit from implementing rhyme analogy as a reading strategy. This poses the possibility of redundancy when reading instructors of more transparent orthographies make use of, for example, rhyme analogies in preparing learners for reading. That begs the question of whether, in the case of transparent orthographies, instruction time would not be spent more effectively for these children if the focus were more exclusively on decoding of grapheme-phoneme correspondences, in other words of smaller grain sizes.

Children, who are learning to read in more opaque orthographies such as English, seem to benefit from separating words that require decoding at different levels of phonological representation into separate groups based on the level of phonological representation (Goswami, Ziegler, Dalton & Schneider, 2003). In other words, when very regular words, that can be recoded using the phonological route, are separated from those that require recoding of larger units it helps these children to focus at a particular level of phonological presentation. This seems to increase their accuracy in reading words with larger units. In one particular study of English and German children (*ibid*) where the blocking off effect was carefully matched to German words with larger grain size units, the German children seemed to effectively make use of the strategy to decode at smaller grain size units and scored higher on accuracy overall than their English counterparts.

In addition to the two strategies described above, namely that of recoding words that are orthographically irregular at larger units of phonological representation such as onset-rime and syllable and recoding words that display a close correspondence between grapheme and phoneme by using recoding skills of small grain sizes, there is a third possible strategy that has been tested. In a study of English and German children it was found that English children learnt to recognise whole words – a strategy that enabled them to read words characterised by significant inconsistencies in terms of phonological representation, at the lexical rather than the sub-lexical level (Goswami, Ziegler, Dalton & Schneider, 2001).

It would seem that since readers of more opaque orthographies cannot rely on the direct symbol-to-sound recoding process, their vocabulary and phonological awareness play a significant role in their reading development. This is because it enables them to guess at words by drawing upon those words and their corresponding sounds that they already have stored in their mental lexicons. This predicts a more significant relationship between vocabulary and reading success for children learning to read in less regular orthographies. Indeed, evidence supporting this notion has been found in a study of children (who are otherwise well matched in terms of curriculum, instruction and geographical area) who are learning to read in English and in Welsh, which is a much shallower orthography than English (Hanley, Masterson, Spencer & Evans, 2004; Spencer & Hanley, 2003).

Considering the question as to which instructional model would be the most effective for successful early literacy acquisition Rayner, Foorman, Perfetti, Pesetsky & Seidenberg (2001) say that in more opaque orthographies all three approaches would add value to

the reading success of the beginner reader but that in more transparent orthographies it would seem that instruction in recoding phonological representations at a smaller grain size seems sufficient.

The psycholinguistic grain size theory takes all of the aspects of early reading covered here into account when it states that in order to understand how readers become skilled it is crucial to understand the process of reading which hinges upon phonological awareness. Different alphabetic languages are represented in writing at varying orthographic depth which requires readers to learn different strategies to recode phonological representations which manifest in different grain sizes for different languages. Reading strategies for different languages are therefore affected by different developmental parameters and limitations.

Interestingly, findings from research in the field of neuro-linguistics echo this theory of psycholinguistic grain size. In the next section I will offer some of the insights from such research, gleaned by a leading scientist in the field.

3.2.1 'Grain size' as reflected in neuro-linguistic research

Stanislas Dehaene is a pioneering scientist and full professor of the chair of Experimental Cognitive Psychology at the Collège de France in Paris. Together with neurologist Laurent Cohen, he has demonstrated the prominent role of the left occipito-temporal region, also known as the visual word form area, in word recognition. This area seems to some extent selective to recognising written words from other visual input such as line drawings (Dehaene & Cohen, 2011).

Orthographies aim to convey meaning, yet vary in the accuracy with which they represent sound. Speaking to this conundrum, Dehaene (2009 p.38 - 40) proposes a neural network model based on research which was conducted on a number of patients who had suffered brain lesions within different parts of the brain and who had then, as a consequence, manifested certain psychological characteristics with regards to word recognition and reading. Evidence from this research suggests that there are at least two parallel neuronal pathways which mutually support each other during reading (p.38).

One of these pathways gets activated when a reader is exposed to new words for the first time, or words which are very rare, or words which reflect speech sounds by means of a regular grapheme-phoneme correspondence. In such a case, Dehaene (ibid) suggests, word processing happens along a 'phonological route'. This process involves

first of all, the deciphering of the letter string, then the conversion thereof to speech sounds, and lastly, an attempt to extract possible meaning from the sound pattern (ibid). This process corresponds to the reading strategy for regular orthographies suggested by Ziegler and Goswami (2005) described in section 3.2.

Another processing route is activated when the reader encounters words that are very familiar, or a word of which the pronunciation cannot be easily gleaned from deciphering the letter string (ibid). The deciphering process takes place along a deeper route by first extracting the word's identity by deciphering it at the lexical level and then using this information to access the word's pronunciation (ibid). This corresponds to the strategy which entails the decoding of larger grain sizes suggested by Ziegler and Goswami (2005) and described in section 3.2 above. Figure 3.2 offers a schematic representation of the different parallel processing routes.

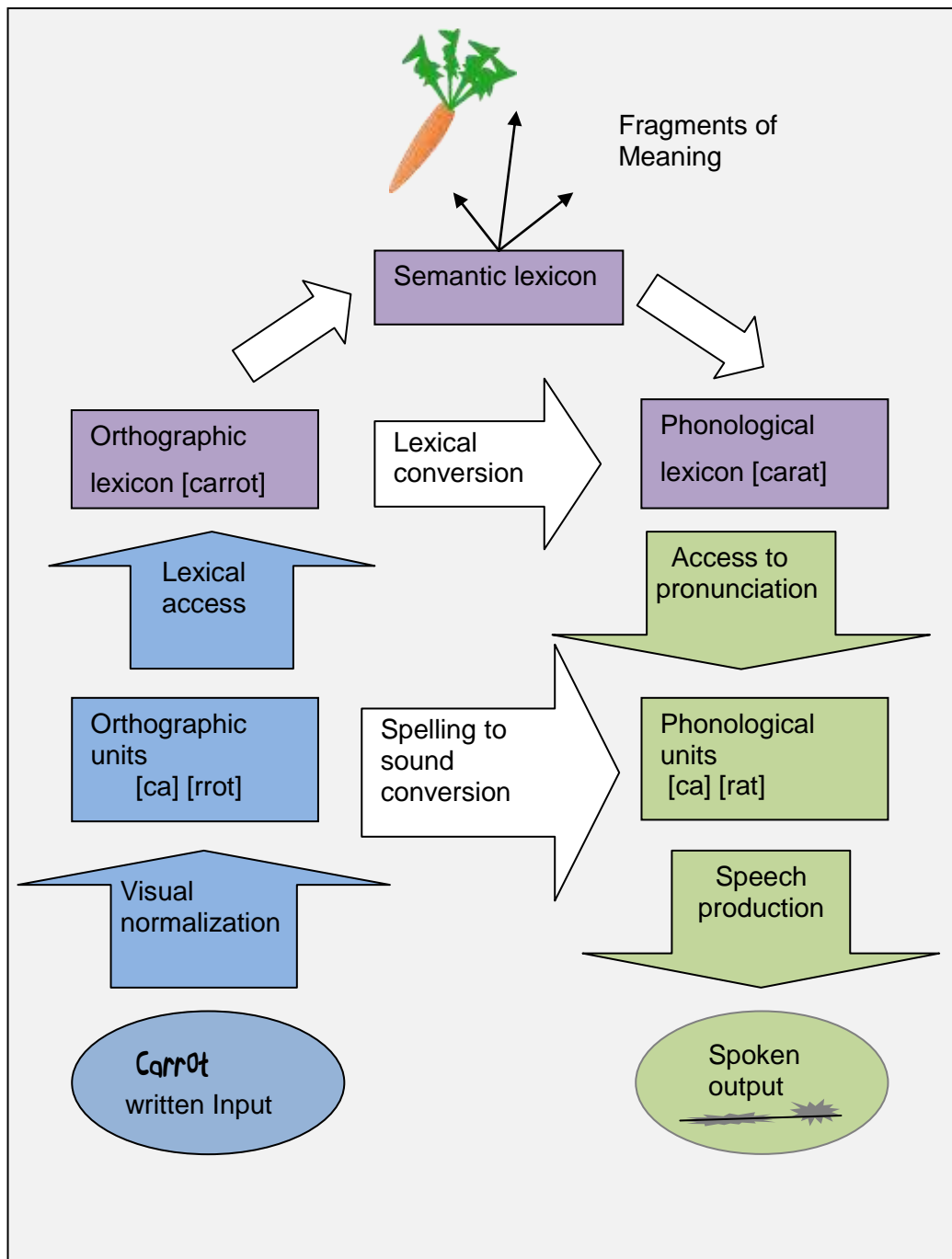


Figure 3.2 Parallel word reading pathways. After Dehaene (2009, p.39)

According to Dehaene (2009), neither of these conceptual pathways, by themselves, gives the reader access to the decoding of all words. The two seem always to be working, to varying degrees, in tandem. In young readers the cooperation between the two routes might be poorly coordinated. Children who rely mainly on the lexical route often pick a word meaning more or less the same than the one they are reading – for example, they would read ‘house’ as ‘home’. Those utilising mainly the phonological

route sound out the word strings in a sentence one by one but often struggle to extract the meaning of the combined sounds (ibid).

In order to access either the sounds or the meaning of a word, Dehaene (2009, p.41) suggests the concept of multiple mental lexicons (see Figure 3.2), within which information is stored for possible retrieval. Some of these mental lexicons, which he refers to as 'orthographic memory' would hold the 'mapping' of graphemes and their corresponding phonemes, while others might contain hierarchical patterns arranged conceptually according to the differing size of lexical unit (i.e., letters; graphemes; syllables; morphemes). Yet another of these mental 'dictionaries' would hold the vast number of familiar words for direct retrieval of their meaning.

Using the English word 'carrot' as example, Dehaene (2009, p.41- 42) uses the image of a reference library with mental dictionaries which open up in sequence to yield specific information about what we read. For example, within the orthographic memories, the entry for the word 'carrot' could be [ca] + [rrot]; whilst in another one of these orthographic memories, the sounds of the word would be stored as /carat/. Within a conceptual lexicon containing grammatical information the word would be stored as a noun, with a regular plural form etc. The meaning of the word is then stored in a semantic memory – 'carrot': An edible vegetable with a certain shape and colour, etc. Dehaene describes the specific areas of the brain that are utilised to perform the specific processes involved in the task of reading and the neuronal processes involved in these operations (see Dehaene, 2009, p. 107 – 113). For the sake of brevity, these will not be discussed here. Instead, since phonemes lie at the crux of this study, the next few paragraphs will focus on what this author says about the conversion of written symbols to phonemes.

Speech sound analysis occurs to a significant extent in the superior areas of the left temporal lobe although the regions of the left inferior prefrontal and pre-central cortices which play a role in articulation are also involved, but to a lesser extent (ibid. p. 107). It is in the left superior temporal lobe where visual graphemes and spoken sound meet. Whereas a large area of this region responds to the sight of a written symbol, only a small sub-region – the planum temporale – respond with increased brain activity to compatible letters and sounds. A conflict between grapheme and phoneme causes a decrease in brain activity. As reading becomes more fluent this area of the brain learns to automatically convert graphemes to their corresponding sounds (ibid. p.109).

Finally, Dehaene (ibid) cautions that although it represents a useful conceptualisation, the bi-route model of reading might be oversimplified and that there are probably 'multiple parallel paths' (p.41) along which reading operations take place.

3.3 PHONOLOGICAL PROCESSING

Phonological processing is the ability to use the sound structure of speech to process oral and written language (Wagner & Torgesson, 1987; Brady 1991). Three interrelated phonological processing skills have been identified by Wagner and Torgeson (1987) namely, phonological awareness, phonological memory, and the retrieval of phonological representations from the lexicon - also called rapid naming or RAN (ibid). Although these three functions are interrelated and correlated with one another they are three distinct abilities which play a significant role in literacy acquisition and as such, impact upon early literacy instruction (Troia, 2004). Of the three, phonological awareness has been shown to be the one most strongly influencing literacy (Anthony & Francis, 2005).

3.3.1 Phonological processing in bilingual people

Chaippe, Siegel and Gottardo (2002) found that children from different language backgrounds develop literacy skills in a similar way and that phonological processing plays an important role in early literacy learning regardless of the alphabetical language. Based on these findings it has been suggested that phonological processing and reading might be acquired according to a universal model (Cummins, 1991). In contrast to these findings, Johnson and Lancaster (1998), who investigated the sound production of a Norwegian and English bilingual child from birth onward, found that the two languages were not treated as a single language system but instead that two separate and opposing phonological systems developed side by side. Similar results were obtained from various other studies, for example of a Spanish-English bilingual child (Schnitzer & Krasinsky, 1996), an Italian-English bilingual child and two Cantonese-English bilingual children (Holm & Dodd, 1999). In the case of the two Cantonese-English children it appeared that the two phonological systems which each of the children developed were acquired along a similar trajectory in comparison to that which monolingual children would follow, although some error patterns normal to Cantonese-English bilingualism appeared in the speech of both children.

Also arguing contrary to the view that phonological development follows the same pattern regardless of language, Ziegler and Goswami (2005) pose that phonological development differs across languages before literacy commences. The majority of studies focusing on cross-language phonological skills have been on European languages. The findings of these studies indicate that phonological awareness skills in the child's first language predict reading performance in the second language. Very little research has been done on how children who are speakers of African languages use their phonological awareness skills to acquire the sounds of a target language which does not belong to the Bantu family of languages (Lekgoko & Winsel, 2008; De Vos, Van der Merwe & Van der Mescht, 2014).

Lekgoko and Winsel (*ibid*), conducted a study on the phonological awareness of Setswana speaking children in Botswana learning to read in English and Setswana. These researchers (*ibid*) cite authors such as Geva and Siegel (2000), Lafrance and Gottardo, (2005), Wang and Geva (2003) and Wade-Woolley and Geva (2000) in their argument that orthographic depth might play a significant role in the phonological processing and reading skills in a second language. Together with Goswami (1999b) these researchers posit that the extent to which linguistic units such as syllables and phonemes are prominent characteristics of a spoken language, influences the way the young reader maps units of speech onto graphemes.

A study by Anthony, Williams, McDonald, and Francis (2007) investigated the relationship between the latent phonological processing skills and early literacy skills of a group of pre-school learners (3 – 5 years old) who had been identified as being at risk of encountering difficulties in learning to read. This study is particularly relevant to the current study since the children came from resource-poor backgrounds. First of all, that inquiry found that each of the phonological processing skills stood separately from general cognitive ability but were correlated in young learners with the level of skills being different in older pre-school children. Also, even after controlling for general cognitive ability, skills of emergent literacy were strongly related to phonological processing ability and children's early literacy skills were influenced only indirectly by cognitive ability and via phonological processing (*ibid*, p. 134-135). This study confirmed earlier research cited by Wessels (2011) on the positive and dependent relationship between difficulties in learning to read and phonological processing skills difficulties (Stanovich, 1988; Stanovich & Siegel, 1994; Torgesen, 1998).

In the next section delays in phonological processing will be discussed briefly.

3.3.2 Delays in phonological processing

When children suffer a phonological delay it may cause the sound system to develop at a slower rate than normal, causing them to produce speech more typical of a younger child and requiring more time in which to process auditory information (Rvachew, Nowak, & Cloutier, 2004). Phonological delays are most often due to a delay in one of the three phonological processes namely phonological awareness, phonological memory and retrieval of phonological representations from the lexicon - also called rapid naming or RAN (Wagner and Torgeson, 1987) - and not because of any cognitive delays (ibid). Learners with delays in phonological processing find it hard to perform various phonological awareness tasks because they can't store a series of sounds in their short term memory (Carrol & Snowling, 2003).

3.3.3 Phonological awareness

Phonology is the study of patterns of basic speech units and the pronunciation thereof within the accepted rules of a specific language - ranging from the smallest units, namely phonemes, to the largest, namely words (Yopp & Yopp, 2000). Gillon (2004) views phonological awareness as the most important of the five metalinguistic skills listed by the American Speech-language-hearing Association (ASHA, 2010). The other four metalinguistic skills are morphological awareness, pragmatic awareness, semantic awareness and syntactic awareness.

Phonological awareness constitutes an umbrella term which includes conceptual skills such as the ability to distinguish words in a sentence, to count the number of syllables in a word, to identify rhyming words, and, to be able to distinguish the onset and rime of a word (in languages such as English and Dutch), or the onset-vowel (in languages such as Japanese (Konza, 2011). Phonemic awareness, which includes the skills of matching, identification, blending, segmentation and manipulation (Nel, 2011)²⁴ forms a sub-set of phonological awareness. This relationship between phonemic awareness and other phonological awareness skills is depicted in Figure 3.3.

²⁴ Despite differing views on which particular skills constitute phonemic awareness I make use of Nel's (2011) list as it appears in her assessment of South African student teacher reading literacy and teaching.

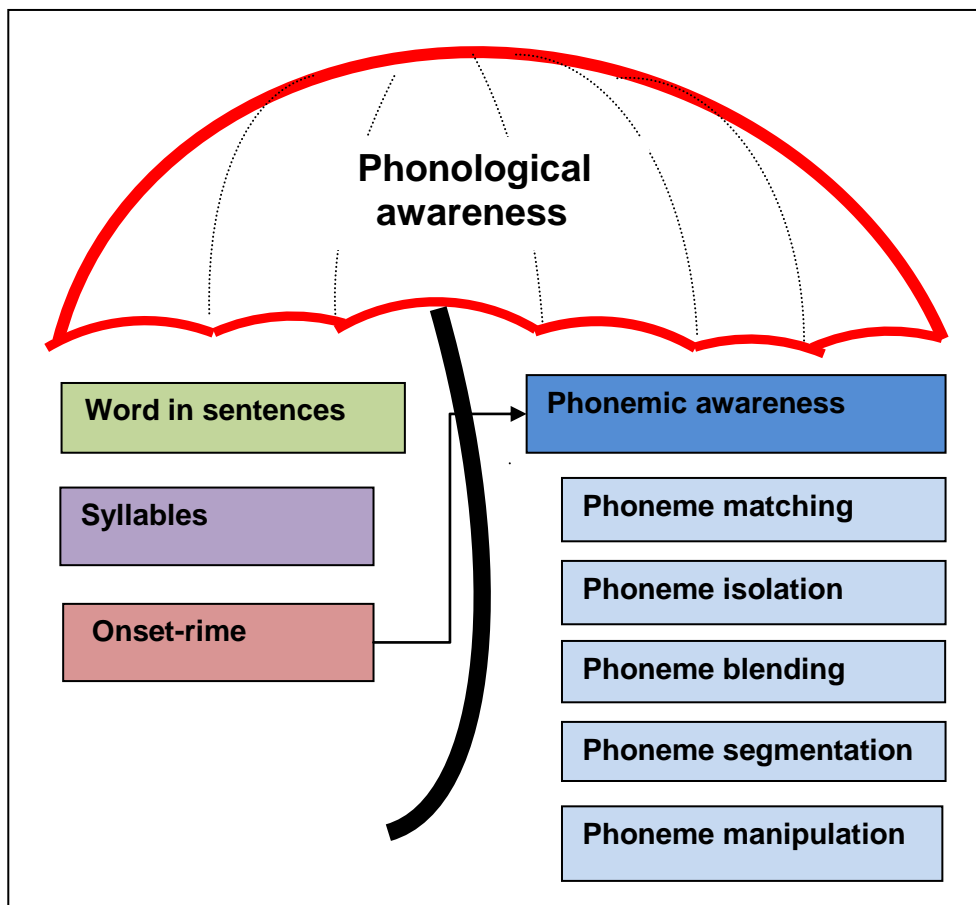


Figure 3.3 Phonemic awareness as a component of phonological awareness.
Adapted from Lane and First (2007).

There is some discord in the literature on the overall definition of phonological awareness (Geudens, 2006; Ziegler & Goswami, 2005). According to Morais (2003), this ambiguity complicates the task of articulating a theoretical framework. While some define it as the ability to manipulate the smallest individual segments of speech, that is, phonemes (Geudens, 2006), others describe it as the ability to manipulate, segment, blend, delete and change the order of any size speech-sound (Goswami & Bryant, 1990).

Speaking to the term 'awareness', Stanovich (2000) claims that it implies the idea of 'consciousness' and suggests that the term 'phonological sensitivity' should be used instead. This, Stanovich proposes, would depict the various phonological skills along a continuum ranging from shallow sensitivity (of large phonological units) to deep sensitivity (of small phonological units). Other researchers such as Hulme, Hatcher, Nation, Brown, Adams and Stuart (2002) suggest that the single term 'phonological awareness' be replaced with the terms 'implicit awareness' (or implicit sensitivity) and

'explicit awareness' (or explicit sensitivity). Opposing this definition, Geudens (2003), Geudens, Sandra and Martensen (2005) and Geudens (2010) argue that although phonological awareness tasks may vary in terms of difficulty or level of cognition required to perform them, an operation of identifying, comparing, separating, combining or generating is a basic requirement, and therefore learners still need to have an 'awareness' of the units of sounds.

Anthony and Francis (2005) argue that significant evidence from research indicates that:

...phonological awareness is heterotypically continuous. That is, phonological awareness is a single, unified ability during the preschool and early elementary school years that manifests itself in different skills throughout a person's development (p.256).

Although the position of this study on what constitutes phonological awareness is broadly in concord with that of Anthony and Francis (2007), I posit that at a certain level, phonemic awareness does stand separate from the other phonological skills. This is because, as Ziegler and Goswami (2005) point out, whereas awareness of larger phonological units comes about naturally in the development of language in typically developing children, the development of phonemic awareness is not dependent on age – it is a set of skills which only manifests to a significant extent once reading instruction begins. For the purposes of this study, clearly, this distinction needs to be made.

3.3.3.1 Syllables

Syllables are formed when consonants and vowels are combined, and in the English language, syllables have a certain structure of sonority that peaks with the vowel. However, As De Vos, van der Merwe and van der Mescht (2014) caution, in African languages words are more likely to be multisyllabic with a more complex morphological structure than of those in English (see section 3.9.1) Therefore, a clause made up of monosyllabic words, such as 'the cat sat on the mat' might not seem as easy for the speaker of an African language (ibid) or have the same psychological relevance (Arrow, 2007) than it does for English speaking children. This difference in language structure could impact negatively on word recognition and automaticity of children who have an African language as first language and who are learning to read in a language with a different syllabic structure, such as Afrikaans.

3.3.3.2 Onset-rime

Phonemes appear within syllables in a hierarchical syllable structure. A simple example of such a structure can be seen in Figure 3.4A. The (English) syllable 'map' appears at the top of the hierarchy, with directly below it, the onset 'm' consisting of a single phoneme /m/ and the rime 'ap', which consists of two phonemes – the vowel phoneme /o/, at the peak of the syllable and the consonant phoneme /p/, which is labelled the coda. When a single consonant or cluster of consonants appear before a vowel in speech it is termed the onset, while any consonant or consonant cluster that appears after the vowel is termed the coda (Ziegler & Goswami, 2005).

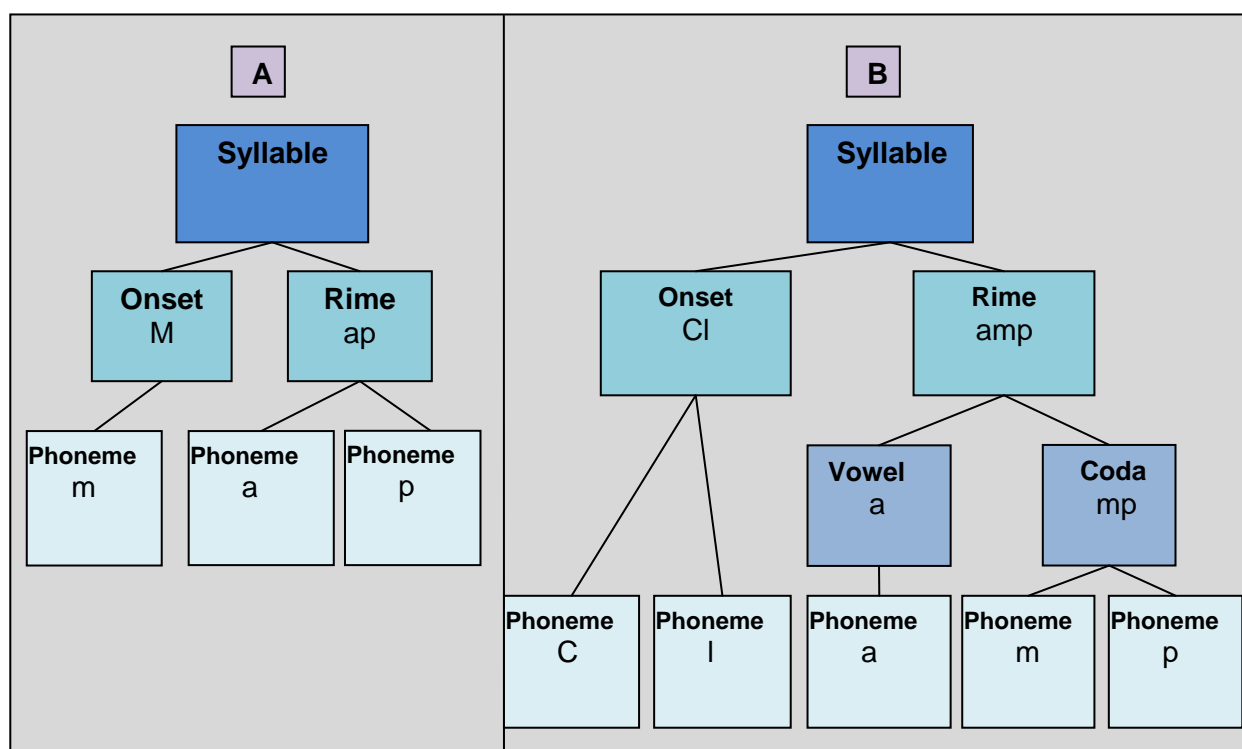


Figure 3.4 Hierarchical syllable structures. Adapted from Ziegler & Goswami (2005, p. 4)

Figure 3.4B shows a more complex hierarchical syllable structure which utilizes all possible levels of the syllable. The word 'clamp' appears at the top of the hierarchy as the syllable. At the next level appear the onset 'cl' and the rime 'amp' – consisting of the vowel 'a' and the coda 'mp'. At the next level both the onset and the rime are broken down to their constituent phonemes. Note that although in English a certain combination of consonants and vowels would be acceptable as either the onset or the rime; this might not be the case for an African language like Setswana. Whereas English (and

Dutch) speaking children might fare better at isolating the first sound of the onset when it is a stand-alone consonant than when it forms part of a consonant cluster (Bertelson, de Gelder & van Zon, 1997), this might not be the case for speakers of other languages.

3.4 PHONEMIC AWARENESS

Fundamentally, speech is made up of a sequence of irregular waves of acoustic energy (Windsor & Pearson, 1992; Tiwari & Tiwari, 2012). At the very next level of speech, are phones, or speech sounds. Although the distinction is not generally detected in normal, everyday speech, technically, the /p/ in pen and the /p/ in 'stop' are different phones (Windsor & Pearson, 1992). A phoneme in any language can therefore be said to be made up of a group of phones that the speakers of that particular language deem to variations of the same sound (Balmuth, 1982).

Phonemes are contrastive sounds of a language, but at the same time also abstract non-meaningful elements thereof (Clark & Yallop, 1990). By making use of a spectrograph - a device used to analyse sound and depict it graphically – this abstract nature of phonemes becomes clear. The graphics rendered by the spectrograph do not show any natural sound segments that correspond to specific letters of the alphabet. As put forth by Frith (1978, p.279), phonemes can therefore be regarded only as types of sound, not as actual sounds. In other words, as an abstraction with no “context dependent variation” such as which occurs in normal speech (ibid). The spectrograph helped earlier researchers understand the complexity of the task faced by the beginning reader and writer of an alphabetic system to perform, for example, phoneme segmentation (Liberman, 1971). Humans can process spoken language at a rate of 10 to 20 phonemes per second, which is also the rate at which phonemes can be articulated (Liberman & Liberman, 1990). Because of this rate and the co-articulation of phonemes during word production it is not easy to parse normal speech into its phonemic units (Liberman, 1971). This complexity impacts especially upon children learning to read in more opaque orthographies, such as English, which does not have one-to-one sound-to-letter mapping (Tangel & Blachman, 1992).

Individuals with phonemic awareness are able to notice and manipulate these smallest parts of speech (Shaywitz, 2003; Zhang & McBride-Chang, 2010; Yopp & Yopp, 2000). Going down the list of phonemic awareness skills, which Nel (2011) presents the different phonemic awareness skills can be explained as follows: Phoneme matching refers to the ability to match the allophones in different words, such as being able to

notice alliteration. Phoneme isolation indicates the ability to isolate a single phoneme, such as the first sound, from other sounds in a word. Blending phonemes refers to the capacity to link different phonemes together in order to achieve the usual pronunciation of words. Phoneme segmentation means that one can deconstruct a word into its individual sounds. The most difficult phonemic awareness task, according to Adams (1990), is the ability to manipulate phonemes in spoken words. Phoneme substitution - the ability to exchange one phoneme in a word for another – is an example of this skill. Spoonerism²⁵ is a fun phoneme substitution activity whereby the first sound in the first word is swapped with the first sound in the second word (e.g., ‘felt made’ becomes ‘melt fade’) (Troia, 2004).

3.4.1 Progression toward phonemic awareness

An understanding of the progression of the different phonological awareness skills toward phonemic awareness or sensitivity is important in order for educators to tailor their instruction so that it addresses the specific language learning needs of the child at any given point (Lyon, Shaywitz & Shaywitz, 2003). There is considerable debate in the literature as to the order in which different aspects of phonological awareness manifest and what role this progression plays in early reading development. Some of the different perspectives on this topic will be explored briefly after which the standpoint from which this study will be conducted will be posited.

To determine children’s awareness of the specific phonological structures of their language, experimental measures of their phonological sensitivity are made (Anthony & Francis, 2005). Phonological awareness has been found to correlate strongly with a child’s future reading and spelling abilities (Bradley & Bryant, 1983; Lundberg, Frost & Petersen, 1988). There seems to be general consensus within the literature that when children have strong phonological awareness skills they usually become good readers and when they have weak phonological awareness skills they generally become poor readers (Wagner & Torgesen, 1987; Anthony & Francis, 2005). For effective phonological recoding children need to be aware of the different sizes of lexical representations, such as phonemes, syllables, onsets and rimes that predominate in the spoken language as well as the orthography of the language they are learning to read in (Ziegler & Goswami, 2005).

²⁵ The Reverend Spooner was dean of New College, Oxford and was notorious for his slips of the tongue such as once pointing out to a student that he was ‘tasting two worms’ and reprimanding him for ‘hissing his mystery lesson’ (Dehaene, 2009, p.201).

Seymour and Evans (1994), Duncan, Seymour and Hill (1997), and Seymour, Duncan and Bolik (1999) claim that phonemic awareness emerges prior to onset-rime awareness and that phonemes are easier to identify than larger rime units which, according to those authors (*ibid*), indicates a progression from phonemes toward larger units - such as onset and rime - as literacy develops. However, Goswami and East (2000), when trying to replicate the findings from the 1997 study by Duncan, Seymour and Hill mentioned above, found that one of the tasks, which required the children to identify and say out loud the sound shared by two words, to have been confusing to young children who had previously encountered some parts of the task, but not others, at school. These researchers (*ibid*) then adapted their methodology and showed that once the children had a better understanding of the task, they clearly exhibited the progression from larger (onset-rime) to smaller (phonemes) units (see Ziegler & Goswami, 2005).

A study was conducted by Bertelson, De Gelder and Van Zon (1997), which aimed to examine the findings of the inquiry by Duncan, Seymour and Hill (1997). The outcomes of this research on Dutch children supported the tenet that children are able to perform onset-rime deletion tasks prior to phoneme deletion tasks. In contrast to this, in her review of some of the controversies regarding the developmental order of awareness of the different linguistic units, Geudens (2006) describes another study, also on Dutch children (Geudens & Sandra, 2003), which found that the children's performance on isolation tasks did not conform to the onset-rime precedence model. Although the first graders in this study could not isolate the separate phonemes in a CVC pseudo-word, at the sub-syllabic level they segmented the word into the onset-vowel considerably more often than into the onset-rime units.

Whereas Stuart (2005) posits that onset-rime awareness occurs before learning to read and that phonemic awareness only comes about after reading instruction begins, Geudens (2006) warns that caution needs to be exercised and the level of cognition required for a specific task taken into account before making assumptions about the sequential development of awareness of some linguistic units on the ground of their size. Geudens (2006) concludes that although it would seem that in European languages such as English and Dutch, progression of phonological skills develop from larger to smaller units, and although sensitivity to rhyme could manifest before exposure to print, it is possible that some knowledge of print is needed in order to isolate phonological units at the sub-syllabic level.

In an article which highlights controversies on the subject of phonological awareness Geudens (2006) cites the diverse views of the following authors: Bryant, MacLean, Bradley, and Crossland (1990), Goswami and Bryant (1990) and Goswami and Mead (1992) view sensitivity to rime and alliteration as necessary developmental precursors to phoneme awareness whereas Hulme (2002) feels that although phonemic awareness is an important predictor of, and an aid in learning to read, it stands independent to an awareness of rime units. Geudens (2006; 2003) proposes that onset rime awareness is significantly related to such measures of phoneme awareness as blending, segmenting and phoneme deletion while Goswami (1993; 1998) argues that onset-rime awareness helps facilitate early reading.

Drawing upon more than four decades of research in the area of phonological awareness and early literacy in all alphabetical languages studied up to that point in time, Anthony and Francis (2005) assert that phonological awareness, which includes phonemic awareness, is strongly related to a child's ability to learn to read effectively. Citing the report on a meta-analysis of 52 controlled experimental studies compiled by the National Reading Panel (2000), these authors (ibid) profess that phonological awareness stand in a causal relationship to reading and spelling ability and that explicit instruction therein has a positive effect on the reading ability of normally developing children as well as those at risk for or already experiencing reading difficulties.

As evidence for the onset-rime precedence model which features prominently in research at this point in time, in this study it will be assumed that phonological awareness develops from larger linguistic units to phonemes. Afrikaans is derived, to a considerable extent, from Dutch (see section 2.3.3.1) - a language about which research has shown (Ziegler & Goswami, 2005) that onset-rime processing takes precedence over processing of other sub-syllabic units, such as onset-vowel. Although not a lot of research has been conducted on the sequential development of phonological skills in either Afrikaans or Setswana, however, a study conducted by Cockcroft, Broom, Greenop and Fridjohn (2001) which investigated the relationship between different aspects of phonological awareness and early reading in Afrikaans showed that the sequence of phonological development in Afrikaans is the same as for European languages although the rate of early literacy acquisition was different to that for English speaking early readers, supposedly because of the transparent nature of the Afrikaans orthography.

According to Lonigan, Burgess, Anthony and Barker (1998), indications of phonological awareness typically manifest around three to four years of age. Goswami and Bryant (1990) in their overview of research on the sequential development of phonological

awareness skills, for typically developing children posit that syllable awareness manifests at around age three to four, and onset-rime awareness at age four to five, with phonemic awareness, as already mentioned, only developing once reading instruction begins. This sequence has been found to be identical for Afrikaans (Cockroft, Broom, Greenop & Fridjohn, 2009). Furthermore, as posited by Anthony and Francis (2005), children are generally able to recognise similar-sounding and dissimilar-sounding words before being able to manipulate sounds in words and they can usually blend sounds at a particular level of linguistic complexity before they can segment units into smaller sound components.

Phonemic awareness usually develops when children start receiving explicit reading instruction, usually at the age of 6-7. Literacy seems to enhance phonemic awareness which, through a process of reciprocity then becomes the most prominent predictor of reading success (Perfetti, Beck, Bell & Hughes, 1987; Rayner, Foorman & Perfetti, 2001). From there, young readers progress from being able to segment the initial and final sound in words, then to blend phonemes into words and to segment a word into its component phonemes. Finally, the child is able to manipulate, add and delete phonemes – skills which constitute the highest level of phonemic awareness.

3.4.2 Phonemic awareness and learning to read

There are currently three major hypotheses about the relationship between phonemic awareness and reading, each of which has had some empirical support. First, that phonemic awareness is a predictor of reading success. Second, that reading performance predicts phonemic awareness and third, that there is a reciprocal relationship between phonemic awareness and reading (Goswami & Bryant, 1990; Stahl & Murray, 1994; Wagner, Torgesen & Rashotte, 1994).

There seems to be evidence of a strong link between phonemic awareness and early reading and therefore, this section will glance upon some of the views in the literature on this reciprocity. Lerkannen, Rasku-Puttonen, Aunola and Nurmi (2004) mention that findings of studies conducted on regular orthographies (Lerkannen, Rasku-Puttonen, Aunola & Nurmi, 2004; Ellis & Large, 1988) point strongly to the hypothesis of a bidirectional relationship between phonemic awareness and reading success, in other words, that phonemic awareness development is enhanced once reading instruction begins (Ehri, 1989; Wagner, Torgesen & Rashotte, 1994).

Poor phonemic awareness development makes it hard for learners to relate individual sounds to the letters of the alphabet. Alphabet recognition involves letter shape recognition, letter-name knowledge, letter-sound knowledge and rapid letter naming (Manning & Kato, 2006). Without phonemic awareness, learners are thus unable to utilize decoding skills to analyse unknown words (Carroll, Snowling, Stevenson and Hulme, 2003).

In a study on the relationship between phonemic awareness and reading, Lerkannen, Rasku-Puttonen, Aunola and Nurmi (2004) found a reciprocal relationship between the two, with phonemic awareness supporting reading development at the beginning of the first year of school (in Finland children start school at age seven), and reading supporting phonemic awareness development at the end of the year. These authors also report on a study by Poskiparta, Niemi, and Vauras (1999) which showed that in a highly regular language like Finnish (and Afrikaans), a lack of phonemic awareness did not necessarily impact negatively on children's learning to read words. One reason for this was that in Finnish schools there is an emphasis on phonics in reading instruction, which, Lerkannen, Rasku-Puttonen, Aunola and Nurmi (2004) (2004) suggest, might be sufficient to support phonemic skills in the first year of school. Phonemic awareness programmes, according to authors such as Yopp and Yopp (2000), should be child appropriate, purposeful and should be treated as only one component of a much broader, holistically integrated literacy programme.

3.4.3 Phonemic awareness and writing and spelling

According to Mayer (2007), early reading and writing develop concurrently. Bissex (1980) proposes that experimenting with writing helps children understand how print and sound work together. Much has been written by authors such as Reid, Schultze and Petersen (2012) and others on the progression of writing by children - from a phase of scribbling through progressively more symbolic renditions to eventually writing letters with the purpose of communicating concepts. This section however, will only deal with the link between phonemic awareness and early writing. What is important to note here is that too much pressure early on to produce accurate spelling and writing can be to the detriment of learners exploring the link between writing and sound and meaning (Mackenzie, 2011, p. 322).

The Gentry Writing Scale (2005) contains five stages of early writing, from non-alphabetic writing to consolidated alphabetical writing (p.128). Progress through these stages are marked in areas such as phonemic awareness, level of invented

spelling and the understanding of the alphabetical principle (ibid). According to Bear, Invernizzi, Templeton and Johnson (2008), a crucial stage of children's writing development is reached when the sounds they hear in oral language are represented in writing. Richgels (1987) cautions teachers not to expect children to produce perfect spelling too soon but rather to allow them to produce invented spelling, on the basis of the sounds they hear as an important phase of their writing development. This is confirmed by Martins and Sylva (2006) who have found that invented spelling activities enhanced the development of phonemic awareness and of the alphabetic principle.

Invented or unconventional spelling is also one of the indicators of a learner's understanding of the sound structure of words, and thus, that the child has attained a certain level of phonemic awareness (Tangel & Blachman, 1992). Groundbreaking work on this topic was done by Read (1971; 1975) who postulates that because children who have not yet learnt to read do not have a visual image of words fixed in their memory, they depended primarily on the articulatory features of words when they tried to write. Read's research found that children who are at a certain level of language development, grouped certain sounds, that are articulated similarly together; that they understood certain relationships between sounds to be stronger than others; and that children who had not yet learned to read arrived, with significant consistency, at the same system of invented spelling. Research studies have shown that children who create invented spelling prior to formal reading instruction and thus deduce the alphabetic principle for themselves, appear to be more prepared for formal reading instruction and more likely to be successful readers later on (Chomsky, 1971; Ferrolì & Shanahan, 1987; Morris & Perney, 1984).

3.4.4 Phonemic awareness and orthographic depth

Phonemic awareness forms an essential part of reading development for readers of alphabetic orthographies because these orthographies record speech through print by recording the smallest units of speech, namely phonemes, into graphemes or written symbols (Yopp & Yopp, 2000). The reading of an alphabetic language is based upon the knowledge that letters represent the sounds of spoken language (Griffith & Olsen, 2004). Without an awareness of these smallest sound units, and how they can be manipulated, the written system of a language becomes arbitrary (Yopp & Yopp, 2000). In other words, orthographic depth can be seen as the extent to which the beginner

reader is able to trust that a certain symbol or combination of symbols represents a certain sound.

Orthography refers to how spoken language is represented in writing. Alphabetic languages vary in the degree to which they are regular in their representation of sound. For example, in English, the grapheme 'a' could represent a number of different phonemes, such as in 'cat', 'made' 'car' 'ball'. Because of the highly irregular way in which English phonemes map onto their representative graphemes, English is considered to be a deep or opaque orthography. In Afrikaans, this same grapheme 'a' represents only two phonemes, /a/ as in 'pad' (road) and /ɑ:/ as in 'skape' (sheep). In Setswana, the written symbol 'a' represents the same sounds namely, /a/ as represented by the first 'a' in the word 'marama' (cheeks) and /ɑ:/ as represented by the second 'a' in the same word (Le Roux, 1993). English can therefore be said to be an 'opaque' or 'deep' orthographically, while Afrikaans and Setswana could be said to be 'transparent' or 'shallow' orthographies.

According to the orthographic depth hypothesis (Katz & Frost, 1992), shallow orthographies should be easier to read using word recognition processes that involve the language's phonology. Children learning to read a shallow orthography should therefore learn to read aloud and spell faster than those learning to read a deeper orthography. This hypothesis is supported by the findings of several studies, such as those cited by Ellis, Natsume, Stavropoulou, Hoxhallari, Van Daal, Polyxoe, Tsipa and Petalas (2004), Wimmer and Hummer (1990), Goswami, Porpodas and Wheelwright (1997), and Ellis and Hooper (2001).

Orthographic transparency influences phonological awareness. In research conducted on monolingual and cross-linguistic settings it was found that those children who learn to read in transparent orthographies, such as Italian, Finnish, German, Spanish or Dutch develop both reading and phonological awareness faster than children who learn to read in a deeper orthography like English (Goswami, Porpodas & Wheelwright, 1997; Nikolopoulos & Goulandris, 2000; Patel, Snowling & De Jong 2004; Porpodas, 1999; Seymour, Aro & Erskine 2003; Aro & Wimmer 2003).

Comparing beginner readers' reading of pseudo-words and real words showed that the scores for reading pseudo-words and real words for children learning to read in a transparent orthography, such as German, were highly correlated whilst the same scores for English children were not significantly correlated (Wimmer & Goswami, 1994). Findings such as these indicate that different strategies are employed by beginning

readers in orthographies that vary in depth – German children seem to employ the same strategy to read pseudo-words and real words whereas English beginner readers use a lexical approach to recognise words because of the irregularity between graphemes and phonemes in that language. It seems that children who learn to read in regular orthographies use their knowledge of phoneme-grapheme regularity (Goswami, Ziegler, Dalton & Schneider, 2003).

3.5 PHONEMIC, SYLLABIC AND PHONOTACTIC ASPECTS OF SPOKEN SETSWANA

Because most of the children in this study come from resource poor home environments it is likely that most of them have not had any significant exposure to print prior to coming to school (Pretorius, 2014). They have likely only experienced language aurally in the community setting where Setswana and Afrikaans are the predominant languages. I will list a few characteristics of the phonemic, syllabic and phonotactic structure of Setswana and then explain how these might influence the development of phonological awareness in Afrikaans for Setswana speaking children. Although I will attempt to highlight some of the specific linguistic characteristics of Setswana from the literature, this section does not portend to be an exposition on the phonology and structure of that language.

It was my intention to compile a table in which the phonemes of Setswana and Afrikaans are compared. However, upon perusal of the literature, I found that phonetic tables aiming to represent the speech sounds of Setswana were very contradictory (see Trennepohl, 1972; Le Roux, 1993; Dichabe, 1997; Palai & O'Hanlon, 2004; Gouskova, Zsiga & Tlale-Boyer, 2011). This might be because of the complex history of the documentation of Setswana orthography (see Nfila, 2002). Drawing upon the seemingly more consistent representation of the speech sounds of Afrikaans and those few of Setswana which seemed not to vary from one literature source to another, rather limited my efforts. Although I speak both languages fluently, I will not venture to describe any speech sound other than what could be confirmed in the literature. Therefore, I here offer but a few of the most significant similarities between the two languages, at the level of the phoneme. First of all, the alveolar medial voiced rolling continuant consonant [r], secondly, the velar medial voiceless fricative continuant consonant [x] and thirdly, the (approximately) mid-low back vowel pronounced with lip-rounding [ɔ]. There are however, also differences in the phonemic structure of the two languages. The phoneme /v/ for example, does not exist in Setswana. Setswana speaking people often substitute

this phoneme with a /b/ when pronouncing words in other languages, for example, 'television' is pronounced 'telebision' (author's own note).

Unlike the syllables of English and Afrikaans, Setswana syllables are almost always open (except for syllables consisting of a syllabic consonant) (Le Roux, 1993, p.104), with no incidence of any tautosyllabic consonant cluster (Gouskova, Zsiga & Tlale-Boyer, 2011). Setswana syllables might comprise of a consonant and a vowel – with any consonant preceding the vowel nucleus; a vowel only; or a syllabic consonant. There are no consonant clusters in Setswana, although in writing, bigrams and trigrams might indicate a single phoneme. Also, although consonants might appear in series without the intervention of a vowel, they are separated by a syllable boundary (Le Roux 1993, p 105), such as, for example, in the word “mo-n-na” (man).

These characteristics of Setswana might impose some challenges upon speakers of Setswana to correctly pronounce Afrikaans words, since these often end in consonant clusters (e.g., 'dorp' - town) and often contain syllables that end in a consonant or consonant cluster. Because I am unaware of any cross language study comparing the phonology of Setswana and Afrikaans, I make use of literature on a comparison of Setswana and English phonology and phonotactics (Trennepohl, 1972). I make use of an example of an English consonant cluster which also happens to occur in Afrikaans, namely /tr/ as in the English word 'trick' and the Afrikaans word 'trop' (herd).

The syllabic structure of Setswana differs considerably from that of the target language of the young readers in this study, namely, Afrikaans. This is apparent in the way that loan words are pronounced in Setswana. For example, the Setswana loan word from the bisyllabic Afrikaans word 'venster' – fensetere (window) has four syllables and clearly shows conversion of both the closed syllables in Afrikaans to the open syllabic structure of Setswana. The same principal seems to apply to the Setswana loan word 'pôrêsitênte' (from the English 'president') (Nfila, 2002). It is interesting to note that there are purely Setswana words for both these concepts ('letlhabaphefo' for 'window' and 'tautona' for 'president') and that these words are still in use in Botswana, but not in South Africa (Nfila, 2002; Khoali, 1998). According to Nfila (2002), these and other differences in speech forms employed by Setswana speaking people in these two countries came about because of geographical parameters imposed by the border between the two countries as well as by their different political dynamics.

Nouns in Setswana are systematically organised in classes or 'genders' (Le Roux, 1993) according to their meaning (whether they refer to people, animals, places, things or

abstractions). On the basis of these classes, and depending on whether the noun is in the singular or plural, nouns are 'morphologically marked' (ibid) by a specific prefix such as in the derivational morphemes which derive nouns from verbs by means of a noun prefix and the suffix /i/ (Dichabe, 1997). For example, adding the prefix /mo/ (indicating a person) to a verb, like 'reka' (to buy) to form the word moreki (buyer) (ibid). Each class of noun has a concord which, except in the case of the 'person' class, is identical to the morphological marker or prefix which indicated the class. For example, '*dikgomo di nwa metsi*' (the cattle drink water). This linguistic characteristic lends a musicality to the spoken language which can be compared to rhyming in English as shown in this Setswana riddle from Nong (1995, p.17) – '*Dikgomo tse dithweu tse di pôô khibidu*' ('The white cows with a red bull' – to which the answer is 'teeth and tongue').

According to Troedell and Shroeder (2007), the complex syllabic structure of African languages require considerable phonological awareness. These authors also point out that speakers of African languages are very attuned to length – a linguistic aspect which is often contrastive. In Setswana the penultimate syllable is almost always long. Apart from a few syllabic consonants, namely 'l', 'm', 'n', 'ng' and 'ny', Setswana syllables end in a vowel (Le Roux, 1993). The nasal 'm' and 'n' are syllabic when they appear before other consonants (but they are not doubled in writing) and so is the nasal 'ng' when it appears at the end of a word.

I want to suggest that it might be possible that certain linguistic elements, such as contrastive tone of Setswana might assist in the phonological awareness of young Setswana speaking children and that this might assist Setswana speaking children with learning to listen to and hear and read in Afrikaans.

A study on phonological and early reading skills of Setswana children in Botswana where children learn to read in Setswana and English concurrently deserves some attention. This study, conducted by Lekgoko and Winskel (2008), involved 36 grade two children and aimed to investigate how they learn to read and whether there is a transfer of early literacy skills across the two languages. Apart from phonemic awareness, letter knowledge (in both languages), and reading of words and pseudo words were assessed. Phonemic awareness in Setswana was found to be a predictor of reading Setswana words and pseudo-words as well as reading English pseudo words, but it showed no cross language transfer effects. Although the children were taught letter knowledge in Setswana in grade one, this factor did not predict reading of either English or Setswana words, whereas letter knowledge in English significantly predicted both pseudo word and word reading in both languages.

Interestingly, the children in the study by Lekgoko and Winskel (ibid) commonly responded to a phoneme deletion task by deleting the entire syllable – for both Setswana and English words. The authors (ibid) posit that this might indicate that the syllable in Setswana might be easier to access than the phoneme. This would be in agreement with the tenets of Ziegler and Goswami's psycholinguistic grain size theory discussed in section 3.2.

3.6 THE AFRIKAANS ORTHOGRAPHY AND LEARNING TO READ IN AFRIKAANS

Although in the previous section, some linguistic aspects of spoken Setswana were discussed, in this section the focus will be on the Afrikaans orthography, and only to the extent to which it is relevant for beginner readers.

Dutch has been the language focus of quite a number of cross language studies, and has been found to be a fairly regular orthography although it has a more complex syllabic structure than for example, Finnish (Bekebrede, Van der Leij & Share, 2009). Afrikaans is, to a significant extent, a derivate of Dutch and the two languages are mutually intelligible (see 2.3.3.1). Very little research has been done on comparing the Afrikaans orthography to other orthographies. In order to gauge the orthographic depth of Afrikaans for the purposes of this inquiry, I will here describe a few studies which compare the orthographies of Afrikaans and Dutch. This will give an idea of whether the Afrikaans orthography, is relatively less or more regular than Dutch. Due cognisance is paid to the fact that this comparison, from the literature, cannot be seen as conclusive. Still, in the absence of research evidence in the literature and since Afrikaans is the target language of the children in this study, I deem this a worthwhile pursuit.

In a study by Van Bezooijen and Gooskens (2005) and Gooskens and Van Bezooijen (2006), which investigated the mutual intelligibility of Dutch and Afrikaans it was found that it was much easier for Dutch readers to understand Afrikaans script than the other way around. This was ascribed to the opacity of cognates²⁶ due to historical developments in the two orthographies with regard to lexicon, grammar and spelling.

In a study conducted by Cockcroft, Broom, Greenop and Fridjohn (2009) the sequential development of phonological awareness in Afrikaans, and its relationship to learning to read was investigated. It was proposed that children who were learning to read and

²⁶ Cognates are words that have the same root in two different languages, with similar meaning and the same etymological origin (Heeringa, Swarte, Schüppert, Gooskens, 2014) .

write in Afrikaans, which has a systematic phonological and orthographic structure, would show a different developmental pattern to children who were learning to read and write in English, which has an opaque orthography with many irregular letter-sound correspondences. The findings indicate that the order of phonological development is similar in both languages, although it is possible that there may be differences in the rate of acquisition of phonological awareness skills (Cockcroft, Broom, Greenop & Fridjohn, 2009).

Although no conclusive evidence exists in the literature it seems that Afrikaans can be compared in orthographic depth to Dutch and that it is therefore a shallow orthography.

3.7 EARLY LITERACY AND THE HOME ENVIRONMENT

A child's home is the first and primary learning environment. This section takes a look at the influence of the child's home environment and whether aspects thereof might influence the development of phonemic awareness and other early literacy skills.

In a study on the effects of different aspects of the home environment on the phonemic awareness development of children in rural Tanzania, Ngorosho (2011) identified four key variables from a child's home environment that impacted on phonemic awareness development and early literacy skill acquisition. These were: Education level of parents; house wall material; light source; and, the number of (school subject-related) books available in the home. Other authors, for example Winsor and Pearson (1992), confirm the important link between the home environment and phonemic awareness, listing home-related variables such as parental verbal skills and educational attitudes (Petrill, Deater-Deckard, Thompson, De Thorne, Schatschneider, 2006); book reading between adults and children (Dickinson & McCabe, 2001); and exposure to reading related media (Foy & Mann, 2003) as factors influencing phonemic awareness development in pre-school children.

Because the development of literacy skills happens against a certain background it is useful to take a broader view of the socio-economic situation within which children grow up. Parenting behaviour, home environment and household income play a significant role in the early cognitive, physical and socio-emotional development of the child and are important determinants in school success, especially in the early years (Vegas & Santibáñez, 2010). A lack of proper stimulation and inadequate interaction can disrupt basic neural circuitry while stimulation can enhance neuro-cognitive processing and brain functioning, especially for infants who were born prematurely (Engle, Black,

Behrman, Cabral de Mello, Gertler, Kapiriri et al., 2007). Persistent poverty has a detrimental effect on the cognitive and socio-emotional development of children (McLoyd, 1998). Economic pressures often compromise parent psychological wellbeing, which could inhibit positive parenting behaviours such as stimulation, support and responsiveness and, as a result, increase negative parenting behaviours such as inconsistent and harsh parenting (McCartney & Phillips, 2006). Children from developing countries are also more likely to be exposed to the effects of maternal depression, community and domestic violence as well as parental loss due to HIV and AIDS (Engle et al., 2007).

Having looked at the home environment and the influences of the socio-economic environment within which the child's early development is situated, the next section will explore the scripted education framework according to which schools and educators in South Africa facilitate the phonemic awareness development of children, namely the Curriculum Assessment Policy Statement.

3.8 CURRICULUM GUIDELINES FOR PHONEMIC AWARENESS DEVELOPMENT INSTRUCTION

Children's early literacy success depends, among other education-related factors such as teacher language proficiency and teacher qualification, on how effectively the curriculum is implemented and how effectively teachers manage its delivery against time (Pretorius, 2014). How the various early literacy language skills are to be integrated into classroom practice is at the core of the Department of Basic Education's (DBE, 2011) advice to educators. Instruction on phonological awareness, phonemic awareness and phonics should not be turned into a drill and repeat exercise but shorter activities should be offered regularly and in a fun way through verbal interaction which will help children learn sounds, gain vocabulary and get familiar with linguistic structures (Nel, Nel and Hugo, 2013; DBE, 2011). There exists some differences of opinion on how phonological skills and specifically phonemic awareness skills should be facilitated in the classroom. Some of these will be discussed in the next section.

The national curriculum statement says that "most reading experts agree that there are five main components to the teaching of reading' namely 'phonemic awareness'; 'word recognition' (sight words and phonics); 'comprehension'; 'vocabulary' and 'fluency' (DBE, 2011, p.14). Regrettably, in the rest of the document, both in the Afrikaans and in the English versions, phonemic awareness is equated with phonological awareness.

Furthermore the CAPS document erroneously defines phonemic awareness (see Table 3.1).

Table 3.1 Definition of phonemic awareness in the CAPS document

Language	Definition of phonemic awareness
Afrikaans (KABV document p.15)	<i>“Fonemiese bewustheid is die herkenning dat spraak uit ‘n reeks klanke bestaan, die herkenning van die individuele klanke asook die manier waarop klanke woorde en sinne vorm. Hierdie bewusmakingsproses begin reeds vroeg in Graad 1.”</i>
English (CAPS document, p. 14)	<i>“Phonemic awareness is recognising that speech consists of a sequence of sounds and being able to recognise these individual sounds, how they make words and how these words can make sentences. Developing this awareness should begin early in grade 1.”</i>

Note: Taken from DBE, (2011): CAPS document, p.14; KABV document p.15

It is unclear from the time allocation in the document (see Table 3.2), where exactly phonemic awareness fits into the schedule since reference is only made to ‘phonics’. It seems that the curriculum writers were unable to avoid the common pitfalls of confounding phonemic awareness, phonological awareness and phonics (see section 1.7).

Table 3.2 Curriculum guidelines: time allocation for Afrikaans home language

		Per day (minimum)	Per week (minimum)
Listening and speaking		15 minutes per day, 3 days per week	45 minutes
Reading and phonics	Phonics	15 minutes per day, 5 days per week	1 hour 15 minutes

	Shared reading	15 minutes per day, 3 days per week	45 minutes
	Group reading	Two groups for 15 minutes each per day, 5 days per week	2 hours 30 minutes
Handwriting		15 minutes per day, 4 days per week	1 hour
Writing		15 minutes per day, 3 days per week	45 minutes
			Total 7 hours

CAPS REF

The order in which the curriculum document suggests phonemic awareness be instructed will be compared to some of the directives in the literature in Table 3.3.

3.9 SCHOOL SUPPORT FOR PHONEMIC AWARENESS DEVELOPMENT

As is clear from the previous section on the effects of the home environment on children's phonemic awareness development, many children in South Africa, especially those who come from resource-poor backgrounds, have limited home-literacy exposure. Since this has been shown to be one of the negative home-related factors impacting upon children's literacy skills development (Ngorosho, 2011), effective literacy instruction can positively influence phonemic awareness, especially for children at risk for failure to read and write (Winsor & Pearson, 1992). Schools can therefore play an important role in ameliorating these deficits by creating an environment which enhances their early literacy learning experience (Pretorius, 2014).

Schooling has a positive effect on the development of phonemic awareness with evidence suggesting that an early focus (at 5 years) on teaching phoneme awareness and phonics can radically improve reading and spelling standards for children learning in their second language (Stuart, 1999). Children, who are taught phonics, letter naming and elementary literacy skills and who get read stories find it easier to learn to read and write when they go to school (Pretorius, 2014). Moreover, the impact of these early literacy experiences are enhanced if children learn in the same language at preschool and through their foundation phase careers (Dickinson, McCabe, Essex, Dickinson & Neuman, 2006; Ntuli & Pretorius, 2005).

Phonemic awareness does not develop naturally and therefore implies instruction thereof (Morais, Cary, Alegria, Bertelson, 1979). Whilst school support of learners who are learning to read in a second language was dealt with in Chapter 2, in this section school support for phonemic awareness development will be examined. First of all, some of the literature on school support in general and the advantages which attending a preschool hold for phonemic awareness development will be looked at. Then some perspectives on specific aspects of instruction of phonemic awareness development will be cited as well as of some practical ways that these can be integrated into classroom practice. Since educator knowledge of phonemic awareness has been shown to be a strong indicator of reading success for learners (McCutchen, Abbott, Green, Beretvas, Cox, Potter, et al., 2002), the final part of this section will examine those aspects of teacher knowledge which are important to successful literacy learning.

There is strong support for the view that phoneme awareness and phoneme-grapheme correspondence knowledge have a positive impact on the development of reading and writing skills, and that this leads to a lasting advantage for children who acquire these skills, at least as soon as, if not before, they are formally introduced to tuition in reading and writing instruction (Stuart, 1999). Linking sound patterns with their corresponding graphemes has been shown to have a positive effect on children's reading development (Cunningham, 1990; Lundberg, Frost & Petersen, 1988). Indeed, studies suggest that teaching phonemic awareness and letter-sound correspondence concurrently has an optimal effect on children's reading development (Ball & Blachman, 1991; Byrne & Fielding Barnsley, 1991).

In the pedagogic literature the emphasis on phonemic awareness seems to be specifically in how it relates to early reading. Most studies suggest that phonemic awareness needs to be explicitly taught to optimally affect reading acquisition. Explicit teaching, according to Christie (2008) involves the following:

...presenting lessons so that purposes are clear to students, as well as the nature of the tasks they are required to undertake. It opens the language of required tasks, including the meanings of instructional words, content words and performance words... It provides a sequential programme of instruction with systematic opportunities for self reflection and assessment.

This explanation by Christie echoes the voices of Henning and Dampier (2012) when they point to the possibility that it might be to the benefit of children learning in their second

language to be exposed, from the onset, to classroom registers of the language in which, later on, they will be expected to learn in (through speech and print) and present (in speech and writing) academic ideas. Furthermore, these guidelines of Christie's can, in my opinion, be successfully applied to phonemic awareness instruction. Children need to know what is expected of them, to avoid the confusion which has affected some studies of phonemic awareness cited by Ziegler and Goswami (2005) in which research outcomes were affected by confounding instructions with regard to the phonemic awareness tasks children were given. Moreover, although there is some difference of opinion on the exact sequence which should be followed in phonemic awareness instruction (see Table 3.3), it seems clear that, to a certain extent, children's development predisposes them to acquiring the different skills in a certain order.

In a study conducted by Stuart and Masterton (1992), four year olds who attended preschool and who had good phonological awareness continued to perform better in reading of regular and exception words and non words when they were 10 years old, compared to their peers who did not have the same level of phonological awareness. It would seem that early, purposeful and focused teaching of phonemic awareness and of grapheme-phoneme correspondence does accelerate development of these skills. Furthermore, strong evidence exists to support the notion that when children acquire these skills as soon as, but preferably before they are formally introduced to literacy skills such as reading and writing, they master these skills much sooner than children who didn't have the same exposure to phonemic awareness and phonics instruction (Lerkannen, Rasku-Puttonen, Aunola, & Nurmi, 2004).

Learners enter school with different levels of phonemic awareness. It is important that teachers address these individual differences by starting with larger units of sound such as syllables and rhymes before phonemic awareness instruction (Yeh & Connell, 2008). Educators also need to take cognisance of the level of difficulty in performing different phoneme awareness tasks and be able to structure lessons and activities hierarchically according to the difficulty of the task (Ukrainetz, Cooney, Dyer, Kyser & Harris, 2000), by for example, teaching first phoneme identification before phoneme deletion.

The National Reading Panel (NRP) (2000) found that when learners receive instruction in only one or two types of phonemic awareness activities at a time they make better progress in reading and spelling than children who are instructed on three or more types of activities at a time. For example, words containing two phonemes, such as 'to' or 'see' are usually easier to segment than words containing more phonemes, like 'black' and 'bread' (ibid). Selection and presentation of phonemes which are to be included in

classroom activities should therefore be strictly controlled (ibid). Also, according to the NRP (ibid), it is advisable to make use of only one phoneme in one word position per session. This means, for example, first using words that start with the same sound and only later on, those that end with the same sound. Teachers should use isolated words, not text, to help children to identify the first phoneme, then the last phoneme, and only then to let learners segment or delete phonemes. Within each task, teachers should start instruction with a word containing two phonemes, then three phonemes and then consonant blend words. Phonemes can be matched to colours, or pictures of items with common phonemes, after which words containing certain phonemes can be generated (ibid).

It is important that phonemic awareness activities are experienced by the learner in a holistic literature learning environment where much of the instruction happens through a naturalistic approach (Ukrainetz, Cooney, Dyer, Kyser & Harris, 2000). Phonemic awareness instruction needs to be embedded into a social matrix of experiences relevant to the learners world (Yopp & Yopp. 2000, p. 132). Sound talk can be integrated into relevant reading and writing activities which encourages the child to engage with language without any drill and practice (Ukrainetz et al., ibid), and since lyrical music presents the sounds in words much more slowly than normal speech, music could be a fun activity through which phonemic awareness skills can be practiced (Fischer & McDonald, 2001). The individual learner's level of phonemic awareness and other emergent literacy skills need to be taken into account and opportunities for self-directed learning offered accordingly (Ukrainetz et al., ibid).

Phonemic awareness and phonics can be linked as soon as possible, especially for transparent orthographies such as Finnish (Lerkannen, Rasku-Puttonen, Aunola, Nurmi, 2004) and, therefore Afrikaans (see section 3.6). Whole words are not used at this point, and according to (Henning, 2014), and in contrast to the directives of the NRP, in South African classrooms, preferably not pictures either, as these could confuse learners as to what phoneme the picture is aiming to elicit. This is because, according to Henning (ibid), learners, when presented with a picture of a green apple on a red table might not know whether they are expected to produce the phoneme /a/ for 'apple', /g/ for 'green', /t/ for 'table' or /r/ for 'red'). Therefore, flash cards with the letter representing the sound can be used, but to avoid confusion, the alphabet should be displayed in the classroom only after all the sounds have been mastered (ibid).

Because of the reciprocal relationship between phonemic awareness and reading, it is imperative that phonemic awareness skills are reinforced once reading starts and that

this positive reciprocal relationship is maintained (Sensenbaugh, 1996). It is also important that children who are at risk of developing problems with reading accuracy and reading fluency be identified using effective assessment to monitor early literacy skills and given the necessary ameliorative instruction to help the learner progress to the next stage of literacy acquisition (Nel, 2011). Studies have shown that children at risk of developing reading difficulties respond well to explicit, intensive and comprehensive instruction (Foorman & Torgeson, 2001). Even older children with poor reading skills benefit from intensive and explicit instruction in phonemic awareness and phonics in terms of their decoding skills, their fluency and their spelling ability (Blachman, Schatschneider, Fletcher, Francis, Clonan, Shaywitz and Shaywitz, 2004).

There seems to be considerable differences in views expressed in the literature on what sequence should be followed when instructing phonological awareness. Because phonemic awareness is considered, by many, a critical component of phonological awareness and a prerequisite for successful literacy learning (Liberman, 1971; Yopp & Yopp, 2000) a few examples of how this topic is presented differently in the literature is presented in Table 3.3.

Table 3.3 Suggested sequence of phonological awareness instruction

Author	Sequence	→	→	→	→	→	→
Adams (1990)	Rhyme	Identify and manipulate patterns of rhyme and alliteration in words	Awareness that syllables can be divided into phonemes	Awareness of individual phonemes	Phonemic segmentation and blending	Adding, deleting and manipulating phonemes	
Johnson and Roseman (2003)	Awareness of words in sentences	Ability to segment words into syllables	Ability to Recognise rhyme	Recognise alliteration	Onset-rime awareness	Identify first and final sounds	Blending, manipulating phonemes through phoneme deletion and adding
Schuele and Boudreau, (2008)	Words into syllables	Rhyme	Onset-rime	Segment initial and final sounds	Blend individual sounds into words	Segment words into component sounds	Delete, add, manipulate phonemes
The Curriculum Assessment Policy Document (DBE, 2011)	Rhyme	Syllables	Onset-Rime	Phoneme segmentation, then phoneme matching, then phoneme isolation	Phoneme substitution, then Phoneme blending	Breaking up spoken words into Syllables	Phoneme deletion

Whilst some authors, such as Spencer, Schuele, Guillot and Lee (2008) caution against literacy instruction practice that might not take a developmentally guided sequence into account, such as the letter-of-the-week framework dictated by the basal reading series which some schools use, Snow, Griffin and Burns (2005) emphasise that beside the sequence in which phonological awareness is taught, instruction of phonemic awareness requires a sound understanding by educators of how it impacts on reading. Educators need sufficient knowledge to be competent to provide comprehensive, intensive and supportive instruction in order for learners to acquire the literacy skills they need to make academic progress in all their subjects (Snow, Griffin & Burns, 2005).

3.10 TEACHER KNOWLEDGE OF PHONEMIC AWARENESS DEVELOPMENT

In this section, the positive relationship between teacher knowledge and learner achievement as well as those aspects of teacher knowledge that are most important to optimise the early reading development of learners will be investigated.

In order for literacy instruction to be effective, teachers' knowledge on the subject needs to be adequate (Pretorius, 2014). Teachers therefore need to be educated in how to encourage phonemic awareness development and how to teach early literacy skills. Given the complexities of reading- and language instruction in South African schools, special attention needs to be paid to the improvement of teacher knowledge on literacy skills instruction, specifically when this entails instruction in a language other than a child's mother-tongue.

For early reading instruction to be effective it is essential that teachers have a thorough understanding of the different aspects of reading as well as how to assess early literacy skills (Pretorius, 2014). According to Cheesman, McGuire, Shankweiler and Coyne (2009) there is a relationship between learners' early reading achievement and teacher knowledge of language structure. Teacher preparation has been shown to be more significantly correlated to reading achievement than, for example, class size (Darling Hammond, 2000). According to this author (ibid), teacher preparation accounts for up to 60% of total achievement variance after taking learner demographics into account.

Despite teachers' recognition of the importance of developing metalinguistic awareness in the classroom, a number of studies have shown that many reading educators do not have a thorough understanding of what exactly they need to do to promote early literacy (Abbott, Walton, & Greenwood, 2002; Mather, Bos, & Babur, 2001; Troyer & Yopp,

1990). Moreover, teachers were found to overestimate their knowledge and ability to teach phonemic awareness. Interestingly, in a study done by Wessels (2011) on English, Afrikaans and Setswana speaking teachers, it was the Afrikaans Grade R teachers who most markedly overestimated their knowledge, and to such an extent that they did not deem themselves as candidates for professional development in that area.

In a study conducted by Spencer, Schuele, Guilot and Lee (2008) which measured the explicit phonemic awareness of several groups of educators including speech-language pathologists, preschool teachers, specialist reading teachers, first grade teachers, and special education teachers, the results indicated that although speech language pathologists fared better than the other groups, their explicit phonemic awareness was still not at the level required of teachers to be able to teach reading effectively. Orthographic knowledge was a factor which was found to impact negatively on skilled readers' ability to recognise speech sounds (Ziegler & Goswami, 2005). Confirming this phenomenon, Spencer et al. (2008) report that teachers often rely on orthographic knowledge instead of knowledge of speech sounds when asked to identify the phonemes in words.

The following recommendations are made by Spencer et al. (2008) to address the deficits in phonemic awareness knowledge of teachers: Educators should receive explicit instruction to improve their phonemic awareness; the materials which are used in phonemic awareness development activities in classrooms need to be assessed for efficiency. Speech language pathologists could be included as part of the task team to enhance children's phonemic awareness development instruction and any interventions that are implemented to assist children who lag behind in phonemic awareness skills. Abbot, Walton and Greenwood (2002) emphasise the importance of proper enunciation of phoneme sounds by, for example, isolating the /p/ sound instead of saying /puh-uh-uh/. Furthermore, Van den Heuvel (2005) stresses that educators need to have sufficient knowledge of what interventions to implement at certain stages of development – for example, letting learners work with concrete objects when matching sounds to them before proceeding to the more abstract level where sounds are represented by words.

According to Nel (2011), informed classroom-based assessment is a crucial teaching strategy which requires in-depth knowledge by the teacher, not only on aspects of early literacy learning, but also on how to properly assess these. In the next section assessment as an essential part of early literacy skills development will be discussed according to some of the literature on the topic.

3.10.1 Assessment of phonemic awareness

According to Nel (2011), assessment in education situations involves the collecting of information about aspects of learners' performance in order to make informed decisions about classroom practice and on how to tailor instruction to serve learners' needs. Effective teachers, this author observes, are those who constantly keep their finger on the pulse of each individual learner's literacy skills and who facilitate the young readers progress to a next level through specific instructional scaffolding. Timing is however, very important in identifying those children who struggle with early reading skills (Good, Simmons & Smith, 1998) as research shows that the earlier problems are identified and interventions designed and implemented the more chance there is for reading success (Lyon, Shaywitz & Shaywitz 2003).

For effective assessment of early reading skills, Hintze, Ryan and Stoner (2003) state that teachers need a sound knowledge base of those skills evidenced by research to be important for phonological awareness and those which affect early reading acquisition. Van den Heuvel (2005) suggests the following few questions as a framework to guide a teacher's formative assessment of the children's phonological awareness: Which children have poor phonological skills; which children need more phonological skills; which children are not making progress, and, whether interventions are effective in improving phonological skills. Furthermore, these authors suggest that teachers employ an assessment programme which is designed to accurately gauge early literacy skills. Such an assessment blueprint, they assert, would help teachers to align their instructional practices to optimise children's development of phonological awareness and early reading skills (Hintze, Ryan & Stoner, 2003).

Citing the recommendations published by a number of professional organisations such as the International Reading Association (1998) and the International Dyslexia Association (1997) concerning the required knowledge base of teachers' instruction, Cheesman, McGuire, Shankweiler and Coyne (2009) list the following competencies needed for effective reading and spelling instruction. Teachers need to work from a solid knowledge base of the theoretical and scientific bases of reading instruction. This will help them to identify learner error patterns and effectively address these. Including a speech language professional in the educational team would help provide scientifically grounded knowledge which could help the timeous identification of deficits in phonological competencies in young readers. Co-teaching between teachers and speech language professionals might be beneficial to the educator in terms of the

effective designing of teaching strategies which are closely aligned to the specific problems that children might have.

Nel (2011) points to research evidence (Black & William, 1998; Fuchs & Fuchs, 1986) which supports the premise that learning is significantly enhanced when teachers use assessment data as the foundation for their instructional decision making. Explicit instruction in phonemic awareness has been shown to benefit young readers through early interventions and adjustments made by their teachers' classroom practice of reading instruction (Lyon, 2003).

McCutchen, Abbott, Green, Beretvas, Cox, Potter, Quiroga, and Gray (2002) assert that teachers need more than just a superficial knowledge of understanding of phonological and early literacy skills to be able to effectively assist struggling learners. It would seem though, that teacher preparation programmes in South Africa, do not allocate sufficient time to facilitate the level of knowledge which teachers require (Nel, 2011). Teacher development programmes show promising results as even the gains in knowledge made by novice teachers, who received as little as six hours of instruction on word structure, who tailored their lessons accordingly, were shown to impact positively on learners' abilities (Spear-Swerling and Brucker, 2004).

3.11 CONCLUSION

In this chapter the nested relationship between phonemic awareness and phonological awareness as metalinguistic skills necessary for language development and early reading was explored by means of a perusal of some of the literature on the topic. Psycholinguistic grain size theory was discussed as well as how some aspects of the theory are reflected in neuro-linguistic research. Some of the more prominent views of the relationship between phonemic awareness and aspects of early literacy such as reading and spelling were discussed.

The issue of orthographic variability between languages and the different reading strategies required to address this variability were looked at. Some information from the literature on a few of the elements of spoken Setswana which were deemed relevant to this inquiry, such as some of its phonotactical, morphological and syntactic characteristics were offered. The Afrikaans orthography was examined in relation to its more often studied prototype, Dutch, in order to approximate the relevant depth of the orthography for the purposes of this study.

Aspects of the child's home environment as foundational in the genesis of literacy were discussed by looking at some of the research which has been done on the topic after which perspectives on the learning environment of the school and classroom as well as the role of the teacher in optimising phonemic awareness development came under the loop.

From a perusal of the literature dealing with elements of morphology, phonotactics and some prosodic elements of Setswana, it seems that although the two languages in this study differ as far as these elements are concerned, there might be some similarities at the phonemic level. The relatively regular orthography of Afrikaans might play a facilitative role in reading acquisition, yet, the difference in psycholinguistic grain size (see Ziegler & Goswami, 2005) between the two languages might pose challenges to the Setswana speaking children learning to read in Afrikaans. Although the home environment of the children might play a role in their phonemic awareness development, in rural South Africa, where caregivers are often not fully literate, and where a host of socio-economic factors affect children's physical well-being, it is the school environment which plays the major enabling role in children's language development and literacy learning (Pretorius, 2014).

It seems therefore, that it is largely up to the school and the education system to facilitate learning to read, in a second language, especially for second language learners who might come from heterogeneous language communities. First of all, the curriculum needs to support these children (see section 2.1). Secondly, the school needs to support early reading by providing the teacher with the necessary materials and training and an orientation toward effective reading instruction. Thirdly, the school needs to be sensitive to the different language and socio-economic backgrounds of learners and know how home related factors might impact learners early literacy learning.

The teacher, as agent of literacy learning, needs to have the necessary in-depth knowledge of reading and how it intersects with phonological awareness and phonemic awareness, all the while tailoring his or her practice in order to teach, with optimal effect, both first and second language speakers to read. Furthermore, the teacher needs to be able to apply this knowledge in the classroom by using a sound knowledge of theory and practice to utilize data-based evidence from valid and relevant assessment methodologies (Good, Simmons & Smith, 1998). Doing this, according to these authors (ibid) ensures the effective alignment between what is known, from assessment, about the child's reading proficiency and appropriate interventions to optimise learner outcomes through direct and intensive instruction of phonological skills.

In conclusion to this section, I deem it prudent to revisit the focus of this study which lies at the intersect of phonemic awareness and reading. I argue that it is important to bear in mind firstly, that the children in this case come from a community where they have most likely been exposed to some registers of spoken Afrikaans (on the farm where their parents work, in the shop, at the only doctor - who is Afrikaans speaking, etc.). Secondly, most of the Setswana speaking children at the school attended the Afrikaans preschool prior to grade one and had therefore been exposed to between one and four years of hearing and using Afrikaans on a daily basis. Those Setswana speaking children who are newcomers to the school and who have not had any of this exposure, would find that Afrikaans is the language which is exclusively used at the school (apart from during the English second language classes). Even so, they would be exposed to the classroom registers of a language which has a shallow orthography and which shares at least some phonemes with Setswana.

CHAPTER 4: A PRAGMATIC STANCE IN THE DESIGN OF A MIXED METHOD INQUIRY

4.1 INTRODUCTION: THE DESIGN LOGIC OF THE STUDY

The aim of this study was to investigate the phonemic awareness development of Setswana speaking children in grade one at an Afrikaans medium school in a rural hamlet in the Gauteng province. This study also aimed to capture aspects of the children's home and school environment that might support the development of this important early literacy skill. In this prelude to the methodology, the research design and empirical aspects of this inquiry will be presented together with a conceptual framework which will be offered as a lens through which to gaze upon the situation and thus focus upon the main construct, namely phonemic awareness development within second language learning.

This chapter explains the purpose of the research design (see Figure 4.1) and aims to justify the specific decisions made regarding the inclusion of different elements of the design. The research methods and instruments are presented and analysed for their relevance to the research questions and for their utility value in addressing the research questions. The ethical considerations which the researcher had to take into account and the administrative procedures that were followed also come under the loop, as does the role of the researcher and the reliability and validity of the research process.

The qualitative component of this mixed method inquiry represents a case. The development of phonemic awareness in Afrikaans, by grade one Setswana speakers, and the concomitant development of early literacy skills, form the 'bounded system' (Stake, 1998; 2005) of this case. The boundaries of the system are the children's home environment and the school, which includes the curriculum, educators and classroom practice.

As researcher, I deemed this case worth investigating because of the contrast between the children's home language environments and their parent's choice of language medium of instruction and also because of the unique interaction that exists between these aspects of the children's language learning and the action that constituted the object of the study (Henning, Van Rensburg & Smit, 2004, p.41). I was interested in

finding out more about the process (*how, where, when* and *why* things happen in the situation) (Henning, Van Rensburg & Smit, 2004, p.40). I also wanted to find out what the outcome of the process (ibid) would be, and because I wanted to be able to measure this outcome, I included what I deem to be an essential quantitative component to my investigation. The design logic was multifocal since this was going to be an investigation of an activity within an activity, namely phonemic awareness development within second language learning. At the same time this nested activity took place within a three-part construct; that of the Setswana-speaking children learning; their home environment and that of the school – both conceptual ‘spaces’ of language learning (Leander, Phillips & Headrick Taylor, 2010).

Unexpected events did enter into the researched situation, for example, the class was divided into two groups early on in the year (in April) and a new teacher was introduced halfway through the school year and most of the Setswana speaking children were assigned to her class. Although this put some strain on the case - I still argue that the design logic held up and that the construct could still be studied within its boundaries. To my view, this constitutes the ‘real life happenings’ which is natural to every research situation investigating a slice of real life.

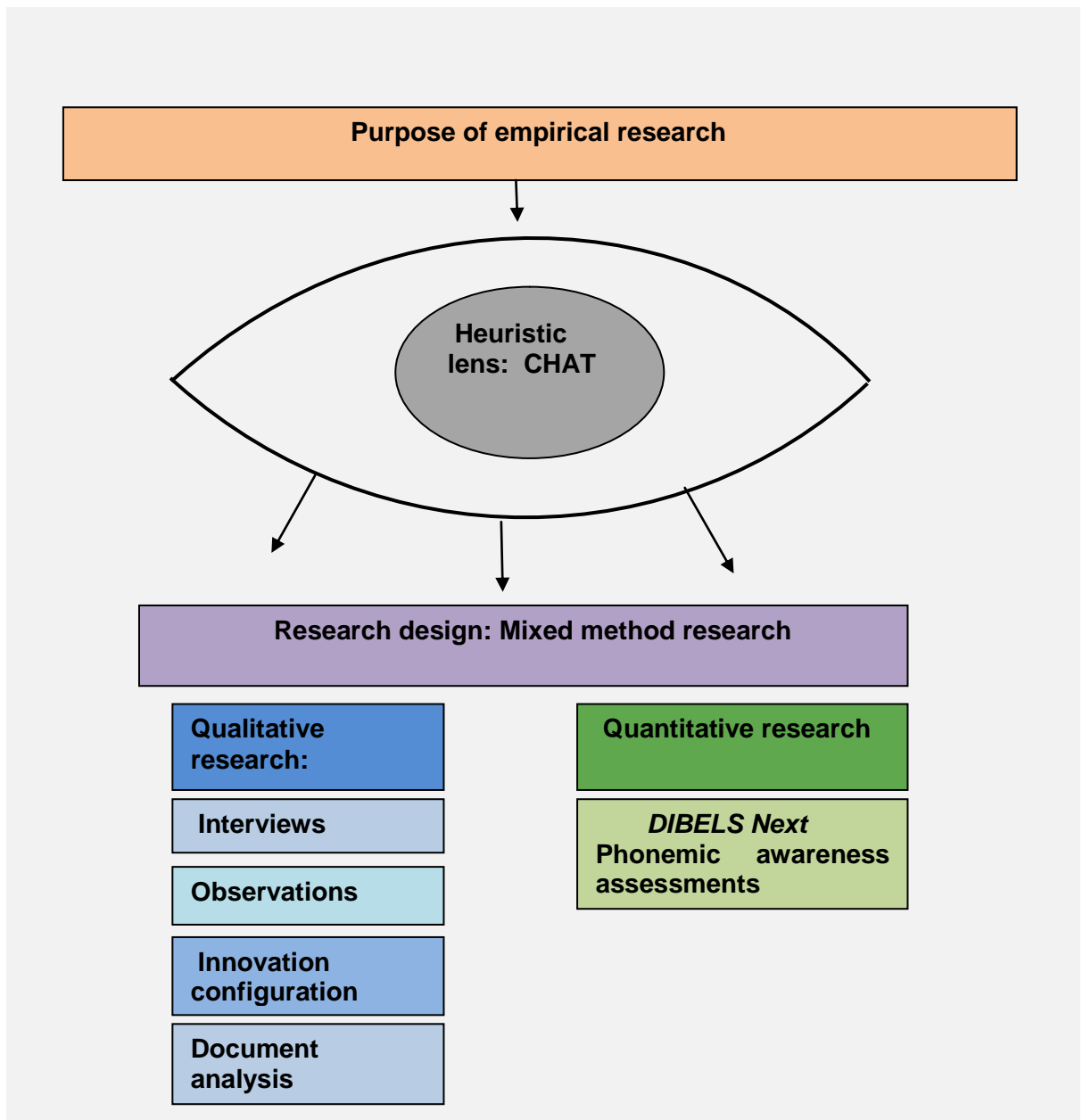


Figure 4.1 Purpose of the research

The conceptual framework of this study, derived from a three sided interplay between the Setswana speaking children, the Afrikaans medium school and the home environment (see Figure 4.2) finds expression in following five research questions, namely:

1. What is the phonemic awareness development profile of Setswana speaking grade one children within their peer group at an Afrikaans medium small-town school?

The following four questions aimed to capture the salient aspects of the situation, namely, aspects of the children's home and school environment which could play a role in their phonemic awareness development:

2. How does their home environment support the phonemic awareness development of the Setswana speaking children?
3. What are the perceptions of Setswana speaking parents, of their children attending an Afrikaans-medium small-town school, which could impact upon the children's phonemic awareness development?
4. What school support is there for the phonemic awareness development of Setswana speaking children at an Afrikaans-medium small-town school?
5. What are the experiences of the teachers and the principal at an Afrikaans-medium small-town school, related to the development of early literacy skills of the Setswana speaking children?

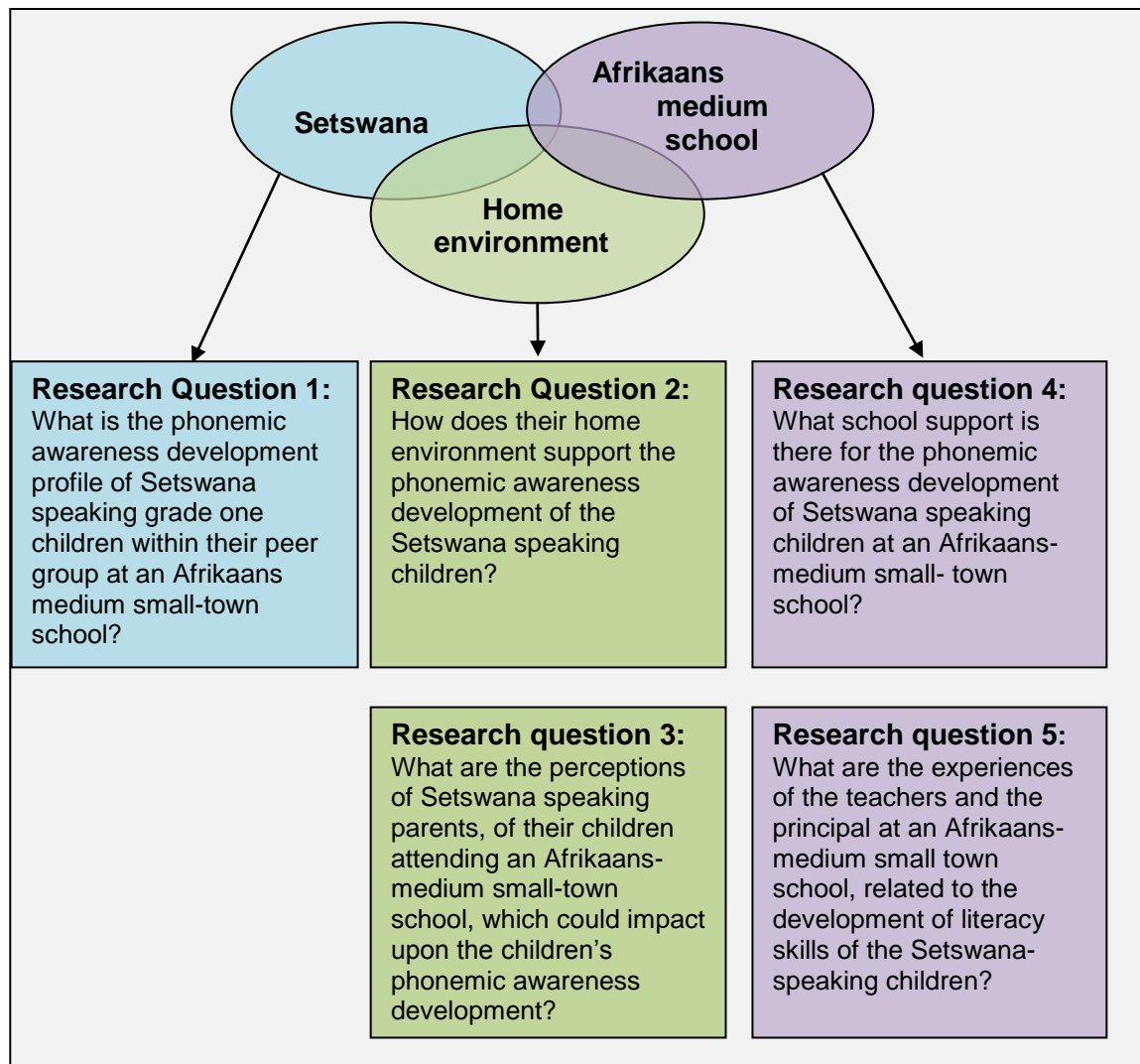


Figure 4.2 Research questions and aspects of the construct from which they derive

In order to realize the aim of the study, the following objectives were set:

1. To measure the phonemic awareness of the grade one pupils at the school.
2. To identify, explore and document aspects of school support that affect the phonemic awareness development of Setswana speaking grade one children.
3. To explore and document the experiences related to their children's phonemic awareness development and early literacy skills of Setswana speaking parents at an Afrikaans medium small-town school.
4. To explore and document the experiences of foundation phase teachers and the principal related to the development of children's literacy skills at an Afrikaans medium small-town school.

5. To capture the challenges arising at an Afrikaans school where 40% of the children are Setswana speaking and mostly from resource-poor backgrounds.
6. To describe the strategies, if any, employed by the school to promote early literacy skills, (i.e., phonemic awareness) of Setswana speaking children at the school.

Each of the objectives has an element of the three-sided construct and each of these elements is operationalisable, which means that they could be observed and documented using certain research sources and methods. These sources and methods and how they link to the research aims is shown in Figure 4.3).

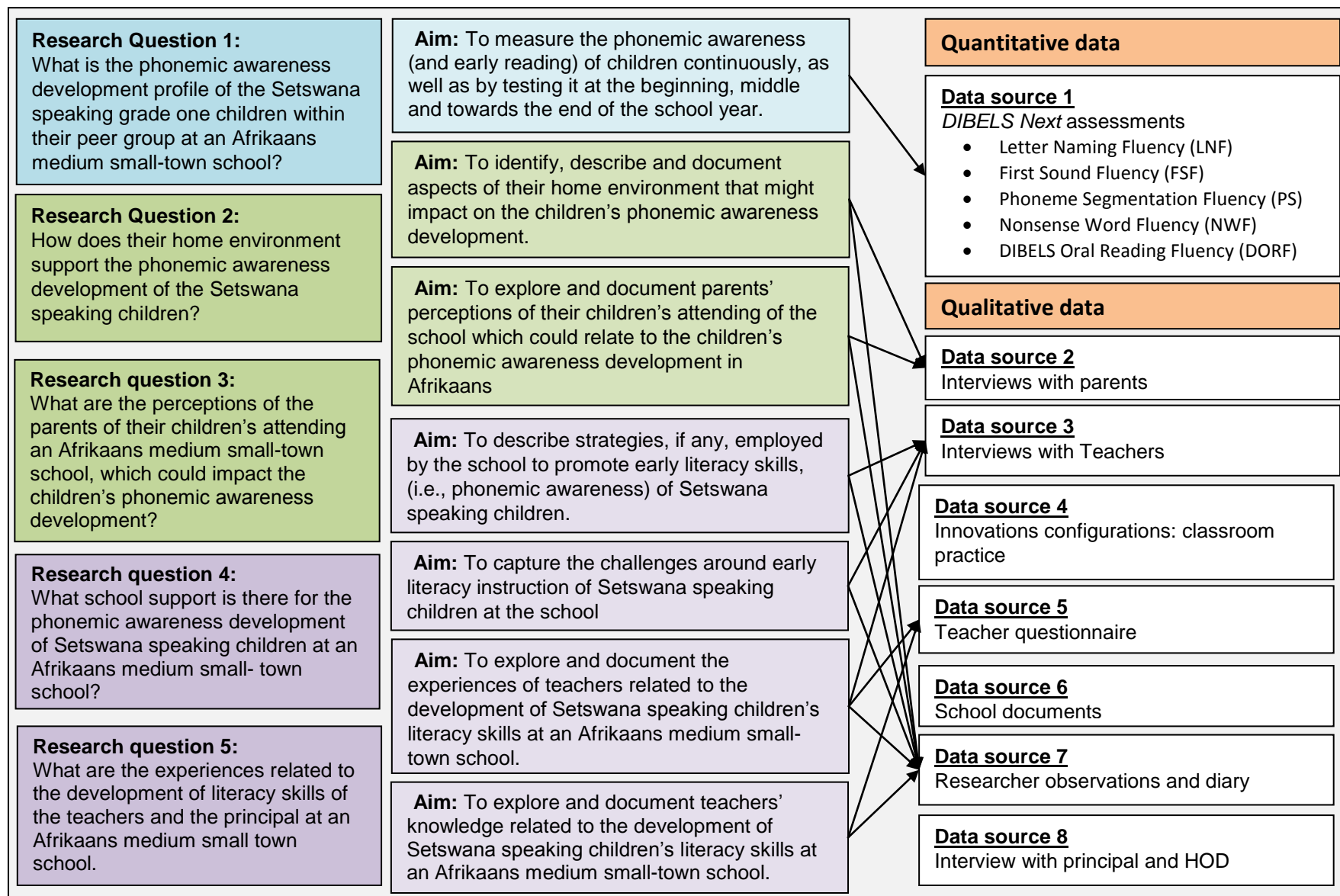


Figure 4.3 Research questions and aims aligned with data sources

4.2 A RESEARCH GENRE AND FRAMEWORK FOR THE STUDY

Activities organize our lives. In activities, humans develop their skills, personalities, and consciousness. Through activities, we also transform our social conditions, resolve contradictions, generate new cultural artifacts, and create new forms of life and the self (Sannino, Daniels & Gutierrez, 2009, p1).

According to Beatty and Feldman (2009) and Beatty (2012), Cultural Historical Activity Theory (CHAT) was developed by Engeström who based his activity theory upon Vygotsky's *cultural historical theory* and Leont'ev's (1978) activity theory. Engeström developed CHAT because he perceived a need for a more acutely trained focus on the tensions that emerge from within, what he labelled, an 'activity theory' and thus expanded the (notional) triangle conceived of by Vygotsky (1978; Kozulin, 1999) to represent his ideas. Although it does not fall within the scope of this study to elaborate upon the topic, I deem it worth mentioning that there is a difference between CHAT and another theory with which it is often equated in the literature, namely, sociocultural theory. Although, as Edwards (2007) explains, the two theories have a number of premises in common - such as, for example, the concept of mediation - the two theories are distinct from one another and were developed from different foci. Having pointed that out, the next few paragraphs will outline the genesis of and the three stages along which CHAT developed.

4.2.1 The first generation of activity theory

Cultural historical activity theory came about in three phases each of which was conceptualised in answer to a perceived deficit within the preceding situation or model. During the 1920s and early 1930s, Vygotsky conceived of activity theory as an antidote to what he perceived as a problem of dualism within the theory of psychology (Engeström, 2001; Miettinen, 1999). Two opposing schools of thought on the topic of human consciousness existed at the time (Miettinen, *ibid*). The first of these was the notion that human consciousness exists as a (conceptual) entity - separate from the physical environment within which the human lives. The prominent research method used by proponents of this viewpoint of psychology was introspection – individuals focused on their inner world and their thought patterns. The other perspective on psychology was of human consciousness as “an epiphenomenon of biology and

physiology” (ibid. p.173) with research centred on behaviourism and the study of the link between stimulus and response.

Vygotsky thus developed the first generation activity theory²⁷ in an attempt to address what he perceived as the main deficit of those two Cartesian views of psychology, namely, that of the individual as an isolated unit apart from, instead of part of, the environment and the community (Engeström, 2001). Vygotsky (1978) viewed the action of the human agent toward an object or outcome as mediated by cultural means or semiotic indicators, such as tools and artefacts, and signs (Kozulin, 1999; Beatty & Feldman, 2009). This view of Vygotsky’s, according to Engeström (2001), transcended the perspective of the “conditioned direct connection between stimulus (S) and response (R)” (p.134) (see Figure 4.2). Tools can be technologies such as hammers or computers; cultural artefacts such as language and art; or theoretical artefacts such as mathematics and curricula (Van der Vyver, 2012a). The individual internalises these semiotic indicators by engaging in social interaction with other human beings (Beatty & Feldman, 2009). Human consciousness, according to Vygotsky, is not situated in the human brain, but rather in the activity of the individual interacting with others – an activity mediated by the tools, artefacts and signs which are created by the culture within which the individual is situated (Miettinen, 1999; Beatty & Feldman, ibid.).

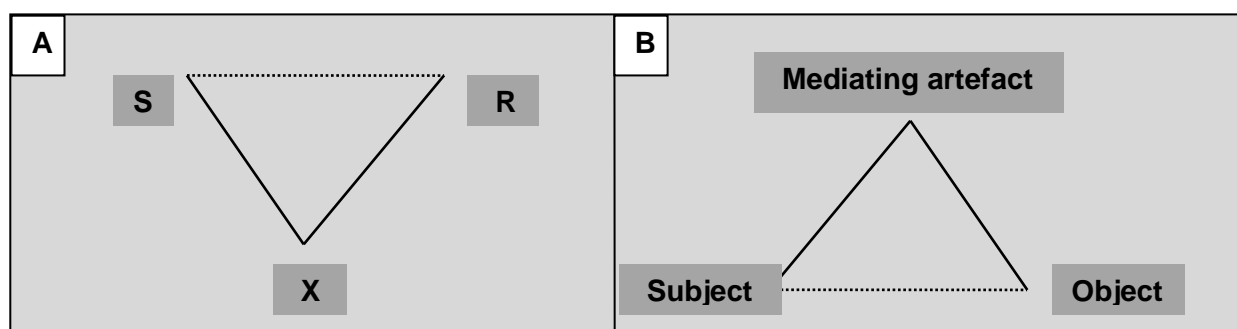


Figure 4.4 Engeström’s reformulation (B) of Vygotsky’s model of mediated action (A). Adapted from Engeström (2001. p. 134)

According to Ilyenkov (1977), Lektorsky (1980) and Backhurst (1991) (all cited in Miettinen, 1999), Vygotsky’s activity theory is an expansion of Marx’s historical anthropology. By contrast, Smagorinsky (2012)²⁸ argues that Vygotsky’s views on a

²⁷ Vygotsky did not refer to his conceptualisation of an activity system as ‘first generation activity theory’ – the term came about as a result of subsequent expansions upon his theory (see van der Vyver, 2012a).

²⁸ Smagorinsky, although a noted scholar on Vygotskian theory, has disassociated himself from activity theory as conceived by Engeström.

number of issues were not all that well received by the authorities within Russia. One of these issues was Vygotsky's lifelong concern with special needs children whom, he believed, did not so much need remedial therapy as a change in the attitude of the society within which they live (ibid). At that point, in Russia, psychologists and pedologists were constantly being monitored for any opposition to the repressive Leninist ideologies of the state. Thus, Smagorinsky (ibid.) suggests, although "Vygotsky no doubt embraced much about Marxism... (it was)...not enough to suit the state" (p.12). Citing Cole in a personal communication, Smagorinsky (ibid, p.10) poses the possibility that perhaps, when Vygotsky died of tuberculosis in 1934, he barely escaped facing "interrogation, torture and execution by the authorities over his departure from the state's more exacting interpretation of Marx". Certainly, even before his death, his works were banned and his demise coincided with merciless and oppressive legislature such as the Penology Decree of 1936 which banned all preceding and future research in the field of child development (Shmeleva, 2002 in Smagorinsky, 2012).

Smagorinsky, a notable scholar on Vygotskian theory (see Smagorinsky & Fly, 1993; Lee & Smagorinsky, 2000; Smagorinsky, 2007; 2009; 2012), had disassociated himself from activity theory as conceived of by Engeström, because of its strong orientation "to collectives rather than contextualised individuals" (Smagorinsky, 2012, p.xxxviii). Despite this, I conclude this discussion of first generation activity theory with these words of Smagorinsky's (2012) - words which, to my mind, succinctly encapsulates Vygotsky's (1978) notion of mediated action:

...psychology ought to be fundamentally developmental in focus, with volitional, goal-directed, tool-mediated action in its social, cultural and historical context serving as the unit of analysis for studying human growth, understanding, and action (p. xxxv).

4.2.2 The second generation of activity theory

The introduction of cultural artefacts as instruments of mediation of human action meant that individuals could be understood against the background of societal structures within which action is mediated by cultural artefacts which are used and produced to a purpose, namely the object or outcome of the activity (Engeström, 2001). This meant that objects became "cultural entities and the object orientatedness of action became the key to understanding human psyche" (ibid, p. 134). However, the unit of analysis within the first generation of activity theory – the individual – imposed some limitations upon the conceptual application of the activity (ibid). In response to this, Leont'ev, a

colleague of Vygotsky's developed second generation activity theory from Vygotsky's idea of semiotic mediation in human cognitive development in an attempt to expand from a focus of the individual to a focus on the collective as unit of analysis (Antoniadou, 2011).

Leont'ev (1978) uses the image of a group of primeval hunters to explicate how the actions of the individual (in this case, the bush beater) have meaning, only as part of the collective action of the group (Youn & Baptiste, 2007). The actions of the individual, when seen in isolation, therefore, do not necessarily enable the meeting of the objective of the activity of the collective. The Russian scholar (Leont'ev, 1987) further elucidates his views by distinguishing three levels of human activity, ranging from the level of the concrete to the abstract namely 'operations', 'actions' and 'activities' based on what each actuates (Youn & Baptiste, 2007). These are illustrated in Figure 4.5 which was generated from Youn's and Baptiste's (ibid, p. 662) discussion on Leont'ev's contribution to CHAT.

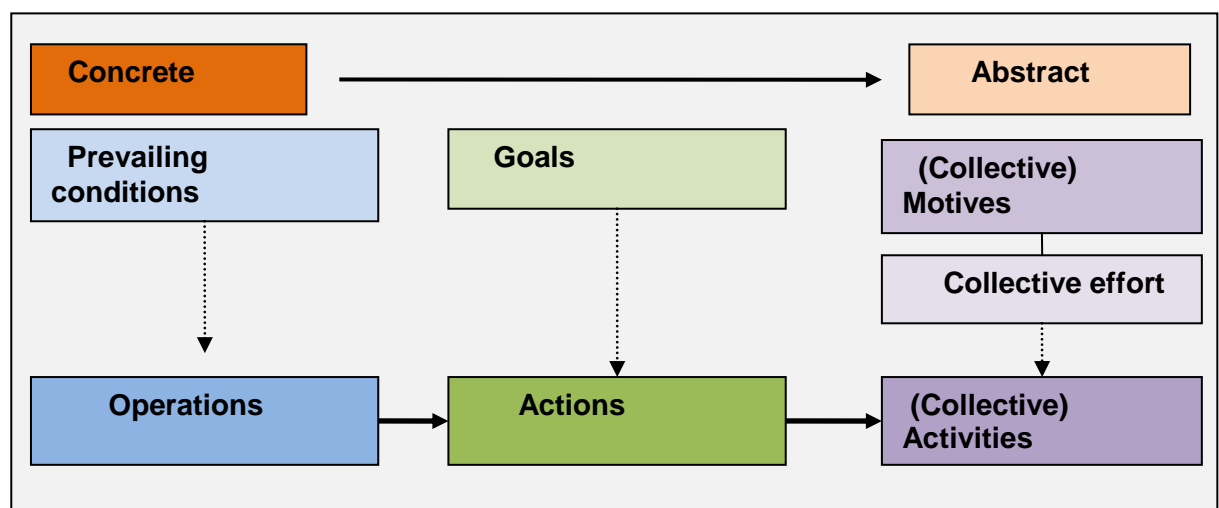


Figure 4.5 A graphic depiction of Leont'ev's conceptualisation of collective activities. After Youn and Baptiste (2007, p.662)

As depicted in Figure 4.5, at the most concrete level, lies *operations* which are specific ways of executing a task, for example, specific strategies are applied to memorise a mathematical equation or of riding a bicycle. Operations are driven by '*prevailing conditions*' and, since people have different levels of knowledge, power and resources, they also differ in the way they perform certain tasks (Youn & Baptiste, 2007, p. 662). At the other end of this conceptual spectrum lies *activities*, which are prompted by *motives*. Motives, according to Youn and Baptiste (ibid, p.662) are "biologically-induced,

culturally-mediated drives, desires (and) interests” which include “sex, recreation, entertainment, mobility, physical safety, economic security, dignity” etc. At an intermediate level between the concrete and the abstract are *actions*, which are directed by *goals*. Youn and Baptiste (ibid) define goals as “intermediary objectives, undertaken to satisfy one or more motives”. *Motives* are therefore, according to these authors (ibid), more primary, more elemental, more abstract and more ubiquitous than goals.

Despite expanding upon Vygotsky’s model (see Figure 4.4) into an activity system of the collective, Leont’ev never did so graphically (Engeström, 2001). In the next section the generation of Engeström’s CHAT from the prototypical contributions of the two Russian scholars’ work will be shown.

4.2.3 The third generation of activity theory

Once Vygotsky’s ideas were read by the international scholarly community it became clear that its application to culturally diverse collectives was limited (Cole, 1988). This challenge of relevance incited a number of scholars to engage upon the development of the notion of activity.

In this section I make use of Engeström’s references and his exposition on the development of third generation activity theory. According to Engeström (2001), who was, at that point, developing the third generation of activity theory, Wertsch (1991) used some of Bakhtin’s (1981; 1986) ideas of dialogicality to expand upon the framework, after which Ritva Engeström (1995) combined the ideas of Bahktin (ibid) with Leont’ev’s conceptualisation of collective activity. Engeström (2001) further explains that some principles of activity networks were developed by Russel (1997) and the dialogue between activity theory after which the actor-network theory of Latour’s (1993) was initiated by Engeström and Escalante (1996) and Miettinen (1999). At the time of his writing about this prelude to the development of third generation activity theory, Engeström (2001, p.135) reports on the elaboration of the ideas of ‘boundary crossing’ (Engeström, Engeström, & Kärkkäinen, 1995) and ‘third space’ by Gutierrez, Rymes and Larson (1995) - concepts which indicate the meeting and interaction within the discourse of the classroom of the ‘worlds’ of the teacher’s script and the learner’s learning – toward the construction of new sense being made which transcends the limits of both seemingly separate ‘worlds’. To Engeström’s (2001) mind, the development of these ideas pointed to an opportunity and a readiness for the construction of the third generation of activity theory.

Since, by now, the discussion has entered the realm of CHAT proper, albeit at the point of its inception, from here onward the model will be discussed and used to elucidate aspects of the case in this inquiry. Considering that an activity is always interrelated with multiple other activity systems, as is explained in this discussion of the different conceptual ‘nodes’ of the activities in this case, the Setswana speaking grade one children.

Engeström (2001) depicted the elements of third generation activity theory and their interrelatedness in the form of a triangle diagram (see Figure 4.6).

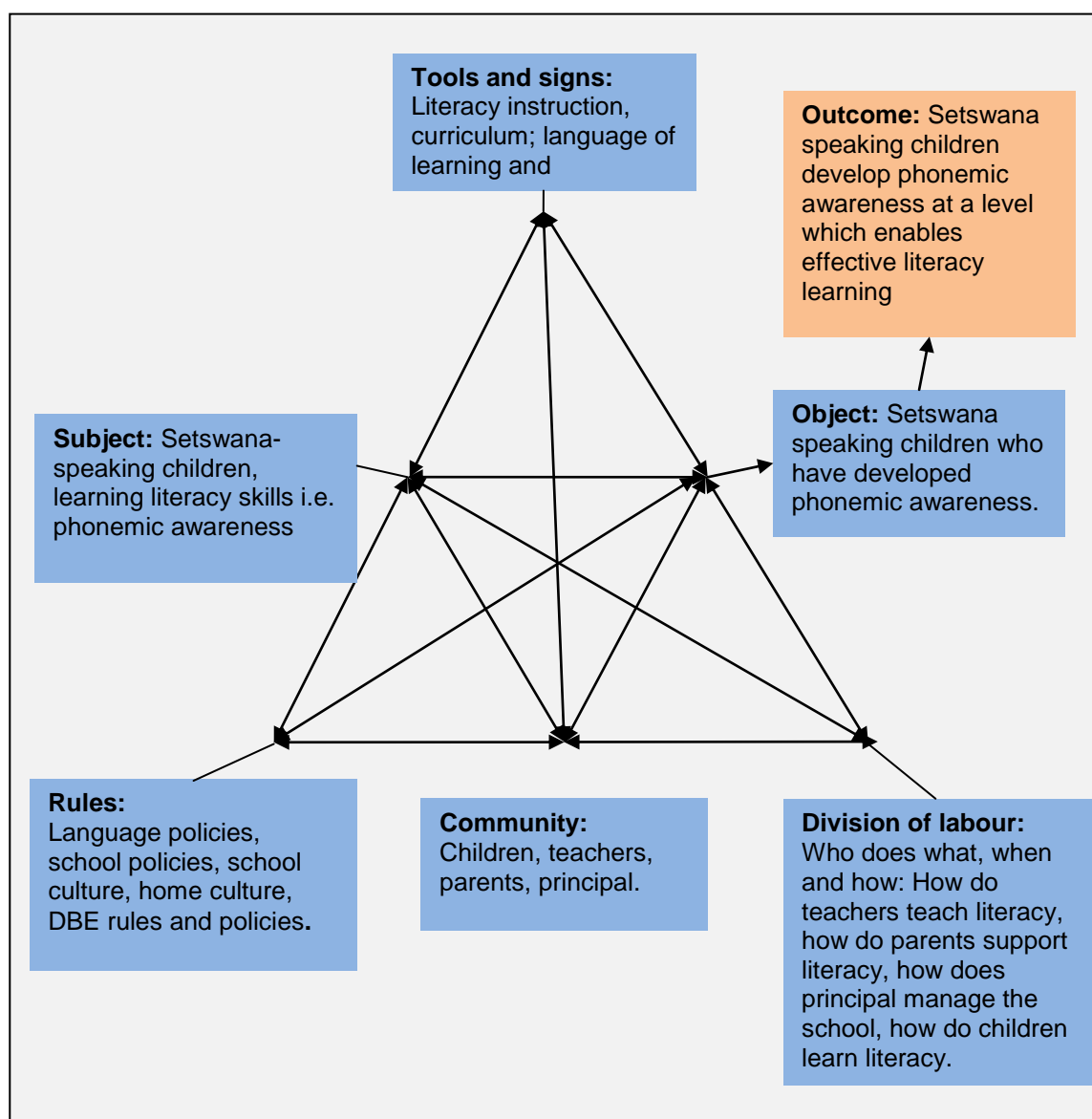


Figure 4.6 The interrelatedness of elements of second-generation activity theory. Adapted from Engeström (1987)

The *subject* within the activity system indicates the individual or group whose actions we want to comprehend – in other words, the focus of our analysis. In the instance of this study, it is clear from the research questions and the aims of this inquiry that we are trying to get a better understanding of the grade one Setswana speaking children who are engaged in the activity of learning phonemic awareness and early literacy in Afrikaans.

The *object* in the activity system is that which motivates the actions of the subject (Engeström, 2001). According to Blackler's (2009) discussion of Engeström's work, it is important that 'object' should not be equated with an 'objective'. Rather, the object should be viewed as that upon which the actions of the subjects are lodged (Beatty & Feldman, 2009) and that which is likely to be implanted in more than one activity system at the same time (Blackler, *ibid*). According to Engeström (1999), the object within an activity system is:

...a project under construction, moving from potential raw material to a meaningful shape and to a result or outcome. In this sense the object determines the horizon of possible goals and actions. But it is truly a horizon: as soon as an intermediate goal is reached, the object escapes and must be reconstructed by means of new intermediate goals and actions. (p.65).

The "project under construction" (*ibid*, p.65) in this study is the Setswana speaking children, engaged simultaneously, in activity within at least two of a range of activity systems, namely; learning phonemic awareness and learning the sounds and structure of a second language. We might, therefore, rather speak of 'projects under construction'. The activity in this case is phonemic awareness development, a construct which exists as an intrinsic part of another activity, namely, early literacy learning. Thus, the object of becoming aware of the phonemes of Afrikaans, in this case, truly is 'a moving target, not reducible to short term goals' (Engeström, 2001, p.136). The target of *developing phonemic awareness* will almost imperceptibly shift to that of being able to *map phonemes to their corresponding graphemes* (phonics) which will soon give way to the aim of being able to *read fluently*, after which the goalposts will shift once more to *expanding vocabulary*, and finally to *reading for comprehension* (Snow, Burns & Griffen, 1998).

According to Blackler (2009, p.27), objects of activity should be viewed as 'simultaneously given' – the Setswana speaking children in grade one of an Afrikaans medium school are acting toward a multitude of simultaneous objects; phonemic awareness development, mastering classroom discourse, learning the sounds of Afrikaans, etc. Secondly, Blackler (ibid) speaks to the 'socially constructed' nature of objects of activity. In this case, phonemic awareness development is a construct which, at this point in time, is taken to carry a certain meaning given it by current scholarly views on its importance in early literacy learning, by the current curriculum (see section 3.8), as well as the meaning ascribed to it by teachers – based on their current knowledge and attitudes. Thirdly, Blackler (ibid) says that the object of activity is 'contested'. Phonemic awareness development, therefore, might or might not be deemed important by the teacher, by the head of department at the school, in the curriculum, by parents etc. Certainly, the definition of phonemic awareness varies in the literature (Geudens, 2006) and its importance in early literacy learning is contested (ibid). Lastly, Blackler (ibid) describes the object of the activity as 'emergent'. This I take to indicate the interconnectedness of the object and the activity. In the case of phonemic awareness development, it is in through the very 'doingness' (De Beer & Henning, 2011) of the activity of learning phonemic awareness that it comes about. It is only when children are made consciously aware that each word begins with a certain sound that they eventually realise that words can be taken apart into their component sounds and that words can be put together by combining sounds in a certain order.

If one imagined the teacher as the subject of an activity system, it is conceivable that the activity within that system could be directed at the same object than the one in this study namely, *Setswana speaking children who have developed phonemic awareness*. And the extent to which this outcome is realised depends, therefore, on how well these two activities meet one another – how effectively the teacher teaches is related to how effectively the learners learn. Note however, that the activity in the second (imagined) system - that of the teacher teaching, is not completely causal to the children learning – even a very skilled teacher who applies highly effective instructional methodologies and who engages closely with her class, and monitors them closely, is up against huge odds if, for example, the children are so malnourished that they cannot concentrate or if the curriculum allows too little time for phonemic awareness activities. A lot depends on some of the aspects of the activity represented by the other 'nodes' thereof. Having illustrated Blackler's notion of the transferability of the outcome between related activity systems, the focus will now return to the activity which was conceived of as heuristic for

this inquiry namely one in which the Setswana speaking children developing phonemic awareness are cast as the subject.

The *outcome* of the subject's acting on the object - of the Setswana speaking children undergoing a process of developing their awareness of individual sounds in Afrikaans - is the ability to map those individual sounds onto their corresponding alphabetic symbols with the aim of being able to read Afrikaans words and sentences and furthermore, to understand what is being read. The outcome therefore includes the dimension of children who are ready to read, not only words, but sentences and eventually meaningful text which will help them progress through school.

The *subject* makes *artefacts* or *tools* to act towards the *object* of the activity in order to bring about *outcomes* (Beatty & Feldman, 2009). These *tools* or *artefacts* can be seen as inherently semiotic, mediational means bearing the standards and the signs of the culture - particularly in how this manifests in language (van der Vyver, 2012a). *Tools* can be physical, such as the classroom space and school buildings within which the children learn; or cognitive, such as mnemonic strategies which the child utilises in the classroom; or symbolic - such as the language (and registers thereof) the child hears and learns to use in the classroom (ibid).

The *community* within the activity system is made up of all the participants who are involved in the *collective activity* with the subject, together with other people or groups who are invested in the *object* of the activity (Engeström, 2001). The *object* therefore delimits the community and differentiates it from other communities (ibid). In the situation of this study, the teachers and other staff at the school, the parents, the school governing body, the principal, the head of the foundation phase at the school, local government and the Gauteng Department of Education and its representatives could all be seen to form a part of the *community* of the activity system.

Division of labour refers to two strata of the division of tasks, between members of the *community* within the activity system. These strata are: A *horizontal division of labour* (Centre for Activity Theory and Development work Research, 2003, in Beatty & Feldman, 2009), in other words - *who* does *what*, *how* is it done and at *what time*, and: A vertical division of labour - of the community's perceptions of power and status (ibid) and the hierarchical allocation of positions within the system. As far as the horizontal division of labour within the activity is concerned, the teacher and the classroom assistant each have their appointed functions to perform, as do the principal, the head of the foundation phase, parents etc. The vertical division of labour - how power and status is distributed

among the role players in the activity - is more complex. Many of the Setswana speaking parents of children at the school work for the Afrikaans speaking parents of children at the school and are dependent on their employers for transport for their children to get to school. By contrast, the daughter of the Setswana speaking town counsellor and the children of other affluent Setswana speaking members of the community, also attend this school. This brings complexity and possible tension to the activity in as much as it challenges community members' notions of power and status.

Implicit and explicit *rules* direct the behaviour of the community members through norms, regulations, conventions, religion, beliefs and taboos (Beatty & Feldman, 2009; Van der Vyver, 2012a). Implicit rules are unexpressed rules such as, for example, traditional beliefs about schooling (teacher stands in front of rows of tables and chairs in classroom), or explicit and stipulated in documents such as laws, policies and regulations (Van der Vyver, 2012a). Examples of explicit rules within the activity system in this case, include curriculum directives, such as the amount of time allocated to different aspects of the curriculum (see section 3.8; Table 3.2); school rules, such as regular meeting times for the foundation phase teachers, safety rules, such as that the gate to the school is manned by a security guard who does not allow anyone else but staff in without contacting the principal; classroom rules, such as that children clean the classroom before school closes in the afternoon, etc. Implicit rules include often contradictory beliefs about gender roles at the school. For example, girls leave the classroom before boys, yet two female teachers are rugby/cricket coaches for boys' teams at this school. Second language learning and early literacy instruction are other areas which role players at the school have strong beliefs about.

4.2.4 Principles of CHAT

Engeström (2001) considered the following four questions as central to any activity system. *Who are the subjects of learning/teaching? And why do they learn/why are they being taught? What do they learn/what are they being taught? and; how do they learn/how are they being taught?* Furthermore, this theorist (ibid) conceived of five principles of third generation activity theory which could be applied to render a more encompassing perspective on aspects of CHAT as a heuristic. From the four questions and the five principles, Engeström conceived of a matrix that could guide his idea of expansive learning (see Table 4.1). Expansive learning, according to Engeström, is the process through which people and organisations "learn new forms of activity which are not yet there". These are being created continually through the process of learning.

In this section, I present, first of all, the matrix described in the previous paragraph (see Table 4.1). Because of limited space²⁹ I have labelled the points of intersect, instead of filling them in on the table, so that they can be explained in detail, in the text. I also present, at the beginning of the discussion of each of the five principles, verbatim, Engeström's (2001) description of each, after which they are applied to some of the aspects of the case in this study.

Table 4.1 Engeström's matrix of expanded learning

	Who are learning/teaching?	Why do they learn/teach?	What do they learn/teach?	How do they learn/teach?
<u>Principle 1:</u> The activity system as unit of analysis	A	B	C	D
<u>Principle 2:</u> Multi-voicedness	E	F	G	H
<u>Principle 3:</u> Historicity	I	J	K	L
<u>Principle 4:</u> Contradictions	M	N	O	P
<u>Principle 5:</u> Expansive cycles	Q	R	S	T

Note: Adapted from Engeström, 2001

The first principle is that a collective, artifact-mediated and object-oriented activity system, seen in its network relations to other activity systems, is taken as the prime unit of analysis. Goal-directed individual and group actions, as well as automatic operations, are relatively independent but subordinate units of analysis, eventually understandable only when interpreted against the background of entire activity systems. Activity systems realize and reproduce themselves by generating actions and operations (Engeström, 2001, p. 136).

²⁹ The questions and the principles are too lengthy to fit into the matrix.

Referring to the point of intersect in the matrix in Table 4.1, the children developing phonemic awareness - cast as the subject of the activity system (see Figure 4.6) - is taken, collectively, as the prime unit of analysis in this study (A). At this school, for example, the development of phonemic awareness (B) by the children as well as how the teacher helps facilitate it cannot be seen separately from the expectations, attitudes and actions of the rest of the community. The parents have certain perceptions of the teacher's ability to teach early literacy skills. The curriculum and those responsible for making sure that it gets implemented – such as officials from the department of education, the principal, and the head of the foundation phase at the school - all impose certain 'goal orientated' requirements (C) upon the activities of the teacher who, in turn, makes sure that the children spend a certain amount of time on certain phonemic awareness activities, such as for example, identifying the first sound of a word (D).

The second principle is the multi-voicedness of activity systems. An activity system is always a community of multiple points of view, traditions and interests. The division of labor (sic) in an activity creates different positions for the participants, the participants carry their own diverse histories, and the activity system itself carries multiple layers and strands of history engraved in its artefacts, rules and conventions.

The multi-voicedness is multiplied in networks of interacting activity systems. It is a source of trouble and a source of innovation, demanding actions of translation and negotiation (p.136).

An activity system is always made up of a community which represents multiple points of view, different traditions, and varying interests (Beatty & Feldman, 2009). This multi-voicedness of the community in the conceptual activity system in this study could play a prominent role in how the object (children's phonemic awareness development) is realised and, I suspect, the multi-voicedness in this case has a lot to do with the language medium of instruction and with perceptions of school functionality.

The focus of this study is on grade one Setswana speaking children at an Afrikaans medium school. This implies that there are voices that are 'for' these children learning at this school, as opposed to at one of the Setswana medium schools, or one of the English medium schools, or at the dual medium (English and Afrikaans) school in the area (G). These 'voices' probably constitute a spectrum (E), including those of the Setswana children's parents, the language in education policy, the school governing body, etc. This spectrum probably also constitutes varying opinions and motives. The

parents have specific motives for putting their children into this school over other, Setswana medium schools or schools that are closer to their homes (F). Seeing as though all the teachers at this school are Afrikaans speaking, and seen in light of the perceived threat to Afrikaans as medium of instruction (Farmer & Anthonissen, 2010; Southern, 2012), it seems likely that there might be emphatic 'voices' which speak 'for' maintaining the Afrikaans medium of the school (F). As to 'how' phonemic awareness is learnt and taught at this school, it is very likely that the teachers and the head of the foundation phase, who guides and monitors the implementation of the curriculum, apart from following the directives of the CAPS and the teachers workbook, might have strong convictions over how phonemic awareness should be instructed (H).

The third principle is historicity. Activity systems take shape and get transformed over lengthy periods of time. Their problems and potentials can only be understood against their own history. History itself needs to be studied as local history of the activity and its objects, and as history of the theoretical ideas and tools that have shaped the activity. Thus...work needs to be analyzed against the history of its local organization and against the more global history of the ...concepts, procedures and tools employed and accumulated in the local activity (Engeström, 2001, p.136-137).

Activity systems evolve over time. Setswana speaking children (I) started attending this Afrikaans-medium school eight years ago, (in 2008) as a result of one of the Setswana speaking schools in the area closing down and the Gauteng Department of Education decreeing that the Setswana-speaking children come to the Afrikaans-medium school (J). This decision was not made as a result of consulting with the parents or teachers at either of the schools. Thus, this event was, in a way, forced upon the children, the parents and the staff at both schools. Issues around language of education, at the time, resulted in rather intense reactions from the Afrikaans community in the area of the school (Researcher preliminary notes). However intense this moment in time might have been to the role players, the question of *who* it is that is learning conceptually intersects with the principle of *historicity*, not at one particular point only, but rather along a range of moments, which continue into the present. The answer to the question of *who* is developing phonemic awareness has certainly changed over the course of time (I). At a certain point in history, the answer to this question changed suddenly and radically from 'Afrikaans speaking children only' to 'a mixture of Afrikaans and Setswana speaking children' (I) because of the closing down of the Setswana medium school and the

amalgamation of the learner population of the two schools at the site of the Afrikaans medium school (J). In 2014 (the first year of this research project), for the first time ever, a Setswana speaking girl was chosen as head girl at the school – symbolic, perhaps, of a certain level of equilibrium³⁰ which had been reached regarding language of instruction in the community of the school. As far as the teachers are concerned, the intersect between the question of *who* is teaching also changed at the point of amalgamation, eight years ago, when only the teaching staff at the Afrikaans medium school was retained. Although some of the supporting staff made the transit too, the children received phonemic awareness instruction, suddenly, not only from a different teacher (I) but in an entirely different language (K).

A more recent historic event which impacted upon the activity in the system happened half way through the school year of the first year of this inquiry (2014). A second grade one teacher was appointed (I) because the class size had increased to such an extent that it was deemed in the best interest of the grade one children at the school to split the class in two. Each class was appointed a teacher, and the classroom assistant now spent her time shared between the two (adjacent) classrooms (J). This certainly impacted on the *what* and the *how* of the activity as the new teacher brought her own idea of *what* (K) constitutes phonemic awareness and of *how* it should be instructed (L) to the situation.

The fourth principle is the central role of contradictions as sources of change and development. Contradictions are not the same as problems or conflicts. Contradictions are historically accumulating structural tensions within and between activity systems. The primary contradiction of activities in capitalism is that between the use value and exchange value of commodities. This primary contradiction pervades all elements of our activity systems. Activities are open systems. When an activity system adopts a new element from the outside (for example, a new technology or a new object), it often leads to an aggravated secondary contradiction where some old element (for example, the rules or the division of labor collides with the new one. Such contradictions generate disturbances and conflicts, but also innovative attempts to change the activity.

³⁰ Equilibrium in activity systems are never fully reached and are transient.

4.2.5 Tensions within the activity system

From the discussion of the way specific aspects of this case ‘fit’ onto the conceptual nodes of the heuristic of the activity system, it is clear that there is a potential for some tensions to develop. The Setswana speaking children are taken as the subject of the activity system, and ‘developing phonemic awareness’ as the activity, with the object being that of knowing how to manipulate the phonemes of the Afrikaans language, which is also the language of the classroom. It would seem then that the extent to which the object is met, or the outcome achieved, depends on how the *tools* – that of early literacy learning, are made available to the subjects, by the teachers as members of the community who have to abide by certain rules. Some of these rules could be; the time allocated by the national curriculum statement to, what that document, variably, and rather vaguely, describes as phonemic awareness instruction (see section 3.8).

By looking at this tiny slice of the activity system, the likeliness of a number of tensions arising from the activity is apparent. For example, there is possible tension in the difference between the children’s home language and that of the classroom and also within the different registers of Afrikaans which the child has to learn to engage in and respond to (for example, the register of the playground, the register of the classroom, and that of the principal during a school function). Then, there is a likelihood of tension in how the children perceive the different roles of the grade one teacher, and later on, of the second grade one teacher and of the classroom assistant and of how they are supposed to behave toward each. Also, there is classroom protocol – the overt/covert rule of; listen to what the teacher says; respond to her question; then listen to the feedback she gives. Furthermore, considerable tension could be generated by the socially constructed dichotomy of the Setswana speaking child of a farm labourer being made ‘class leader for the day’, and so, be able to tell the child of your parents’ employer to sit down and keep quiet. Tension lies in the subject acting toward achieving the outcome of the activity: To learn to say, with varying success, the different sounds of Afrikaans, some of which might not have been encountered before (for example, the phoneme /v/) which does not exist in Setswana) (see section 3.5).

The fifth principle proclaims the possibility of expansive transformations in activity systems. Activity systems move through relatively long cycles of qualitative transformations. As the contradictions of an activity system are aggravated, some individual participants begin to question and deviate from its established norms. In some cases, this escalates into collaborative envisioning and a deliberate collective change effort.

An expansive transformation is accomplished when the object and motive of the activity are reconceptualised to embrace a radically wider horizon of possibilities than in the previous mode of the activity. (Engeström, 2001, p.137).

A full cycle of expansive transformation may be understood as a collective journey through the zone of proximal development of the activity:

It is the distance between the present everyday actions of the individuals and the historically new form of the societal activity that can be collectively generated as a solution to the double bind potentially embedded in the everyday actions. (Engeström, 1987, p. 174)

In the next section the research design, namely mixed method research, and the research approach, namely pragmatism, will be explained.

4.3 MIXED METHOD RESEARCH: A PRAGMATIC APPROACH TO RESEARCH

A research design can be said to be a blueprint or outline of the 'investigatory strategy' for the envisaged research (Trafford & Lesham, 2008). Designing a study involves the researcher laying out research methods and procedures in a certain way so that data relevant to the answering of the research question is collected, analysed and interpreted in a scientific way (Henning, Van Rensburg & Smit., 2004, p.30). Research design provides cohesion between the different components - the design, sampling and methods work together to address the research question (Cresswell & Garrett, 2008). To this end I made use of a mixed method design and of multiple data collecting strategies from different sources and different participants in the study. Mixed methods research comes about in response to research questions which predisposes the design to the collection of both quantitative and qualitative data in order to address specific questions (Cresswell & Garrett, 2008). After the collection of both quantitative and qualitative data the data is merged, linked or combined into a unitary inquiry or a multiple-phase longitudinal study (ibid).

Significant debate exists in the literature about the merits of using either a qualitative or quantitative approach to research. This debate has caused a divide between the proponents of each methodology. Onwuegbuzie and Leach (2005) however, label this

divide a 'false dichotomy'. Onwuegbuzie and Leech (2005) posit that such a distinct polarisation is erroneous since there are considerable similarities between the two methodologies. These authors (ibid) argue for a 'pragmatic' approach which combines positivist and interpretivist methodologies in the same study.

Mixed method research refers to a research design which involves the combination of quantitative and qualitative techniques and methods to effectively address the research questions (Cresswell & Plano Clark, 2007, p.5). The aim of a mixed method design is to draw from the strengths of both qualitative and quantitative methods and to minimise possible weaknesses (McMillan & Schumacher, 2006, p.401). The conceptual balance between the two components – quantitative and qualitative - of this design is depicted in Figure 4.6 which shows that although the quantitative data in this inquiry forms a relatively small component of the study, it effectively counterbalances the more prolific qualitative data by weight of it being the only measure of the main construct of the research, namely the phonemic awareness development of the Setswana speaking children. Without this quantitative component, it would be difficult to determine whether or not the children had made progress in developing phonemic awareness. The diagram also shows how the two components of the mixed method research are both supported by a pragmatic approach to the study.

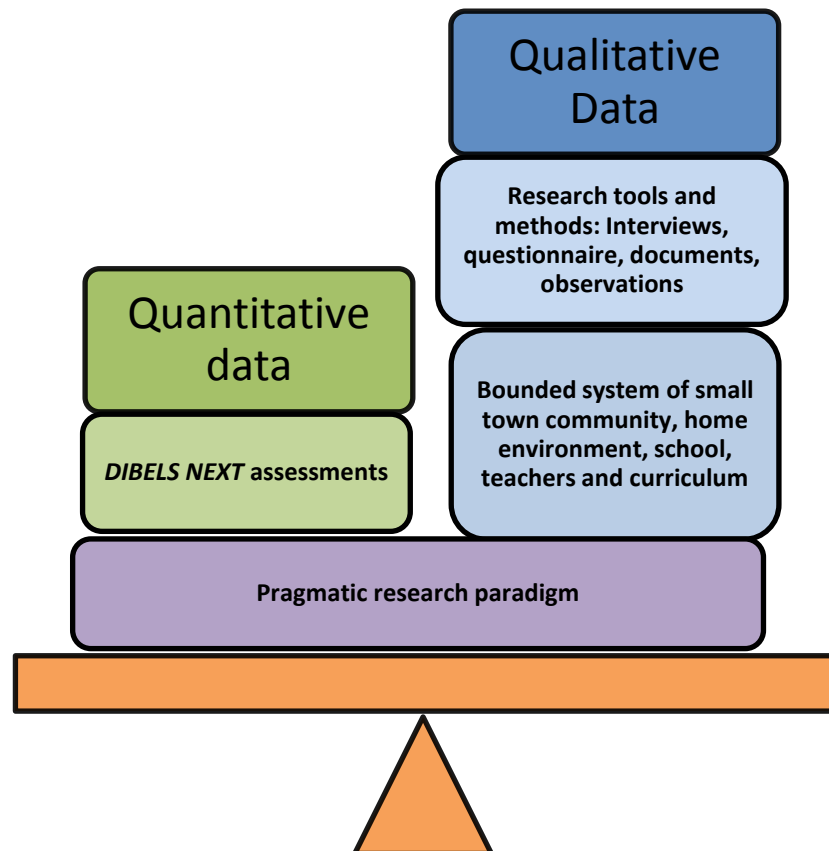


Figure 4.7 Balance in the design of the mixed method study and the underlying support rendered by a pragmatic research paradigm

As is clear from the title of this study, this investigation has as its main constructs, the Setswana speaking children's development of phonemic awareness in Afrikaans. The process of *development* implies an unfolding of a skill, or a progression toward mastery of a skill. This is reflected in both the first research question as well as the first research aim of this inquiry (see Figure 4.3). How to go about determining whether or not the children developed phonemic awareness, and if they did, to what an extent they did, was the most important aim of this design. Since phonemic awareness is a measurable construct for which various instruments have already been developed, I decided to include a quantifiable component to the investigation, thus rendering it a mixed method research design.

There are broadly three types of mixed method designs (McMillan & Schumacher, 2006, p. 404). These are; explanatory, exploratory and triangulation and refer to the order in which the different methods are employed and the priority given to each method. In the

case of this inquiry, the nature of the research problem, and the resultant research questions, requires a triangulation design.

4.3.1 Background to mixed method design

Although the term 'mixed method research' was only coined more recently, in the 1980's, Johnson, Onwuegbuzie and Turner (2007) point out that qualitative and quantitative methodologies had been combined within single studies by anthropologists and sociologists such as Lynd and Lynd (1929;1959), Jahoda, Lazarsfeld and Zeisel (1931; 2003) and Hollingshead (1949) as early as 1929 and onward. Johnson, Onwuegbuzie and Turner (ibid) place the idea of mixed method research on a conceptual continuum between the philosophies of Plato (as representative of the quantitative research paradigm) and that of Sophists such as Protagoras and Gorgias (as representative of the qualitative research paradigm), calling mixed methods research an attempt "to respect...the wisdom of both of these viewpoints, while also seeking a workable middle solution for many (research) problems..." (p.113).

Cresswell and Garrett (2008) pose that the core assumption of mixed methods research is the combining of the strengths of both quantitative and qualitative methodologies. This, according to these authors (ibid) has the potential to give the researcher a more in-depth understanding of a particular research problem than either one of the two methodologies on its own. These authors (ibid) describe mixed methods research as a new movement in the "evolution of research methodology" (p.322) and as such, prone to debate about its exact nature.

4.3.2 Rationale and purpose of the design

Bryman (2006) describes Greene's (1989) five justifications for utilising both quantitative and qualitative research in one study, namely triangulation, complementarity, development, initiation and expansion. According to this Greene (ibid), *triangulation* involves converging, corroborating and correspondence of results from quantitative and qualitative methods. *Complementarity* involves looking to elaborate, enhance and clarify results across methods. *Development* utilises the results from one method to inform decisions about sampling, implementation and measurement. Initiation involves the exploration of paradoxes and contradictions within the data in order to come to new insights about the research questions or data from one method through the research questions or data of the other method. Expansion involves enlarging the scope of the research by applying different methods to address different aspects of the inquiry.

Bryman (2006) expanded upon the reasons suggested by Greene (ibid) for employing a multiple strategy research design by conducting an expansive review of the reasons that were given by authors of methodological scripts and research articles for making use of both quantitative and qualitative research. These rationales are listed in Table 4.2 together with the relevance they bear to the study.

Table 4.2 Rationale and purpose of a mixed method research design

	Rationale and purpose of the design	Relevance to the study
Triangulation	Combining quantitative and qualitative research to triangulate findings in order that they may be mutually corroborated toward greater validity	See 4.3.5.2
Offset	The research methods associated with both quantitative and qualitative research have their own strengths and weaknesses so that combining them allows the researcher to offset their weaknesses to draw on the strengths of both.	Whilst the quantitative component, namely, the <i>DIBELS Next</i> assessments offer a measure of the main construct of the study, namely that of phonemic awareness development, on its own will not explain progress or lack thereof.
Completeness	The researcher can bring together a more comprehensive account of the area of enquiry in which he or she is interested if both quantitative and qualitative research is employed.	See above.
Process	Quantitative research provides an account of structures in social life but qualitative research provides sense of process.	The <i>DIBELS Next</i> phonemic awareness assessments would be able to give an indication of whether the Setswana speaking children were indeed developing phonemic awareness during their first year of school.

Different research questions	Quantitative and qualitative research can each answer different research questions.	Whilst the DIBELS assessment are effective to determine whether or not the children had developed phonemic awareness or not, no predesigned measure could capture the complexities of a situation within which which children who are immersed in a school where a subtractive bilingual model is the order of the day are enrolled in that school by choice.
Explanation	Aspects of one methodology are used to help explain findings generated by the other.	It was hoped that the interviews with the Setswana speaking parents would shed some light on aspects of their home environment and how these impact upon the phonemic awareness development (in Afrikaans) of the Setswana speaking children.
Unexpected results	Quantitative and qualitative research can be fruitfully combined when one generates surprising results from the one that can be better understood by employing the other.	Although the innovations configuration forms a part of the qualitative data and is described as such, it is the quantifying of specific literacy activities which gives a clear perspective on phonemic awareness development instruction within the situation. See Table 5.9; Figure 5.2
Instrument development	Qualitative research is employed to develop questionnaire and scale items – for example, so that better wording or more comprehensive closed answers can be generated.	During the preliminary observations (in the presentation during which I presented a proposal of the study to the teachers and the principal) I noticed that the teachers and the principal did not seem sure about

		the exact meaning of 'phonemic awareness' nor of its importance for early literacy acquisition. This prompted the design of the self administered questionnaire with which to gauge teachers' knowledge.
Sampling	One approach is used to facilitate the sampling of respondents or cases.	Not applicable
Credibility	Employing both approaches to enhance the integrity of findings.	The phonemic awareness development of the Setswana speaking children within their Afrikaans speaking peer group could be quantified, while interview and observation data could help explain the quantitative finding
Context	Rationalising the combination in terms of qualitative research providing contextual understanding coupled with either generalisable, externally valid findings or broad relationships among aspects of the study.	See above
Illustration	The use of qualitative data to illustrate quantitative findings often referred to as putting 'meat on the bones' of 'dry' quantitative findings.	The interviews with the grade one teacher, the pre-school teacher, the principal and the head of department of the foundation phase all included questions on how the phonemic awareness development and early literacy (as well as the general school experience) of the Setswana speaking children was supported at the school. These questions

		were included in the hope that information gained from them would corroborate the findings of the quantitative <i>DIBELS Next</i> phonemic awareness assessments.
Utility	Improving the usefulness of findings – refers to a suggestion that, combining the two approaches will be more useful to practitioners and others wishing to replicate the methodology.	The utility value of the quantitative data to stakeholders such as the school principal, the HOD of the foundation phase and the other foundation phase teachers lies in that the children’s progress can be plotted and presented visually with inferences that could assist these stakeholders in making decisions about how to enhance the development of phonemic awareness of the Setswana speaking children at the school. Likewise, qualitative data, such as data from the interviews with the parents could provide these same stakeholders with insight into the children’s home environment and how it impacts upon their early literacy learning at the school.
Confirm and discover	Using qualitative data to generate hypotheses and using quantitative research to test them within a single project.	The preliminary observations done by the researcher of the Setswana speaking children’s reading (in the year prior to the formal commencement of this inquiry) prompted the researcher to hypothesise about the extent to which phonemic awareness was developed by the Setswana speaking children in the grade one

		classroom.
Diversity of views	This includes two slightly different rationales – namely, combining researchers’ and participants’ perspectives through quantitative and qualitative research respectively, and uncovering relationships between variables through quantitative research while also revealing meanings among research participants through qualitative research.	In this study, the research assistant, who was also the grade one classroom assistant, added valuable perspective and rich(qualitative) data on the children’s phonemic awareness measures which complemented the data from the <i>DIBELS Next</i> phonemic awareness assessments.
Enhancement	Building upon quantitative/qualitative findings, thus making more of or augmenting either quantitative or qualitative findings by gathering data using a qualitative or quantitative research approach.	The qualitative results from the researchers notes on how children pronounced individual phonemes prompted the quantification of the classroom observation video material into innovations configurations in order to measure the frequency of certain behaviours (such as pronunciation of individual phonemes, by the teacher, in the classroom).

Note: After Bryman (2006, p.105 – 107)

4.3.3 Pragmatism as research paradigm

Although the research paradigm is not always obvious, it influences research decisions at every level of a study and thus needs to be declared (Cresswell, 2003). Therefore, “research needs to be defensible to the research and practice communities for whom research is produced and used” (Onwuegbuzie & Johnson, 2006, p.48).

Mixed methods research has components of both qualitative and quantitative research approaches, and these approaches are rooted in vastly different research paradigms, namely that of postpositivism and interpretivism respectively (Moran-Ellis, Alexander,

Cronin, Dickinson, Fielding, Sleney, & Thomas, 2006). The nature of the research problem, the research questions and the research aims of mixed methods research requires a multifaceted approach which cannot be exclusively pinned on either a post positivist or an interpretivist paradigm. Conducting mixed methods research requires a certain level of flexibility and a multifocal view of the research situation (Creswell & Garrett, 2008). Pragmatism is considered the most appropriate epistemological stance for multi-strategy research (Teddlie & Tashakkori, 2003; Johnson, Onwuegbuzie & Turner, 2007; Cresswell & Garrett, 2008). This is because it implies that careful thought goes into what method would be the most effective to address any specific research question.

4.3.4 Value of mixed methods design

Mixed methods research might be costly in terms of time, money and energy, and certainly these considerations need to be taken into account (Abowitz & Toole, 2010). However, there are definite benefits in terms of reliability and validity of data, to employing a multiple strategy design (Bryman, 2006). Apart from the benefits which are listed in Table 4.2, a mixed methods design also allows the researcher to make causal inferences from converging data and to confirm that data is not coincidental (Abowitz & Toole, 2010). Applying multiple methods to investigate the same problem enables the researcher to pick up on recurring patterns within the data - patterns which occur across data sources, data gathered by means of different methods and which can transcend the inherent weaknesses of any particular source or method (ibid). Creswell and Plano Clark (2007) mention a lack of deep understanding of the specific situation of questionnaire respondents as a weakness of quantitative research. These authors (ibid) also point out that respondents' voices are not directly heard in quantitative research. On the other hand, qualitative research, according to them (ibid), often leans too heavily upon the subjective interpretation of the researcher, which might lead to researcher bias.

When the results from the different methods applied within a study diverge, instead of converge, it could indicate a need for the researcher to revisit theoretical assumptions and to work on adjusting and refining research methods and ways of measuring data. It follows therefore that whether data from a multiple research strategy converges or not, it conceivably provides data which is valid and reliable to the extent that we can set greater confidence in our conclusions (Cresswell and Plano Clark, 2007).

4.3.5 Choosing a specific mixed method design

I do not agree with Johnson, Onwuegbuzie and Turner's (2007) who posit that the largest data component of the research positions the research as either predominantly quantitative or qualitative. In the case of this study, albeit that the quantitative component is relatively small, I propose that it would be near impossible to obtain a measure of the main construct, namely, of phonemic awareness development within second language learning, unless through the employment of quantitative methods.

4.3.5.1 Procedural considerations of choosing a mixed method design

Once the research design is decided upon, the researcher needs to give careful consideration to some procedural aspects of the research. Three such procedural aspects of research which impact upon the choice of a specific multi-strategy design have been identified by Creswell and Plano Clark (2007), namely, *timing*, *weighting* and *mixing*. *Timing* refers to the chronological order of the quantitative and qualitative research components. Within mixed methods research, timing can be either concurrent or sequential (Tashakkori & Teddlie, 2003; Johnson & Onwuegbuzie, 2004; Creswell & Plano Clark, 2007). When the quantitative and qualitative data are collected at more or less the same time and the analysis thereof typically happens only after all the data has been collected, the timing of the mixed methods research is said to be *concurrent*. When data is collected, analysed and interpreted in a distinct series of phases during the study and the results from one phase informs and leads into another, the timing is said to be *sequential*. Since the quantitative data gathering of the *DIBELS Next* phonemic awareness tests were planned to occur at the beginning, the middle and the end of the school year and the rest of the data would be gathered throughout that year, a concurrent approach³¹ was selected for this research.

Weighting of the quantitative and qualitative components of the inquiry involves a decision by the researcher as to the priority or importance given to the two components and depends on the extent to which either the quantitative or qualitative research addresses the research problem and research questions and whether they can effectively fulfil the research aims (ibid). Decisions about weighting could either involve the allocation of *equal* weight or importance to the quantitative or qualitative components or it could mean that the researcher deems one component more crucial to the research problem than the other. Within this inquiry, although the bulk of qualitative data outweigh

³¹ Although the decision to generate innovations configurations of the classroom video material was made as a result of early qualitative observations, this was not part of the research plan at the outset.

that of the quantitative data, I still allocate them equal weight because I deem the *DIBELS Next* phonemic awareness tests as crucial to establishing the main construct of this study, namely phonemic awareness development within second language learning. The generation of the innovations configurations, I also deem important as they represent a quantified phase in the collection and presentation of an important aspect of the study which is then described ethnographically (see section 4.3.5).

How the quantitative and qualitative aspects of a study will be *mixed* forms the third procedural component and refers to how the data sets from the two components are combined. This is an important consideration for the research since, despite stringent data collection methods it is possible that the researcher, in lieu of a rigorous multi-strategy design, could end up with an arbitrary collection of data. According to Creswell and Plano Clark (2007), there are three strategies for mixing the quantitative and qualitative data within a study. These are *merging*, *embedding* and *connecting* of the data. The researcher can merge the two data sets after they had been separately analysed, by combining or integrating the data during the interpretation phase. Alternatively, the data of one method could be embedded within the data from the other method – for example, embedding a small quantitative component within a predominantly qualitative study, such as embedding the quantitative data on marks achieved for different subjects by a certain population within a more ethnographic description of possible reasons for patterns of achievement within the population. Lastly, the researcher could connect data when the analysis of one type of data results in a need for another type of data, such as when a quantitative analysis of test scores show a distinct discrepancy between the scores of girls and boys, the researcher might decide to conduct focus group meetings with the two groups to get a better understanding of the results of the quantitative data analysis. In this study, data from the quantitative and qualitative research was *merged* after the presentation, analysis and interpretation of the data sets.

4.3.5.2 Triangulation research design

Abowitz and Toole (2010) propose that the triangulation of mixed methods research entails different ways of operationalising the same construct and affords the researcher a multifocal perspective of the research problem. According to Webb, Campbell, Schwartz and Sechrest (1966), the uncertainty surrounding interpretation is minimized as soon as two or more independent processes of measurement supports a specific proposition. This is because of the various ways a construct can be measured across methods. For example, the difference in wording of questions and the variations in

format e.g., including fixed response and open ended questions in an interview schedule or questionnaire influences how respondents interpret meaning, thus minimising problems of measurement validity (Abowitz & Toole, 2010).

Cresswell and Plano Clark (2007) offer a summary of the four major mixed methods research designs and their variations as it appears in the literature. These are triangulation, embedded, explanatory and exploratory designs. For the purpose of this inquiry, a triangulation research design was decided upon as the most efficient blueprint according to which to address the construct of the study, namely the phonemic awareness development of Setswana speaking children at an Afrikaans medium school. I will now briefly outline the main incentives for this decision at the hand of Creswell and Plano Clark's explanation (ibid, p.62 – 67).

First of all, the purpose of this type of design is to gain a solid understanding of the research topic through the generation of different, yet, complementary data on the same topic. Secondly, triangulation research seeks to set off the strengths of both quantitative and qualitative methods, whilst at the same time ameliorating the weaknesses of both. Thirdly, this research design allows the researcher to use quantitative and qualitative methods simultaneously and to afford them equal weight. This design also has utility value in the case of this study, since the results from the quantitative *DIBELS Next* assessments can be expanded upon through the rich results from the qualitative methods, such as the interviews which were conducted with the different role players – parents and teachers - in the children's academic pursuits. Finally, in interpreting the data, the two data sets will be brought together through the *convergence model* – a specific type of triangulation research design – which has as its aim the validation and confirmation of conclusions about a specific phenomenon. This model is explicated in Figure 4.9.

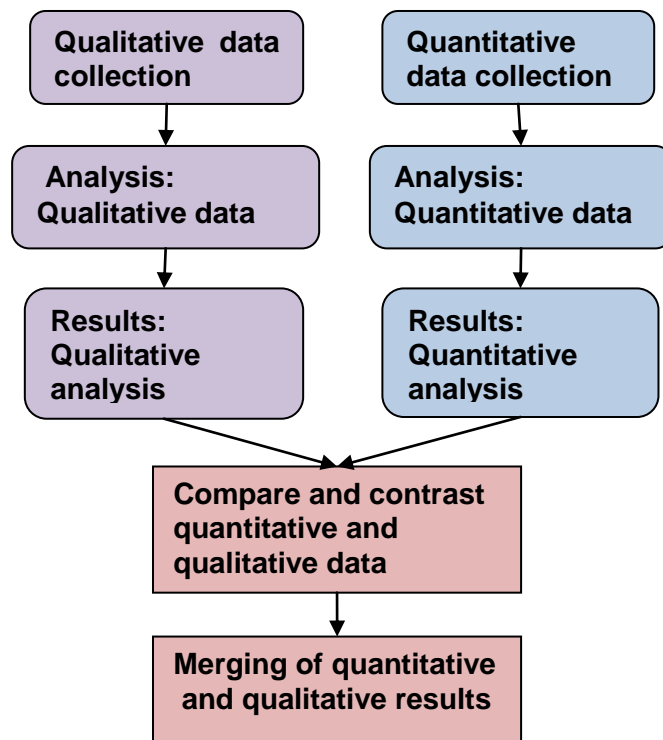


Figure 4.8 Convergence model of the triangulation mixed methods design.
Adapted from Cresswell and Plano Clark (2007, p.63)

According to Johnson, Onwuegbuzie and Turner (2007), triangulation methods were first described by Denzin (1978) who listed four types of triangulation. These are: Data triangulation, which indicates the utilization of different sources within a study; investigator triangulation – the use of more than one researcher; theory triangulation, which refers to the application of various viewpoints and theories when interpreting the results of an inquiry; and, methodological triangulation – the use of different methods when investigating a research problem. Apart from methodological triangulation, which involves multi-strategy research, in this study I also employed data triangulation, since I made use of various sources to gather data from. Furthermore, I made use of two research assistants – thus rendering investigator triangulation.

4.4 QUANTITATIVE RESEARCH

This section deals with the analysis and the description of quantitative data. This component of the research consists of data obtained by adapting and translating

aspects of the *DIBELS Next* assessments into Afrikaans and making use of classroom and curriculum based items.

4.4.1 Translated and adapted *DIBELS Next* assessments

The *DIBELS Next* assessments consist of a set of standardised interlinked research-based measures administered individually and which aim to monitor the development of early literacy skills. The reliability and validity of the instruments are well documented (Good & Kaminski, 2011). Although the results are not generalisable, and although I cannot base it on any specific test theory, for the reasons which will be given next, I propose that the tests which I developed have content and face validity.

For the purpose of testing the phonemic awareness development and early reading skills of the children in the study, I used the *DIBELS Next* phonemic awareness tests which I adapted and translated into Afrikaans, selecting items from the 200 most used Afrikaans words, which forms part of the grade one curriculum. Because Afrikaans contains words with a similar structure, I selected words which corresponded to the original English test items in terms of word structure and length, for example, CCVC. Furthermore, I checked that the words selected were appropriate for the children by consulting with the classroom assistant who acted as co-researcher in this instance and who signed a confidentiality agreement pertaining to the content of the tests. I made sure that the teachers did not see any of the tests before hand, despite their requests to that effect. The test items which I developed were also peer reviewed by colleagues at the North West University, where I studied. To increase the levels of measurement validity of any newly created or adapted test items, a researcher needs to pre-test these measures by means of a pilot study (Abowitz & Toole, 2010). The test was thus piloted by administering it to the five youngest children in the grade two class (mean age 7 years 3 months).

Research on *DIBELS* was first conducted at the University of Oregon during the late 1980's and initially focused on being a curriculum based assessment measure. Today however, the *DIBELS* are considered to be a general outcome measure (GOM) (Fuchs & Deno, 1994), which differentiates it from other oft-used formative assessments, such as, for example, mastery measurement - when teachers assess the mastery of curriculum outcomes by children. Such curriculum based measurement can take the format of end-of-unit tests, which means that scores cannot be compared over time as only the set of skills reflective of the content of a specific unit gets tested. Instead,

general outcome measures aim to establish whether or not the learner is making progress toward a long-term goal.

In her study on the validity and accuracy of *DIBELS* and another measure of early literacy skills, Hintze, Ryan and Stoner (2003) found all the measures of *DIBELS* to be reliable and predictive of later reading proficiency. The tests were also found to have utility value in indentifying learners who are at risk of reading problems and to effectively track individual learners' progress.

Because it is very important to report with complete accuracy on the framework of standardised assessments, such as *DIBELS Next*, with permission, I peg the following few paragraphs, which will outline the different assessments used as basis for the measurements in the study closely on Nel, Adam, Good, & Kaminski's (2015) explanation of the different components of assessment.

4.4.1.1 Letter Naming Fluency (LNF)

LNF is a brief, direct measure of a learner's fluency in naming letters. LNF assesses a learner's ability to recognize individual letters and say their letter names. Using standardized directions, the assessor presents a page of uppercase and lowercase letters arranged in random order (see Figure 4.10) and asks the learner to name the letters. The assessor marks letter names that are read incorrectly or skipped. The total score is the number of correct letter names that the learner says in 1 minute.

Table 4.3 Overview of Letter Naming Fluency

Basic Early Literacy Skill	None
Administration Time	1 minute
Administration Schedule	Beginning of Grade R to beginning of Grade 1
Score	Number of letters named correctly in 1 minute

Wait Rule	If the learner does not name a letter within 3 seconds, mark a slash (/) through the letter and say the correct letter name.
Discontinue Rule	No letters named correctly in the first row

Note: Adapted from Good, Kaminski, Cummings, Dufour-Martel, Petersen, Powell-Smith, Stollar, & Wallin (2012, p. 48).

The purpose of LNF is to measure learners' automaticity with letter naming. Fluency in naming letters is a strong and robust predictor of later reading achievement (Hammill, 2004; Schatschneider, Fletcher, Francis, Carlson, & Foorman, 2004; Adams, 1990; Scarborough, 1998). The purpose of LNF is to measure fluency rather than identify which letters the learner knows or does not know, so while all letters are included on the LNF materials, they appear in random order. As such, it provides an added risk indicator for early school-age children.

Letter naming fluency is not an indicator of any of the basic early literacy skills. The basic early literacy skills represent the research-based elements of instruction. They are the skills that learners must acquire to be readers. It is possible to learn to read without naming letters (Schatschneider, Fletcher, Francis, Carlson, & Foorman, 2004). So letter naming is a secondary, instructional target. Letter naming fluency functions as an indicator of risk and an indication of how much instructional support a learner may need to learn one of the basic early literacy skills (Whitehurst & Lonigan, 1998). Because letter naming is not a basic early literacy skill, there is no benchmark goal for Letter Naming Fluency, nor are there progress monitoring materials for LNF. Although Letter Naming Fluency is not an indicator of a basic early literacy skill (see Table 3.4), it is a measure of learner's fluency with naming letters and an indication of risk of reading failure.

1 DIBELS® Letter Naming Fluency
Grade K/Benchmark 1

s	J	/	v	e	X	T	/	V	D
f	F	W	/	Q	P	q	/	c	O o
R	n	B	w	g	/	z	d	u	p y
S	m	x	L	k	Z	a	Y	H	j
i	K	U	M	G	r	A	N	h	C
I	b	S	F	f	u	L	A	m	B
V	T	Y	G	e	W	E	a	N	X
l	b	M	C	q	z	P	x	i	Q
g	J	O	s	d	Z	K	o	v	j
D	t	h	w	R	U	c	r	I	k
n	H	y	p	s	J	z	v	e	X

LNF Response Patterns:

<input type="checkbox"/> Makes random errors	<input type="checkbox"/> Doesn't track correctly
<input type="checkbox"/> Makes consistent errors on specific letter(s)	<input type="checkbox"/> Other
<input type="checkbox"/> Says letter sound instead of letter name	

Total Correct: **23**

Figure 4.9 Letter Naming Fluency (LNF) assessment

The timing for the assessment starts when the assessor says “begin” and stops at the end of one minute. The score is the number of letters named correctly in one minute (see Figure 4.10). Correct letters are left blank. Letters that are named incorrectly, hesitated upon for more than 3 seconds, and letters that are omitted are slashed. If a learner hesitates for more than 3 seconds on a letter, the assessor says the correct letter name and slash the letter. Learners can get credit for an incorrect response as long as they self-correct within 3 seconds. If a learner skips a row, draw a line through the row and disregard those letters in terms of scoring. Discontinue the task if the learner has not gotten any correct letters in the first row.

4.4.1.2 First Sound Fluency (FSF)

This assessment measures fluency in identifying the initial sound in words – a phonemic awareness skill which is strongly related to early reading acquisition (Yopp, 1992). First Sound Fluency is a brief and direct measure of a learner’s ability to produce the initial sound in spoken words. Although this skill is usually measured at the beginning and middle of pre-school, I decided to include it in the assessment because the children in

this study were developing phonemic awareness in a second language and therefore, I wanted to capture their level of phonemic awareness correctly in case it were at a level lower than what is expected for their age.

Table 4.4 Overview of First Sound Fluency (FSF)

Basic Early Literacy Skill	Phonemic Awareness
Administration Time	1 minute
Administration Schedule	Beginning of Grade R to middle of Grade R
Score	2 points for each correct initial phoneme and 1 point for each correct initial consonant blend, consonant plus vowel, or consonant blend plus vowel said by the learner in 1 minute
Wait Rule	If the learner does not respond within 3 seconds on a word, mark a slash (/) through the zero and say the next word
Discontinue Rule	Zero points in the first five words

Note: From Good, Kaminski, Cummings, Dufour-Martel, Petersen, Powell-Smith, Stollar, and Wallin, (2012, p. 39)

During this assessment the assessor uses scripted directions (see Figure 4.11) to say a list of words, one at a time, to the learner. The learner's responses are recorded on a scoring sheet where the assessor circles the sound or group of sounds which the learner produces in response to the prompt. Learners can score two points for saying the initial phoneme of the word – for example, saying the /s/ sound in response to the prompt 'scream' or, one point for saying the initial consonant blend, eg. /sc/ or /scr/. In the case of a CVC word, such as 'sock', one point is awarded if the child says the initial consonant and the vowel. The total score is calculated by adding together the one score point and two score point scores recorded in one minute.

2 DIBELS® First Sound Fluency
Grade K/Benchmark 2

Test Items	Correct/2 points	Correct/1 point	Incorrect
1. land	/l/	/la/	0
2. gift	/g/	/gi/	0
3. snail	/s/	/sr/ /snai/	0
4. stove	/s/	/st/ /stoa/	0
5. mild	/m/	/mie/	0
6. stream	/s/	/st/ /str/ /strea/	0
7. pairs	/p/	/pe/	0
8. flare	/f/	/fl/ /fle/	0
9. peace	/p/	/pea/	0
10. sly	/s/	/sl/	0
11. plate	/p/	/pl/ /pia/	0
12. thank	/th/	/tha/	0
13. sweet	/s/	/sw/ /swea/	0
14. life	/l/	/lie/	0
15. blank	/b/	/bi/ /bla/	0
16. doll	/d/	/do/	0
17. sling	/s/	/sl/ /sli/	0
18. stairs	/s/	/st/ /ste/	0
19. knees	/n/	/nea/	0
20. peek	/p/	/pea/	0
21. cream	/k/	/kr/ /krea/	0
22. clang	/k/	/kl/ /kla/	0
23. bag	/b/	/ba/	0
24. ride	/r/	/rie/	0
25. fruit	/f/	/fr/ /froo/	0
26. porch	/p/	/por/	0
27. flour	/f/	/fl/ /flow/	0
28. race	/r/	/rai/	0
29. chin	/ch/	/chi/	0
30. steam	/s/	/st/ /stea/	0

2-pt responses: **7**
x 2: **14** + 1-pt responses: **6** = Total: **20**

Figure 4.10 First Sound Fluency (FSF) assessment

Differential scoring for learner responses allows young learners to receive partial credit for demonstrating beginning skills in phonemic awareness. A learner who may not be able to isolate an initial phoneme (e.g., /s/, /t/) would still receive partial credit for providing the first group of sounds in the word, showing emerging understanding that words are made up of sounds. Although partial credit is given, the goal is for the learner to be able to correctly say the first phoneme of each word.

To ensure that learners understand the task and to maximize the performance of young learners who may not have had any prior exposure to instruction in phonemic awareness, three practice items are included. The practice items provide decreasing levels of support, including modelling (e.g., “listen to me say...”) and leading the correct response (e.g., “say it with me”). By design, the first two practice items start with the same sound, /m/. In the first practice item, isolation of the /m/ sound at the beginning of a word is modelled. In the second practice item, the learner is asked to isolate the beginning sound in a word that also starts with /m/. In the third practice item, the learner is asked to generalize the skill of isolating beginning sounds to a word that does not start with /m/. After the practice items the assessment starts. The assessor says a series of

words one at a time to the learner and asks the learner to say the first sound in the word (see Addendum H for scripted instructions and Addendum I for the assessment).

4.4.1.3 Phoneme Segmentation Fluency (PSF)

Phoneme Segmentation Fluency is a direct assessment of one of the first steps toward successful reading, phonemic awareness. Phoneme Segmentation Fluency provides an indication of whether or not learners have mastered an early phonemic awareness skill, producing all of the individual sounds, or phonemes, in spoken words.

Table 4.5 Overview of Phoneme Segmentation Fluency (PSF)

Administration Time	1 minute
Administration Schedule	Middle of Grade R to beginning of Grade 1
Score	Number of correct sound segments the learner says in 1 minute
Wait Rule	No response within 3 seconds, say the next word
Discontinue Rule	Zero correct sound segments in the first five words

Note: From Good, Kaminski, Cummings, Dufour-Martel, Petersen, Powell-Smith, Stollar, & Wallin (2012, p. 55).

Because phonemic awareness is a key early literacy skill, learners who score above the benchmark goal on PSF are probably on track toward reading success. Those who are not may need some additional instructional support.

According to Phillips and Torgesen (2006), learning phonemic awareness does not happen in isolation from other literacy skills. At the same time learners are learning phonemic awareness in preschool, they are also developing vocabulary and oral language skills. Phoneme Segmentation Fluency (PSF) assesses the learner's fluency in segmenting a spoken word into its component parts or sound segments (see Table 3.5).

Using standardized directions (see Addendum B), the assessor says a word and asks the learner to say the sounds in the word (see Addendum C). The assessor underlines

each correct sound segment of the word that the learner says (see Figure 3.9). The total score is the number of correct sound segments that the learner says in 1 minute. For example, if the assessor says the word *fish* and the learner says /f/ /i/ /sh/, the learner has completely and correctly segmented the word into its component sounds and the score is 3 correct sound segments. If the learner says /f/ /ish/, the score is 2 correct sound segments.

Partial credit is given for partial segmentation. A learner who is developing phonemic awareness may not yet segment words completely into individual sounds but *may* segment parts of words. For example, a learner who says the first sound of the word *sun* (/s/) receives 1 point. A learner who says the onset and rime (/s/ /un/) receives 2 points and a learner who completely and correctly segments all of the individual phonemes in the word (/s/ /u/ /n/) receives 3 points. Consonant blends have two or more phonemes that should be produced separately for a learner to receive full credit. For example, for the word *trap*, a learner who says /tr/ /a/ /p/ receives partial credit of 3 points, and a learner who says /t/ /r/ /a/ /p/ receives the full 4 points.

2 DIBELS® Phoneme Segmentation Fluency
Grade K/Benchmark 2

				Score
sack /s/ /a/ /k/	hole /h/ /o/ /l/	trip /t/ /r/ /i/ /p/	game /g/ /ai/ /m/	8 /13
fox /f/ /o/ /k/ /s/	toes /t/ /o/ /z/	star /s/ /t/ /ar/	sheep /sh/ /ea/ /p/	6 /13
pine /p/ /ie/ /n/	forth /f/ /or/ /th/	fought /f/ /o/ /t/	which /w/ /i/ /ch/	/12
cold /k/ /o/ /l/ /d/	shout /sh/ /ow/ /t/	bit /b/ /i/ /t/	send /s/ /e/ /n/ /d/	/14
would /w/ /u/ /d/	dreamed /d/ /r/ /ea/ /m/ /d/	red /r/ /e/ /d/	sell /s/ /e/ /l/	/14
dug /d/ /u/ /g/	kicked /k/ /i/ /k/ /t/	chin /ch/ /i/ /n/	him /h/ /i/ /m/	/13
Total: 14				

PSF Response Patterns:

- ☐ Repeats word
- ☐ Makes random errors
- ☐ Says initial sound only
- ☐ Says onset rime
- ☐ Does not segment blends
- ☐ Adds sounds
- ☐ Makes consistent errors on specific sound(s)
- ☐ Other

Figure 4.11 Phoneme Segmentation Fluency (PSF) assessment

The timing for Phoneme Segmentation Fluency starts when the assessor says the first word and ends after one minute. Learners receive points for each correct sound segment they produce in one minute. The most desirable response is segmenting the words into phonemes. However, learners can get credit for incomplete segmentation.

Allowing partial credit in the scoring increases the sensitivity of the measure thus, making it possible to measure development from partial to complete segmentation. Although partial credit is given, the preferred response is for learners to completely segment words at the phoneme level by the end of grade one.

4.4.1.4 Nonsense Word Fluency (NWF)

Knowledge of the alphabetic principle is an important early literacy skill. Nonsense Word Fluency is an indicator of the alphabetic principle. As learners learn to read, the alphabetic principle and basic phonics provides an early foundation. Automaticity with phonemic awareness provides a strong foundation for learning the alphabetic principle, or phonics and decoding (Moats, 2000).

Table 4.6 Overview of Nonsense Word Fluency (NWF)

Basic Early Literacy Skill	Alphabetic Principle and Basic Phonics
Administration Time	1 minute
Administration Schedule	Middle of Grade R to beginning of Grade 2
Score	Number of correct letter sounds (CLS) and number of whole words read without sounding out (WWR)
Wait Rule	If the learner responds sound-by-sound, mixes sounds and words, or sounds out and recodes, allow 3 seconds, then provide the correct letter sound. If the learner responds with whole words, allow 3 seconds, then provide the correct word.
Discontinue Rule	No correct letter sounds in the first row

Note: From Good, Kaminski, Cummings, Dufour-Martel, Petersen, Powell-Smith, Stollar & Wallin (2012, p. 66)

According to Good, Kaminski, Dewey, Wallin, Powell-Smith, & Latimer, (2013), advanced phonics skills are taught later in the primary grades. Nonsense Word Fluency is an indicator of the core component, the alphabetic principle. The alphabetic principle, also known as “phonics,” has two parts namely, alphabetic understanding, and phonological recoding (Bay Area Reading Task Force, 1997, p. 41 in *ibid*). Alphabetic understanding includes letter-sound correspondence or grapheme-phoneme correspondence and the understanding that letters represent sounds in spoken words

(p. 41). Phonological recoding involves the use of alphabetic understanding to decode unknown words (p. 41).

It is important to note that the alphabetic principle is not simply knowing letter-sounds. In order to read, children need to be fluent at blending sounds into words (Anderson, Hiebert, Scott, & Wilkinson, 1985). This is where phonemic awareness and the alphabetic principle work together. If a child knows that words are made up of individual speech sounds and is familiar with the symbols (i.e., letters of the alphabet) and knows their sounds, it is much easier for the child to blend those sounds into a word. Phonics is the system of letter-sound relationships that is the foundation for decoding words in print. The understanding of basic phonics begins with knowing basic letter-sound correspondences and applying this knowledge to decode simple words. These skills are essential to being a skilled reader. Learners who struggle with reading often lack these skills. The alphabetic principle and basic phonics skills can be taught. And when they are taught, learners are more likely to become proficient readers (Snow, Burns & Griffin, 1998).

Nonsense Word Fluency (NWF) is a brief, direct measure of the alphabetic principle and basic phonics. It assesses knowledge of basic letter-sound correspondences and the ability to blend letter sounds into consonant-vowel-consonant (CVC) and vowel-consonant (VC) words. The test items used for NWF are phonetically regular make-believe (nonsense or pseudo) words (see Addendum D; Figure 4.13). To successfully complete the NWF task, learners must rely on their knowledge of letter-sound correspondences and how to blend sounds into whole words (see Table 4.6). One reason that nonsense word measures are considered to be a good indicator of the alphabetic principle is that “pseudowords have no lexical entry, [and thus] pseudo-word reading provides a relatively pure assessment of learners’ ability to apply grapheme-phoneme knowledge in decoding” (Rathvon, 2004, p. 138).

Following a model and a practice item, the learner is presented with a sheet of randomly ordered VC and CVC nonsense words (e.g., *dif*, *ik*, *nop*). Standardized directions (see Addendum E) are used to ask the learner to read the make-believe words as best they can, reading either the whole word or saying any sounds they know. For example, if the stimulus word is *tof*, the learner could say /t/ /o/ /f/ or “tof.” The assessor underlines each correct letter sound produced either in isolation or blended together (see Figure 4.13). Whole words read without sounding out are underlined in their entirety.

1 DIBELS® Nonsense Word Fluency
Grade 1/Benchmark 1

	CLS	WWR
► b o l k i v u l / a c l e l	13 /14 (14)	1
f i j k u g / a t o i d e g	13 /14 (28)	1
w a v] p e k y o s m u b f i v	3 /15 (43)	0
e c f a j v o g k i f p u k	/14 (57)	
o g w a p f e c p i m f u j	/14 (71)	
k a g v o v n i l p e v z u b	/15 (86)	
s e b a v z u p p i j b o k	/14 (100)	
f u l f a v z e c s i c o t	/14 (114)	
s o p t u v z e v t i b z a k	/15 (129)	
z o c a c b e j l i k f u f	/14 (143)	

NWF Response Patterns:

<input type="checkbox"/> Says correct sounds out of order (sound-by-sound)	<input type="checkbox"/> Doesn't track correctly
<input type="checkbox"/> Makes random errors	<input type="checkbox"/> Tries to turn nonsense words into real words
<input type="checkbox"/> Says correct sounds, does not recode	<input type="checkbox"/> Makes consistent errors on specific letter sound(s)
<input type="checkbox"/> Says correct sounds, recodes out of order	<input type="checkbox"/> Other
<input type="checkbox"/> Says correct sounds, recodes with incorrect sound(s)	
<input type="checkbox"/> Says correct sounds and correctly recodes	

Total Correct Letter Sounds (CLS): **29**

Total Whole Words Read (WWR): **2**

Figure 4.12 Nonsense Word Fluency assessment

There are two separate scores reported for NWF namely, Correct Letter Sounds (CLS) and Whole Words Read (WWR). Correct Letter Sounds is the number of letter sounds produced correctly in 1 minute. For example, if the learner reads *dif* as /d/ /i/ /f/ the score for Correct Letter Sounds is three. If the learner reads *dif* as /di/ /f/ or “dif,” the score is also three. Whole Words Read (WWR) is the number of make-believe words read correctly as a whole word without first being sounded out. For example, if the learner reads *dif* as “dif,” the score is 3 points for CLS and 1 point for WWR, but if the learner reads *dif* as “/d/ /i/ /f/ dif,” the score is 3 points for CLS but 0 points for WWR.

The goal is for learners to read whole words on NWF; however, an advantage of NWF is that it allows for monitoring the development of the alphabetic principle and basic phonics as early as the middle of Grade R, when producing individual letter sounds is the more common response.

4.4.1.5 DIBELS Oral Reading Fluency (DORF)

DIBELS Oral Reading Fluency (DORF) is an indicator of advanced phonics and word attack skills, accurate and fluent reading of connected text, and reading comprehension (see Table 4.7). According to Good Kaminski, Dewey, Wallin, Powell-Smith, & Latimer, (2013), the retell portion of *DIBELS* Oral Reading Fluency provides an additional check on comprehension for the small number of learners who read a minimum number of words correct per minute, but for whom oral reading fluency alone may not be a good indicator of comprehension.

Table 4.7 Overview of DIBELS Oral Reading Fluency (DORF)

Basic Early Literacy Skill	Advanced Phonics and Word Attack Skills Accurate and Fluent Reading of Connected Text Reading Comprehension
Administration Time	1 minute plus 1 minute maximum for Retell
Administration Schedule	Middle of Grade 1 through end of Grade 6
Score	<ul style="list-style-type: none">• Median number of words correct per minute (Words Correct)• Median number of errors per minute (Errors)• Median number of correct words in the Retell• Median Quality of Response for the Retell
Wait Rule	On DORF, 3 seconds; On Retell, first hesitation 3 seconds
Discontinue Rule	<p>If no words are read correctly in the first line, say Stop, record a score of 0, and do not administer Retell.</p> <p>If fewer than 10 words are read correctly on passage #1 during benchmark assessment, do not administer Retell or passages #2 and #3.</p> <p>If fewer than 40 words are read correctly on any passage, use professional judgment whether to administer Retell for that passage.</p>

Note: From Good, Kaminski, Cummings, Dufour-Martel, Petersen, Powell-Smith, Stollar, & Wallin (2012, p. 79).

Oral Reading Fluency is more than accurate reading of words and is not speed reading. There are multiple definitions of fluency in the reading literature. Most definitions include

accuracy, rate, and prosody. Oral Reading Fluency is, “the ability to read words accurately, effortlessly (automatically), and with appropriate phrasing and expression when reading orally” (Rasinski, 2003, p. 169). Reading fluency is reading that is accurate (without too many miscues), at a reasonable rate, and prosodic (read with enough expression that it sounds like language) (Stahl & Kuhn, 2002; NICHD, 2000). Reading fluency depends on well-developed letter-sound recognitions skills, efficient and automatic decoding of regular and irregular words, and the use of expression and phrasing when reading aloud.

Comprehension is the ultimate goal of reading assessment and teaching. According to Kosanovich, Reed, and Miller (2010), comprehension is not a single skill, but a collection of skills that includes: Accurate and fluent reading; monitoring while reading; ability to use cognitive strategies flexibly to gain meaning from text; linguistic knowledge about syntax, semantics, and word morphology; prior knowledge; and cause and effect reasoning (p. 684).

Reading comprehension is the ability to understand text (Duke, Pressley, & Hilden, 2004; Perfetti, 1985; Carlisle & Rice, 2002). In the progression of skills leading to reading comprehension, accuracy precedes fluency. It is not useful to read fast and make many mistakes. Once a learner is an accurate reader, it is repeated practice that moves them to automaticity and fluency. Once a learner is both accurate and fluent, they are able to attend to what they read and can read with expression. Fluency can be described as the bridge to comprehension. It is not a goal itself, but a means to the end of understanding what is read (Adams, 1990; Stanovich, 1980; LaBerge & Samuels, 1974).

There are two components to DORF namely, oral reading fluency and passage retell. For the oral reading fluency component, learners are given an unfamiliar, grade-level passage of text (see Addendum G), and asked to read for 1 minute. Errors such as substitutions, omissions, and hesitations for more than 3 seconds are marked while listening to the learner read aloud (see Figure 3.11). Learners are asked, by means of scripted instructions (see Addendum F) to read three different grade-level passages for 1 minute each. The score is the median number of words read correctly and the median number of errors across the three passages. Using the median score from three passages gives the best indicator of learner performance over a range of different texts and content.

The passage retell component follows the reading of each passage, *provided that the learner has read at least 40 words correct per minute on a given passage*. Passage retell is intended to provide a comprehension check for the DORF assessment, and provides an indication that the learner is reading for meaning. With a prompted passage retell, the learner is instructed to read for meaning. Speed-reading without attending to text comprehension is undesirable and a lack of comprehension will be readily apparent in the learner's retell.

Case studies have documented learners who can read words but not comprehend what they read (Dewitz & Dewitz, 2003). There is concern that learners who display similar reading behaviour will not be identified without a comprehension check. Passage retell provides an efficient procedure to identify those learners who are not able to talk about what they have just read. Inclusion of passage retell also explicitly instructs learners to be reading fluently for meaning. The quality of a learner's retell provides valuable information about overall reading proficiency and oral language skills.

3 DIBELS® Oral Reading Fluency
Grade 1/Benchmark 3.3

Total words: 34

Errors (include skipped words): 3

Words correct: 31

Going to Market

0	Four baskets were filled with fish. Now it was time to take them to	14
14	the market. Ken helped his father load the baskets onto the family's boat.	27
27	Ken's family lived on a large island off the coast of Africa. They used the	42
42	boat to sail to market.	47
47	Ken jumped into the boat. His father pushed the old wood boat off	60
60	the sand and into the clear blue water. After climbing in, Ken's father	73
73	lifted the big triangle sail. The wind filled the cloth, pushing the boat out	87
87	to sea. The trip would take about an hour, so Ken sat down in the front	103
103	of the boat. There were often interesting plants and animals to see	115
115	along the way. He did not want to miss any of them.	127
127	Ken's father kept the boat close to the land. Ken could see clean	140
140	white beaches lined with coconut trees. A big sea turtle came up for	153
153	air near the boat. It went back under when the boat got closer. Before	167
167	long, Ken saw some dolphins. They raced beside the boat for several	179
179	minutes. Looking back at the coast, Ken saw some monkeys. They were	191
191	leaping from tree to tree.	196
196	The trip seemed too short. Ken's father turned the boat to the shore	209
209	and let the sail down. Ken heard the wood scrape on the sand. Now	223
223	it was time to take the fish to the market. Ken hoped they would sell all	239
239	their fish quickly. He wanted to sail in the boat again.	250

Figure 4.13 DIBELS Oral Reading Fluency (DORF) assessment

During retell, the learner is asked to tell about what he/she has read. Passage retell provides a valuable indicator of reading comprehension. The assessor indicates the number of words in the retell that are related to the passage by drawing through a box of numbers. Following a hesitation of 3 seconds, learners are prompted to tell as much as they can about the passage. If the learner hesitates again for 5 seconds or longer, or if the learner is clearly responding in a way that is not relevant to the passage, for 5 seconds, the task is discontinued. The assessor must make a judgement about the relevance of the retell to the passage. Retell can be used from the middle of grade 1 through to the end of grade 6. A quality of response rating allows the assessor to make a qualitative rating of the quality of the learner's response. The rating should be based on how well the learner retold the portion of the passage that he/she read.

DORF provides an indication of several basic early literacy skills. With the accuracy score, one can get a sense of the learner's ability to decode words with phonics patterns that are more advanced than those on NWF. The measure also provides an indicator of accurate and fluent reading of connected text. DORF is also a strong indicator of comprehension. It doesn't reveal everything about a learner's comprehension skills. But for the vast majority of learners, if they are accurate and fluent readers, they are likely to understand what they have read. The retell component provides an additional indicator of comprehension, and helps to identify the small number of learners for whom DORF may not be as good an indicator of comprehension (Good et al., 2013).

4.4.1.6 *DIBELS* Composite Score

The *DIBELS* Composite Score is a single number that compiles and weights the learner's performance on the significant indicators measured at that point in time. The purpose of the Composite Score is to provide the best overall estimate of the learner's early literacy skills and/or reading proficiency (Good, Powell-Smith, & Kaminski, 2011). Because the *DIBELS* Composite Score provides the best overall estimate of a learner's skills, the *DIBELS* Composite Score should generally be interpreted first. If a learner is at or above the benchmark goal on the *DIBELS* Composite Score, the odds are in the learner's favour of reaching later important reading outcomes. Some learners who score at or above the *DIBELS* Composite Score benchmark goal may still need additional support in one of the basic early literacy skills, as indicated by a below benchmark score on an individual *DIBELS* Next measure, especially for learners whose composite score is close to the benchmark goal.

At many assessment periods, the Composite Score is a simple addition of each of the scores included for that time of year; yet for some indicators, there are multipliers other than 1. From the beginning of grade R through the beginning of grade 1, the scores are simply added together. From the middle of grade 1 onward, there are multipliers that range from 2 to 4.

Because the scores used to calculate the *DIBELS* Composite Score vary by grade and time of year, it is important to note that the Composite Score generally cannot be used to directly measure growth over time or to compare results across grades or times of year (Good, Powell-Smith, & Kaminski, 2011). However, because the logic and procedures used to establish benchmark goals are consistent across grades and times of year, the percentage of learners at or above benchmark can be compared, even though the mean scores are not comparable.

4.4.2 Reliability of *DIBELS* Next assessments³²

Although the assessments used in this research were translated and adapted to suite the situation of the children in the study, I deem it important to state the reliability of the *DIBELS* Next assessments from which the translated assessments derive. I will briefly report on three types of reliability which are cited in the *DIBELS* Next technical manual, namely, alternate form reliability, test-retest reliability and inter-rater reliability. The information which I provide here will not include specific coefficients (for coefficients, see Good, Kaminski, Dewey, Wallin, Powell-Smith & Latimer, 2011, p. 82 – 90), but will focus on the qualitative descriptions of the findings of the statistical data pertaining to these three forms of reliability.

Table 4.8 Reliability of *DIBELS* Next tests

Type of reliability	Description	Results
Alternate form reliability	Indicates the extent to which test results generalize to different item samples. Students are tested with two	Overall, the alternate-form reliability of a single form of most <i>DIBELS</i> Next measures is sufficient for making screening decisions and in many instances

³² In this section reliability and validity of the *DIBELS* Next assessments, per se, will be discussed. Reliability and validity as it pertains to the study as a mixed method inquiry will be discussed in section 4.7

	different (i.e., alternate) but equivalent forms of the test and scores from these two forms are correlated.	sufficient for important individual decisions. Test results from multiple administrations of the same measure are highly Reliable (p. 83)
Test-retest reliability	An index of score stability or the degree to which results from student testing are replicated when the same test form is administered twice within a short interval. Scores from the two test administrations are then correlated.	For nonsense word fluency (NWF) reliability coefficients are sufficient for screening decisions. In general, for DORF Words Correct and the <i>DIBELS</i> Composite Score, reliability coefficients are sufficient for making important individual educational decisions (p86).
Inter-rater reliability	The extent to which results generalize across assessors. The inter-rater reliability estimates reported here are based on two independent assessors simultaneously scoring student performance during a single test administration ("shadow-scoring"). The two raters' scores are then correlated.	Inter-rater reliability is high for all measures indicating that scoring directions were applied in a consistent manner across assessors (p. 88).

Note: Good, Kaminski, Cummings, Dufour-Martel, Petersen, Powell-Smith, Stollar, & Wallin (2012) p. 82 – 90)

4.4.3 Validity

Although there is considerable debate in the literature about the precise definition of the term 'validity' (see, for example, Winter, 2000; Johnson, Onwuegbuzie & Turner, 2007), for the purposes of this study, the term will be taken to refer to the extent to which a measure is indicative of the construct it is intended for (Hammersley, 1987). Two types of validity will be discussed here, namely content validity and face validity.

With regard to the *DIBELS Next* assessments content validity varies with the purpose for which the data is intended (Good et al., 2012). *DIBELS Next* measures were designed as general outcome measures or indicators of overall performance in a particular skill area. The assessments in this study are used to gauge the main construct thereof, namely the phonemic awareness development (and related early literacy skills) of the children in the study. Results are intended to show whether the children made progress in developing phonemic awareness and other early literacy skills.

Face validity was increased by the execution of a pilot test to make sure that the test and the items would be understood by the intended participants namely, the grade one children. Face validity is optimised by the administration of a pilot test to a sample of five of the youngest grade two children to verify the relevance of the various test items to the intended population and to make sure that the children are able to understand the translated scripted instructions (Thiétart, 2007, p.175).

4.4.4 Pilot test

Because the nonsense word fluency, first sound fluency and phoneme segmentation components of the test had been reframed in Afrikaans, and because the oral reading fluency texts were generated on the basis of classroom based vocabulary, I had the test checked for level appropriateness by the student classroom assistant who worked in the grade one class and who acted as research assistant during the administration of the assessment. Furthermore, I piloted the test on the five youngest of the grade two children. The pilot proved to be useful as it came to the fore that the font which I had used on the nonsense word fluency test, namely Arial, caused the children to struggle reading the letter 'a' in lower case. I therefore, changed the font to ABC Junior Typing. The pilot test also gave me opportunity to pilot the scripts which I had translated from English to Afrikaans.

4.4.5 DIBELS Net analysis

Assessment data were captured and analysed within the *DIBELS Net* data management system. The results are then generated via various reports as required by the researcher. From the quantitative results, themes are generated that best describe the children's assessment results.

4.5 QUALITATIVE RESEARCH

According to Meriam (1998), qualitative research is a term which refers to investigations into real life social phenomena, with as little as possible interference in the natural settings within which they occur. Some of the characteristics of qualitative research as put forth by Cresswell (2009) and recorded by Wessels (2011) are presented in Table 4.9.

Denzin and Lincoln (2000) emphasise the central role of the researcher in this form of research and encapsulate its nature thus:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive material practices that makes the world visible (p.3).

Table 4.9 Descriptions of some characteristics of qualitative research

Characteristics of qualitative research	Description	Manifestation of the characteristic within the inquiry
Natural setting	Information is gathered in the natural setting through personal contact with people and by observing how they behave.	Extensive time was spent by the researcher making observations at the school and within the community. Personal contact was made with all participants in the study.
Researcher as key instrument	The researcher gathers the information.	The researcher conducted most of the interviews herself except for employing a Setswana speaking research assistant. This was deemed necessary to

		obtain data from Setswana speaking respondents.
Multiple data sources	Data is gathered from several sources. From those categories are derived and themes conceptualised that reflect cross-source correspondence.	In this inquiry the researcher made use of interviews, questionnaires, documentation, artefacts, and researcher observations. This proved sufficient to answer the research questions.
Inductive data analysis	The researcher derives themes by arranging the data into incrementally more abstract units of information.	Data was codified, after which the codes were arranged into categories. Themes were derived from these categories.
Participants meanings	The researcher looks for the meaning in what the participant says and does.	In this inquiry the researcher focused on aspects of the school and home environment which could bear relevance to the development of phonemic awareness.
Emergent design	The initial research plan is not set in stone as the researcher, whilst gathering data, might become aware of other sources to utilise in getting data which would address the research questions	Unexpected events, such as for example, the whole school evaluation which took place in the year in which the research was done, and the decision by the school to divide the class into two groups presented new opportunities to gather data.
Theoretical lens	This gives the researcher an overall perspective that shapes the research questions and informs how data are collected.	Ziegler and Goswami's psycholinguistic grain size theory (2005) guided the research process to investigate the activities used in the classroom to facilitate phonemic awareness development for the Setswana speaking children learning to

		read in a transparent orthography such as Afrikaans.
Interpretive inquiry	The researcher interprets what is seen and heard and understood within the situation of the inquiry. The researcher's interpretation is influenced by his or her own background, history and own prior perceptions of the situation.	The researcher speaks both Afrikaans and Setswana fluently. She also has extensive experience working at informal settlements in the area where the population is mostly Setswana speaking (see Van der Vyver 2012a). Her three children go to the school.
Holistic account	Multiple perspectives and diverse aspects of the situation is reported on and taken into consideration.	All but one of the parents of the children in this study were interviewed. The teacher questionnaire, which determined to gauge the teacher's knowledge of phonemic awareness, was administered to all the foundation phase teachers. Various semi-structured and informal interviews were conducted with the grade one teacher; the preschool teacher; the principal and the head of the foundation phase department at the school. Various school events and many of the rituals at the school were observed to get a comprehensive view of those aspects of their school life which might impact upon the Setswana speaking children's school experience in general, and their phonemic awareness development in particular.

Note: Adapted from Creswell (2009) and Wessels (2011).

4.5.1 Sampling

The unit of analysis in this study is the Setswana speaking grade one children at a small-town Afrikaans medium school engaged in developing (among other early literacy skills) phonemic awareness in a second language. The construct of 'phonemic awareness development' was operationalised into actual observable phenomena such as 'children engaging in early literacy activities'; 'a teacher who teaches phonemic awareness skills in a certain way'; 'a principal who views the Setswana speaking learners at the school in a certain way'; 'parents who choose the school for specific reasons'; and, 'children who are engaged in certain language activities before starting school'. Phonemic awareness development as construct was also examined through investigating how the different role players in this education activity - the teachers, the principal and parents - expressed themselves about this and other aspects of early literacy as well as their perceptions of the role each of them play in the children's early reading.

Sampling was done by purposeful selection of the intact group that constitutes the case. The following key participants were identified and included: The school principal, the grade one teacher, the preschool teacher, the head of department of the foundation phase, as well as the parents of the children. The grade three teacher and the Afrikaans home language teacher for the grades 4 – 7 children were included as participants in one data source, namely as respondents in the teacher questionnaire. This was done to get a comprehensive picture of teacher knowledge of phonemic awareness at the school.

Each of the participants was chosen because they would potentially provide data that would address the research questions. In this study it was desirable to make use of multiple data sources so as to render the situation from multiple perspectives. Also, gathering and comparing different types of data from different sources can enhance, for the researcher, areas of commonalities between the sources and so, help to confirm findings (Knafl & Breitmayer, 1989). Following is a brief explanation of the motivation which prompted the inclusion of each set of participants in the inquiry. More specific demographic details about the participants will be given in the next chapter where each data source will be discussed in detail.

Apart from the axial group of Setswana-speaking children, their school principal, teachers, and parents³³ were selected because they would be able to provide data about the children's early exposure to pre-literacy activities and print, their socio-economic status, and the parents' education levels. Since second language learning is an important background construct within this investigation, parents were also deemed to be valuable informants regarding parent motivation for putting their children in an Afrikaans medium school, parents' literacy abilities, their proficiency in Afrikaans, how they view their role in their children's literacy learning and their attitudes toward supporting their children's schooling in a second language. This group was also selected because they could be seen as indirect 'recipients' of the education efforts bestowed upon their children and therefore, close witnesses of how well their children were responding to literacy instruction at this specific school.

I selected the school principal and the head of the foundation phase department at the school as key informants about school-level support strategies for the Setswana-speaking children's education in general as well as for their development of early literacy skills, such as phonemic awareness. Both the principal and the HOD had served a considerable term at this school and could thus provide sufficient background to the period within which the transition from an Afrikaans medium school attended exclusively by Afrikaans speaking children, to that of an Afrikaans medium school at which nearly 40% of the learners were from a Setswana language background.

The grade one classroom assistant, a student teacher, who acted as research assistant while administering the translated and adapted *DIBELS Next* assessments was selected because she was, in a way, participant researcher (Jarvis, 1999) and as such, party to the phonemic awareness development activities of the children. She participated in all the day to day classroom activities, meetings and many of the casual conversations which have been included as data in this study. The term 'practitioner researcher', according to Jarvis (ibid), implies that the individual is at the same time an active participant and a researcher looking for answers. Although this role was not fulfilled to the potential which it could have been, this was still a valuable source of data. Through her participation in this research she had the opportunity to expand her professional development through increasing her knowledge of research and research methodology. She received theoretical and practical training on basic test protocol and specifically in the administration of the *DIBELS Next* assessment. I also checked the performance of

³³ For ease of reference 'parents' in this study will refer to the person or persons in whose care the child is.

individual children against the qualitative information she gave. This individual was a rich source of insider knowledge, especially when it came to filling out the additional information parts of the test sheets. I also gave her feedback on the performance of individual children which could enhance her classroom practice.

4.5.2 Qualitative data collection methods

In the next section the various methods which were utilised in the process of collecting qualitative data for this study will be described.

4.5.2.1 Questionnaire

A self-administered pen and paper questionnaire containing fixed and open ended questions was used as tool to gauge teachers' knowledge of phonemic awareness, aspects of their classroom practice and some of their perceptions on early literacy instruction (see Addendum J).

In a literature review on the administering of questionnaires, Bowling (2005) reports that different modes of administering questionnaires impact upon the quality of the data obtained. That author (ibid) also relates that such modes differ in a number of ways, e.g. in how the respondents are contacted, the medium through which the questionnaire is administered and how the questions are delivered. I made use of this source to compile a table in which some of the salient points of the design of the questionnaire in this study are highlighted through presentation of those common issues in questionnaire research relevant to this study, and how these were addressed in the administration of this questionnaire to the teachers (see Table 4.5).

Table 4.10 Issues to consider in the design of a self-administered questionnaire

Aspect of research	Description	Relevance to the administration of the questionnaire in the study
Burden on respondent	Visual self-administration presentation presupposes dexterity and literacy in the language of the questionnaire.	All the respondents are fully literate Afrikaans speaking primary school teachers – none of them were physically disabled.

Influence of the social setting in which the questionnaire is administered.	Physical setting and possible social, cultural and language differences.	<p>The questionnaire was administered to the teachers, all together in a group, sitting at the staff table, after school, where they usually sit during break times.</p> <p>Teachers were all members of the same small-town community, all female, and all from an Afrikaans language background.</p> <p>Because the teachers seemed nervous at 'writing a test' the researcher kept the atmosphere light hearted and relaxed and respondents were allowed to make comments during the administration of the test.</p>
Item response rate	Influenced by not understanding questions and/or by boredom.	The researcher was present and explained each question before respondents started answering them. The researcher guided respondents when they were unsure of the meaning of a question and encouraged respondents to complete the questionnaire to the best of their ability.
Pace of completion and control over the order of questions	Self-administered questionnaires allow respondents to preview and review their questions and to adjust their answers.	
Social desirability bias	Respondents present information in a way which is socially acceptable. This is more likely to happen during a face to face interview situation or during a telephonic survey.	Respondents were encouraged to complete the papers anonymously. Also, respondents did not seem to censor their answers to the one question which could have elicited a social desirability bias namely, <i>question C10: Do you think that the current departmental directives on phonological awareness are sufficient?</i> To which all the respondents answered in the

		negative.
Acquiescence bias	Responding excessively positive to questions – a culturally based tendency to agree with others because it is easier to agree than to explain why you disagree. More common in interview and telephone situations than in self-administrated situations.	The questionnaire was designed as a research tool through which to get an indication of teachers' knowledge and, apart from question C10 mentioned above, did not contain any questions which could have incited respondents to agree or disagree.
'Ease' of reporting bias and primacy effect	A tendency of respondents to answer fixed response or multiple choice questions by selecting the first or the nearest answer	Upon scrutiny of responses to the multiple choice section of the questionnaire, it appears that despite teachers' poor performance on these items, they did not select the first answer more frequently than any other.
Interviewer bias	The presence of an interviewer can be distracting and elicit social desirability bias.	The researcher was present. However, I aimed to not engage with the respondents unless they asked a clarifying question. The items were designed to measure teachers' knowledge and therefore the likeliness of my presence having influenced answers is small.
Recall effects	In self-administration settings the respondent has to judge for herself whether the information they have recalled is relevant to the question, and decide on the basis thereof	This effect was minimized because the researcher was present and respondents could ask clarifying questions to which I provided the answers.

	how best to respond.	
Sensitive information	Self-administration of questionnaires can increase respondents' willingness to disclose sensitive information, compared to face-to-face or telephone interviews.	<p>Although the questionnaire didn't contain questions of a sensitive nature, the teachers' answers showed that they lacked knowledge of phonemic awareness and second language learning.</p> <p>I argue that the mode of administration lent itself to more valuable data than a face-to-face interview would have as the respondents were not put in a situation where they needed to reveal their lack of knowledge on phonemic awareness to another person.</p> <p>Teachers' almost unanimous acknowledgement of their lack of knowledge shown by their responses to question C15: <i>Do you think that you possess sufficient knowledge about phonemic awareness development to effectively prepare children for reading?</i> bears testimony to this.</p>

Note: Adapted from Bowling (2005)

In designing this data set I was guided by elements of research question 4 and to a lesser extent, by aspects of research question 5. These two questions are presented below:

Research question 4:

What school support is there for the phonemic awareness development of Setswana speaking children at an Afrikaans-medium small-town school?

Research question 5:

What are the experiences related to the development of literacy skills of the teachers and the principal at an Afrikaans-medium small town school?

The most important aspects of these questions were explored in the available literature and used to guide the investigation. These were; the impact of teacher knowledge on children's phonemic awareness development and; teacher perceptions of their classroom practice and of the importance of phonemic awareness (see section 3.10). Specifically, by designing this questionnaire, I hoped to effectively address the research aim related to the two research questions mentioned above by exploring and documenting teachers' knowledge related to the development of Setswana speaking children's literacy skills at an Afrikaans medium small-town school. The elements of this research aim which I decided to examine through administering this questionnaire were: a) whether the teachers knew what phonemic awareness is and what they understood by terminology related to phonemic awareness and phonemic awareness instruction; b) an indication of teachers' own phonemic awareness; c) what the teachers' perceptions were about their own knowledge of phonemic awareness instruction and what their experiences were as instructors of that set of skills; and d) finally, in order to rule out the possibility that, apart from lacking knowledge of phonemic awareness development, some of the teachers might lack knowledge of other aspects of language, I included a few questions on other phonological and language skills, such as, for example, to segment words into syllables and to identify two words as either a homophone (question D3) or, a homonym (question D4).

4.5.2.2 Interviews

According to Henning, van Rensburg and Smit (2004), the main objective of data gained from an interview is to give the researcher some insight, from the way people talk, into their thoughts, feelings and actions. An interview is a structured discussion which is managed by the researcher and information gained from this is analysed with the purpose of attaining a better understanding of the meaning of what people say (ibid). Face-to-face and in-depth interviews seek to gain insight into the experiences and perspectives of individuals on a specific issue (DiCicco-Bloom & Crabtree, 2006).

I decided to conduct semi-structured, face-to-face interviews (see Table 4.11) with the school principal, the pre-school teacher, the grade one teacher and the head of department of the foundation phase at the school in order to elicit responses about the meaning that they, as educators ascribed to the main construct of the inquiry, namely the development of phonemic awareness and early literacy learning of the Setswana speaking children at the school. Gaining such an understanding would also serve to address research questions 4 and 5 (see Figure 4.11). The interview schedules were purposefully designed to this end and also to establish whether or not specific strategies

were employed to enhance the early literacy learning experience of the Setswana speaking children in the study. Also, in order to compare data, some of the questions in these four interviews overlap (see Figure 4.11).

An interview was also designed to gather data from the children's parents or primary caretakers about the children's home environment and aspects thereof that could impact upon their phonemic awareness development, attitudes about their learning in Afrikaans and perceptions about the school.

When conducting an interview, the researcher takes part in the construction of meaning through "dialogical communicative action" (Henning, van Rensburg and Smit, 2004, p.57) such as encouraging the participant to continue talking and making non-linguistic utterances such as 'Hmmm' or guiding the conversation in the direction of a specific topic (ibid).

4.5.2.3 Interview schedule

Semi-structured interview schedules which contained predetermined questions and sequences were used (see addendum K. The structured component of the interviews was tailored to address the research aims (see Figure 4.11. Including a variety of different questions to gain information on the same construct implies triangulation within a single method and also means that the researcher does not depend on a single indicator which could possibly yield invalid and unreliable data (Abowitz & Toole, 2010). Semi-structured interviews were designed in order to allow the interviewer to rephrase, add or alter questions according to interviewees' individual responses (Galletta 2013). Cross checking, clarifying and probing questions were also included. Care was taken in the translation of the questions to convey the intended meaning.

The interviews with the school principal, the grade one teacher, the preschool teacher and the HOD of the foundation phase included questions on the following topics: Perspectives on language of education and second language learning; the importance of phonemic awareness; school-based strategies for enhancing the early literacy learning of Setswana-speaking children; perceptions on the curriculum; support from the local community, perceptions on the home environment of Setswana-speaking children; best practices to manage diversity; and challenges in teaching early literacy learning to Setswana-speaking children.

The interview questions of the parents' interview included the following topics: Demographic information on levels of education of parents or primary care takers and on the socio-economic status of the child's household; an understanding of phonemic awareness and early literacy; factors within the home environment which could impact on the development of phonemic awareness; and the home-school relationship as perceived by the parents.

4.5.2.4 Interview procedure

Interview data was recorded by means of audio recording and note taking. This combination is recommended by, among others, authors such as DiCicco-Bloom and Crabtree (2006). The voice recording served as an additional recording measure and as a back-up procedure should the interview notes be lost or damaged. Transcribing of voice recordings do present challenges in terms of time and other resources (Lee, 2004). Because, in total, 14 interviews were conducted, of which ten lasted more than an hour each, and because the interviews with the parents all had to be translated from Setswana into English by the research assistant, who was remunerated per hour, it was decided to use the notes as primary source of data and to use the voice recordings to ascertain meaning when necessary during the translation of the interviews from Setswana to English. The interview with the school principal took place in his office, the interviews with the three teachers took place in their classrooms, and the interviews with the parents took place in the staff room of the school.

The first objective of the interview process was to establish a friendly and secure rapport with the interviewee. Because the principal and the teachers knew me well, this was easy in the interviews conducted with them. In the case of the parents, the research assistant Paulina and I took some time at the beginning of the process to thank the parents for their participation and to explain the background information and the aim of the interview to them and also to set them at ease with regard to issues of confidentiality (see section 4.2) The format of the interview was also explained to each respondent beforehand.

Since interview skills do not merely equal the mechanistic execution of items on a tick list, but rather consist of an intricate dynamic of observation, empathetic response and consciousness of the interview situation and the interviewee (Denzin & Lincoln, 2005, p. 703) the interviewer needs to sustain, throughout the interview process, sensitivity of the circumstances from within which the various respondents take part. All respondents

were given information about the research before each interview. This included the purpose of the research and the sequence and format of questions.

Table 4.11 Rationale and purpose of interviews with parents and teachers

Interviews	Aim: To identify, describe and document aspects of their home environment that might impact on the children's phonemic awareness development.	Aim: To explore and document the experiences of their parents related to the Setswana speaking children's phonemic awareness development.	Aim: To describe strategies, if any, employed by the school to promote early literacy skills of Setswana speaking children.	Aim: To capture the challenges around early literacy instruction of Setswana speaking children at the school	Aim: To explore and document the experiences of teachers related to the development of Setswana speaking children's literacy skills at an Afrikaans-medium small-town school.
Interview with school principal	Questions: 6, 9, 10	Questions:	Questions: 2, 4, 5	Questions: 1, 3	Questions: 7, 8, 9, 10, 11, 12, 13, 14
Interview with Grade one teacher	Questions: 6, 13	Questions:	Questions: 2, 4, 5, 17	Questions: 1, 3	Questions: 7, 8, 9, 10, 11, 12, 14, 15, 16
Interview with preschool teacher	Questions: 6, 12, 13,	Questions:	Questions: 2, 4, 5, 17,	Questions: 1, 3,	Questions: 7, 8,9,10, 11, 14, 15, 16,
Interview with HOD of foundation phase	Questions: 6, 12, 13,	Questions:	Questions: 2, 4, 5, 17,	Questions: 1, 3,	Questions: 7, 8, 9, 10, 11, 14, 15, 16,
Interviews with parents	Questions: A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15-A17, B 1-11, C 1-8, E1-E17, I2, I4, I5,	Questions: D1.1 –D1.15, D2 D3.1 – D3.5, G3, G4, G11, G12.1 – G12.8 I1, I2, I3, I4, I5, I6, I7,	Questions:	Questions:	Questions:

4.5.3 Researcher Observation

In this study I was a participant observer and I made use of some ethnographic methods. This, according to Abowitz and Toole (2010), gives the researcher the opportunity to study the natural and complex actions of a group of people in their natural situation, and affords a holistic perspective of the participants' views within changing dynamics. This approach is most applicable to smaller groups and therefore, one cannot simply generalise findings derived from such a situation to larger populations (ibid).

4.5.3.1 Rationale and purpose

I made use of two methods to record observed data. First of all, I kept a diary as a field log of my observations and the progress of the inquiry (see Addendum M). Secondly, I made observations after the fact, from video recordings of classroom proceedings during literacy sessions. These recorded observations were used in two ways. First of all, I noted the lesson proceedings, including general classroom events and interactions as observations (see Table 5.11), and secondly, I recorded aspects of the teacher's literacy instruction practice in an innovations configuration (see Table 5.9).

My role as researcher was that of *participant researcher*. This is because, at the time, three of my own children attended the small school and my youngest daughter happened to be one of the pupils in the class which I observed for the purposes of data gathering. A participant researcher is one who is known and accepted by the subjects and other role players within the situation of the inquiry as well as direct observer, who endeavours to remain as unobtrusive as possible, to guard against bias (Web centre for social research, 2010). According to Henning, Van Rensburg and Smit (2004, p.83), unless observations happen through prolonged field visits, it is impossible for a researcher to enter the research situation as an 'empty slate' and to hope to gain the members of a group's perspective of the world.

The field notes which I made in a diary aimed to focus on particular aspects of the school and its population with the purpose of gathering data relevant to the construct of the inquiry, namely the phonemic awareness development of the Setswana speaking children at the school, the language of the school and of the classroom, and those school-related and home-related factors which impact thereupon.

4.5.3.2 Classroom video recording as observation

Electronic recording of visual data is a convenient way to gather observation data as it gives the researcher the opportunity to look at the data more than once and to make decisions as to which aspects of the research situation to focus on (Caldwell & Atwal, 2005). This method of data collection increases the credibility of studies by non-participant researchers as it minimises selectivity and bias and gives the researcher the chance to employ more stringent strategies to enhance reliability (ibid). Dufon (2002) however, suggests that the researcher takes a more critical look at this form of data collection by considering decisions about the data collection which might impact thereupon. Aspects for consideration suggested by Dufon (ibid) are: *How the interaction is to be recorded; who the recording will be done by and, who or what should be the focus of the recording.* After all, as Pirie (1996) suggests, a video recording cannot capture everything that happens in the classroom. What actually does get recorded depends on who the researcher is, where the camera is placed or held as well as the quality of the sound recording. Pirie (1996) calls upon researchers to be clear and open on issues such as the scope and nature of the data that gets to be analysed. I argue, with Henning, Van Rensburg and Smit (2004, p.83), as with any observation, researchers observe situations with the aim to “capture what is available to your observation” and that the choices one makes (where to aim the camera, who to focus on, when to end the recording) is subject to what the researcher already understands about the situation and the people.

In making video recordings of the classroom, I intended to capture, first of all, the teacher’s classroom practice – specifically pertaining to early literacy teaching - but also the way that she and the classroom assistant and the children interacted in the classroom. It was only later, after reading Nel’s (2011) description of innovation configurations that I decided to analyse the video data according to this method – a method which has been used for longer than three decades as tool to generate, implement and assess education innovations (Hall, Loucks, Rutherford & Newton, 1975 in Nel, 2011).

4.5.3.3 Generating innovation configurations of classroom video recordings

Video recordings of classroom sessions were used to develop an innovation configuration (see Table 5.9), which is a matrix which describes the essential components of a specific practice (Nel, 2011) – in this case, the practice of literacy

teaching by the teacher in the classroom. After Hall and Hord (1987), Roy and Hord (2004), and Nel (2011), the matrix which I generated comprises two dimensions. The first of these is 'essential components' (listed as row headings within the leftmost column, with subcomponents included for purposes of clarity) and the degree of implementation (listed as column headings along the topmost row of the matrix).

The variations associated with the innovation configuration range according to the degree of implementation of a specific criterion. These are structured so that there is a direct relationship between an increase in score and in the complexity of the criterion for the variation – in other words an ordinal arrangement of scores. For example, if the teacher presents an activity by only demonstrating it, it would represent a lower level of teaching of a concept than if she were first to model or demonstrate the activity which would indicate the highest level of evidence that a particular aspect of phonemic awareness and early literacy has been effectively covered.

The following procedure was followed when scoring aspects of the classroom situation. First of all, after observing a certain literacy-related aspect of the classroom situation, an 'X' was placed under the particular variation of implementation code. Bulleted items expand upon the categories and provide more detail and examples of descriptors for each component. Secondly, each item was given an inclusive rating which depends on the highest variation of implementation score that received an 'X'. These inclusive ratings are put under 'Rating' in the last column on the right. For example, if under 'First sound fluency' the highest variation that received an 'X' was for demonstrating the concept, then a rating of 1 is appropriate for that concept. Thirdly, the highest item rating from each variation for each component is transferred to the rating column on the right. Fourthly, it is important to note that the scale points should not be taken to indicate an equal interval between each score – in other words, the difference between 1 and 2 cannot be interpreted to be of the same significance as the difference between 2 and 3. Also, although a score of 4 represents a higher level of implementation than a score of 2, it cannot be assumed to be double the quality of a score of 2. Finally, for ease of reference, the scores for the second, third and fourth weeks of school are presented together underneath each variation of implementation code.

4.5.4 Documents and artefacts

Henning, van Rensburg and Smit (2004, p.98) propose that documents have the potential of yielding rich data, especially when they utilised for their content value and analysed for their discursive value. These unobtrusive sources of data can be useful in

that they are not affected by the research process or by the presence of the researcher (Abowitz & Toole, 2010).

At the beginning of the research I took stock of the data which were already available. These included the school language policy and other school documents such as budgets, proposals and other documents which are important in representing the history of the research situation (ibid). During the research period, I also gathered the minutes of some of the foundation phase meetings and a meeting of the school governing body which I attended. During that year, a whole school evaluation was executed by representatives of the department of basic education's quality assurance directorate and I included that report, which is referred to as the *IQMS Report* (Addendum A) in my data because, as an objective report on assessment research which was commissioned by the Gauteng Department of Education it serves to validate much of the data which I have gathered, especially with regard to the school and its functionality.

4.6 QUALITATIVE DATA ANALYSIS

Although not exclusively seated in grounded theory practice (Strauss & Corbin, 1999), the analysis of the qualitative data was done through content analysis by following processes of coding and categorising. The congruence between data sets incited the use of content analysis in this study.

Although conducting discourse analysis on the different texts was not part of the original research plan, certain discourse markers came to be highlighted during the process of examining the tensions that came to the fore within the research situation. The use of content analysis ensured that the analysis process stayed true to the actual lived experiences, words and actions of the participants – from which the codes were closely derived.

The following processes were followed in analysing the data: Recorded data was transcribed verbatim after which all the data was arranged in sets and read to get an idea of the content. Next, the data sets were coded, one by one, by arranging segments of data together semantically. The codes were then processed in the following three steps as described by Henning, Van Rensburg and Smit (2004). First of all, units of meaning were selected and grouped together on the basis of words and phrases used by participants, and by the researcher in the field notes describing events, and in documents related to the research topic with a focus on how frequently and consistently as well as how widely across sources certain words or phrases appear in the data. Each

of these codes were then ascribed descriptive labels. Next, these codes, or labels were reread and scrutinised for coherence, causality and meaning and arranged into categories which reflect similar issues and topics within the data. The final step in the data analysis process was the examining of categories and how they relate to one another and to specific themes identified in the research and through the data analysis process. These themes were then described and used as wellspring from which the researcher discusses the issues to which the research pertains, puts forward arguments and draws conclusions about the outcomes of the research.

4.7 RELIABILITY AND VALIDITY OF MIXED METHODS RESEARCH

Onwuegbuzie and Johnson (2006) emphasise the importance of credibility and trustworthiness when conducting mixed methods research by plotting a typology of nine types of validity by which mixed methods researchers should consider toward the legitimisation of their research. These are depicted in Table 4.12.

Table 4.12 Types of validity and legitimisation in mixed method research

Types of validity or legitimisation	Description
Inside-out	The extent to which the researcher accurately presents and appropriately utilizes the insider's view and the observer's views for purposes such as description and explanation.
Sample integration	The extent to which the relationship between the quantitative and qualitative sampling designs yield quality meta-inferences.
Weakness minimisation	The extent to which the weakness from one approach is compensated by the strengths from the other approach.
Sequential	The extent to which one has minimized the potential problem wherein the meta-inferences could be affected by reversing the sequence of the quantitative and qualitative

	phases.
Conversion	The extent to which the quantitative and qualitative data yield quality meta-inferences.
Paradigmatic mixing	The extent to which the researcher's epistemological, ontological, axiological, methodological, and rhetorical beliefs that underlie the quantitative and qualitative approaches are successfully (a) combined or (b) blended into a usable package.
Commensurability	The extent to which the meta-inferences made reflect a mixed worldview based on the cognitive process of Gestalt switching and integration.
Multiple validities	The extent to which addressing legitimating of the quantitative and qualitative components of the study result from the use of quantitative, qualitative, <i>and</i> mixed validity types, yielding high quality meta-inferences.
Political validity	The extent to which the consumers of mixed methods research value the meta-inferences stemming from <i>both</i> the quantitative and qualitative components of a study.

Note: Adapted from Onwuegbuzie and Johnson (2006)

4.8 ADMINISTRATIVE PROCEDURE AND ETHICS

In accordance with the ethical requirements of collecting data in mixed method studies set out by Creswell and Plano Clark (2007), I obtained permission to conduct the research from three levels, namely from the people in charge of the site (the school principal and, by implication, the Gauteng Department of Education; from the people who would take part in the study namely the teachers, parents and children; and from the campus based institutional review board – the Ethics Committee of the North West University. Details of the administrative processes and ethical considerations for this study will be discussed next.

Permission to conduct research at the school was requested in a letter which was presented to the principal and the school managing team. Permission was granted by the school principal after consulting with the school management team and the school governing body (Addendum P). Permission was also granted for the use of school documents as data.

Permission to conduct this study at this school in Gauteng was obtained from the GDE. A certified copy of this letter was given to the principal of the school at the beginning of the research (see Addendum Q)

The research assistant, who assisted with the *DIBELS Next* assessments, signed a confidentiality agreement. An information session was held with the school principal and all the school teachers during which the research proposal was presented. At this session details of the purpose, nature, aims of the research and data collection methods were disseminated to the teachers and the principal. The school principal and those teachers who would take part in this research all signed consent forms, the content of which were explained to them at the information session.

Parents were invited to an information session by means of a letter which was attached to the school news letter (see Addendum N). An information session was presented to the parents during the grade one parents evening at the beginning of the year. At this session details of the purpose, nature, aims of the research and data collection methods were disseminated to the parents. Parents and primary caretakers signed informed consent forms and received information brochures (see Addendum R) about the research. The grade one children's verbal assent was obtained after I explained my presence in the classroom and the purpose of the study to the children on the first day of school.

As suggested by Abowitz and Toole (2010), care was taken to find a balance between the information about the proposed research methods and any risk it might carry – giving subjects every opportunity to make an informed decision about their participation whilst not prejudicing the data which were to be collected. Participants' right to privacy was maintained by protecting the identity of the school, the teachers, learners, parents and district officials. To this end pseudonyms were used to refer to all the participants, the school and the town within which the school is situated.

Ethical clearance was obtained from the Ethics Committee of the North West University, Potchefstroom. Details of this clearance (see Addendum O) are:

Care was taken with regard to the following ethical aspects as explicated by Shamoo and Resnik, (2009)

Protection from harm

The researcher made sure that no participants were put in a situation in which they could come to any harm as a result of their physical or psychological participation in the study. Participants were not subjected to embarrassment or undue stress during the research. During the administration of the *DIBELS Next* assessments the researcher employed the services of the grade one classroom assistant, whom the children saw every day, in order to optimise learner's emotional comfort and stability. For instance, during the *DIBELS* Oral Reading Fluency component of the test, learners read to her, as they do in class, while the researcher sat to one side with the scoring sheet.

Honesty and trust

In the collection of data through semi-structured interviews, self administered questionnaires, collection of documents and artefacts and the administration of the *DIBELS Next* assessments, as well as during the data analysis process the researcher adhered strictly to all ethical guidelines about honesty and trustworthiness of data collection and analysis.

Privacy, confidentiality and anonymity

Confidentiality was maintained through the removal of any identifying characteristics of people and places before dissemination of information. The researcher made it clear that the participants names would not be used for any other purposes and that information would not be shared that could compromise their identity in any way. Pseudonyms were therefore used throughout.

Voluntary participation

In addition to all the precautions mentioned here, participants were assured that the research was exclusively for academic purposes and that their participation was completely voluntary. Participants were not forced to participate and retained the right to withdraw from the research at any time.

Researchers need to take care never to place participants in any form of danger or to force them to take part in anything they are unwilling to. Furthermore, the research process should bring more good than harm to the participants. This implies strict adherence to ethical considerations and research integrity. As researcher I recorded some of the research data such as using photographs and voice and video recording to record much of the data. I have referenced sources from the literature and will allow the participants insights and access into the reporting of the evidence. The research assistants and I maintained a relationship of trust and cooperation with participants throughout the research process.

4.9 CONCLUSION

This chapter presented the rationale and purpose as well as the process of the mixed methods design according to which this inquiry into the phonemic awareness development of the Setswana-speaking grade one pupils at an Afrikaans medium school in a small town in the Gauteng province was planned and executed. It showed how quantitative and qualitative research methodologies were utilised in order to gain a comprehensive, multifocal perspective of the research situation. It also explains how the application of this design could result in a research process which draws upon various sources by means of different tools to gain convergent data that would be more reliable than if only one methodology had been applied. Furthermore, this design offered the researcher some flexibility in making decisions on how best to go about gaining an understanding of the situation when unexpected events developed during the course of the research.

The *DIBELS Next* assessments were translated into Afrikaans and adapted to the South African situation (see for example, Addendum G). Quantitative data were analysed by making use of descriptive statistics (e.g., percentages, mean scores). A pencil and paper questionnaire was administered to the foundation phase teachers as well as to the grade four to seven Afrikaans home language teacher in order to gauge the school's knowledge resources on phonemic awareness development and phonemic awareness development instruction (Addendum J). Interviews were conducted with participants from the school (Addendum K) and with the children's parents regarding their home environments (Addendum L) so as to enable the researcher to gain a deeper understanding of topics and of the perceptions of the different participants in interaction with the researcher. Existing documents and artefacts, such as flash cards were perused as were documents which were generated during the research period. I kept

notes, in a diary, on everyday occurrences in the classroom and at the school, as well as on any events which I deemed relevant to the topic of my research (M). Video recordings were made of classroom sessions from which innovation configurations were generated and observation notes made.

Quantitative data were analysed through the *DIBELS Net* system. Qualitative data were analysed according to qualitative content analysis by the coding and categorizing processes that originated from grounded theory practice (Strauss & Corbin, 1999). Electronically recorded video data were analysed according to innovation configurations which were rated according to a four-point scale. The reliability and validity of the instruments were strengthened by a review of some of the literature on this topic.

Care was taken to conduct the research ethically and the appropriate administrative issues were dealt with to remain sensitive to participants' right to anonymity and confidentiality. Participants were informed of the purpose of the research and care was taken not to harm anyone who formed part of this inquiry.

The design and methodologies were tailored to maximise the reliability and validity of the data in order to offer the insights generated by this pioneering study on the phonemic awareness development of Setswana speaking children learning phonemic awareness in Afrikaans. In the next chapter, the data and analysis thereof will be presented.

CHAPTER 5: FROM GATHERING TO ANALYSING DATA

5.1 INTRODUCTION

In this chapter the processes of the field inquiry and the implementation of the research design are described. The different research operations are explained with examples of 'raw' data and data-in-analysis. This account of the field research aims to show how the data were collected, organised and interpreted. The chapter advances from a description of the identification and selection processes of the different data sources through the inductive analysis process towards the themes that were derived from the analysed data. The design logic of pragmatism within a mixed method design is reflected in this fully empirical report of the research process.

5.2 DATA SOURCES

Eight data sources were drawn upon in this inquiry (see Figure 4.1). In this section the types of data will be differentiated. Some of the data already existed at the outset of this study. Some data, in accordance with the research design and planning phase, was generated during the research while other data, came about unexpectedly as a result of some unexpected results which entered upon the research situation during the data gathering phase of the inquiry. Examples of this are: The school language policy, which forms part of the school documents (data source 6), already existed by the time of the planning of this inquiry. Interviews were purposefully designed as data gathering instruments. An exception is the interview which I conducted on the spur of the moment with the principal and the HOD of the foundation phase at the school when certain events presented a unique opportunity for me to gain insight on an aspect of the research situation (see 5.4.8). The IQMS whole school evaluation report (data source 6), is another example of how, in true pragmatic mode, I opportunistically included data which did not form part of the initial research plan, when I realised the value which an independent research report on the school could add to my study.

After examining them for their value within the inquiry, they were converted to formal sets and were then analysed in *document analysis* mode. The term 'sets' is used in this study to indicate the morphing of information from knowledge sources in general everyday discourse, to systematically organised social science knowledge and thus

indicates a more abstract form of the information gained (Van der Vyver, 2012a). For ease of reference the numbers which have been allocated to each data set are the same as the data sources from which they derive.

Preliminary observations and notes made by the researcher (data set 7) of events and informal conversations with some of the participants prior to the commencement of the formal research phase informed aspects of the research. An example of this is some of the questions in the interview schedules with the various participants. These preliminary observations also guided the researcher to look for information on certain aspects of the situation in the existing literature. The spiralling and expanding process of examining the literature for information on certain topics alerted me to the specific relevance of certain aspects of the planned inquiry – such as, for example, the importance of teacher knowledge about phonemic awareness to the development of early literacy skills in children. Such information gleaned from the literature thus informed the design of some of the instruments, such as, for example, the teachers' questionnaire (data set 5).

In accordance with the pragmatic position which was adopted for this mixed method study (see section 4.3.3), some data, which was initially intended to form part of a certain data set, was eventually allocated to a different set in a bid to increase validity and reliability. An example of this is the video recorded data which was initially seen as a convenient way to gather data for the researcher to include as observations later on. However, such a volume of video recorded material was generated that it predisposed the data to also be organised into an innovation configuration (data set 5) which would reflect the teacher's classroom practice in a structured way. This I deemed to be more effective than an overabundance of observation notes. The observations are presented in Table 5.11 and this data combined with the field notes I made in a diary during my field visits forms part of data set 7. Despite the abundance of data in this set, it was used primarily to confirm other analysis outcomes, as I was wary of letting my own voice dominate those of the participants in the situation (Van der Vyver, 2012a), such as the teachers, the principal and the parents.

Finally, since it is the main construct of the inquiry, I wanted to be able to measure and present the development of the Setswana speaking children's phonemic awareness as it progressed within the situation of their home and school environment, as concisely and clearly as possible. I decided to do this by including a quantitative component to the research. After investigating various options from the existing literature on instruments that would be able to measure this construct, I selected those components of the *DIBELS Next* assessments (Data set 1) which, to my mind, were best aligned to the

purpose of measuring the construct. This quantitative component of the study, comprising a single data set, will be put forth and the analysis thereof discussed. The main finding derived from this data will be proffered. Following that, the eight data sets which, together, make up the qualitative part of the study, will be presented. That part of the chapter will show the reader how, through an inductive process of analysis, a few salient themes were arrived at. Finally, in accord with the convergence model of the triangulation mixed methods design, as put forth by Cresswell and Plano Clark (2007), the quantitative and qualitative themes will be brought together.

5.3 QUANTITATIVE DATA: PRESENTATION AND ANALYSIS

In this section the results from the adapted and translated *DIBELS Next* assessments, which aimed to gauge the phonemic awareness development of the Setswana speaking children in the study, are presented. The first research question, which the quantitative component of the study aims to find an answer to, focuses on the process of development of an early literacy skill by a group of children. In this section therefore, the presentation and analysis is aligned with that research question namely:

Research question 1: *What is the phonemic awareness profile of Setswana speaking children within their peer group at an Afrikaans-medium school?*

Secondly, because phonemic awareness is a *process* the focus is on whether or not the Setswana speaking children made any progress in their development of phonemic awareness. Thirdly, because phonemic awareness is an important part of a significant predictor of early reading success, the children's early reading proficiency will be presented according to a few indicators thereof namely, the number of words the child could read correctly per minute as well as the accuracy with which they read. Fourthly, since reading comprehension is the final goal of literacy learning, the children's ability to retell what they have read was measured. This is done by recording the number of words relevant to the passage, which the children used in their retell of the story they have read. The quality of their retell is also presented according to a scale from zero to three. Fifthly, The *DIBELS* Composite Score, a single number calculated from the learner's performance on the significant indicators measured at that point in time, is presented as an estimate of the learner's early literacy skills and reading proficiency (Powell-Smith, Good, Latimer, Dewey & Kaminski, 2011). Finally, to get an indication of the Setswana speaking children's literacy within their peer group, for each of the

indicators mentioned here, the mean of the Setswana speaking children is compared to the mean of their peers. The retell quality of the group was calculated using the mode of the two groups' scores for that component.

5.3.1 *DIBELS Next* assessment scores – data set 1

The first data set comprises the results from five components of the *DIBELS Next* assessments that were administered to the grade one children at the beginning (February), middle (June), and end (November) of the year. Table 5.1 shows the basic early literacy skills which were measured in order of complexity as well as the corresponding *DIBELS Next* indicators that were used in this investigation. Although letter sound fluency formed a part of the assessment, and therefore, makes up a part of the composite score (see section 4.4.1.6), it has not been included here. Letter Naming Fluency is not an indicator of a basic early literacy skill but a measure of learner's fluency with naming letters and an indication of risk of reading failure.

Table 5.1 *DIBELS Next* indicators and their alignment with early literacy skills

Basic early literacy skills	<i>DIBELS</i> indicators
Phonemic awareness	First sound fluency (FSF) Phoneme Segmentation Fluency (PSF)
Knowledge of the alphabetical principle and basic phonics	Nonsense Word Fluency (NWF) <ul style="list-style-type: none"> • Correct letter sound (CLS) • Whole words read (WWR)
Advanced phonics and word attack skills	<i>DIBELS</i> Oral Reading Fluency (DORF) <ul style="list-style-type: none"> • Correct words per minute (CW) • Accuracy
Reading comprehension	<i>DIBELS</i> Oral Reading Fluency (DORF) <ul style="list-style-type: none"> • Correct words per minute • Accuracy • Retell total • Quality of retell

Note: Adapted from Good, Kaminski, Dewey, Wallin, Powell-Smith and Latimer (2011)

Although first sound fluency (FSF) is a skill which should be mastered by the middle of kindergarten (Good, Kaminski, Dewey, Wallin, Powell-Smith & Latimer, 2011), it was included here in order to gauge the children's initial level of phonemic awareness.

Except for the First Sound Fluency score of one child (Learner 20) who had been retained at the end of the previous year whose score on this measure remained the same across the three test times, all Setswana speaking children improved on the FSF score over the course of the year. At the beginning of the year the mean test scores of the Setswana speaking children on this test component was slightly higher than that of the rest of the class, at the middle of the year it was slightly lower and by the end of the year it was only very slightly above that of the Afrikaans speaking children. By the end of the year, six of the ten Setswana speaking children performed above the class average on this score.

A similar trend can be seen for the Phoneme Segmentation Fluency (PSF) score. At the beginning of the year the Setswana speaking children's mean score for this test component was 4.1 score points above the class average, by the middle of the year it was 2.7 score points lower than the class average and by the end of the year it was 2.1 score points above the class average. By the end of the year eight of the ten Setswana speaking children performed above the class average on this score.

Table 5.2 **Setswana speaking children's First Sound Fluency (FSF) and Phoneme Segmentation Fluency (PSF) scores.**

Student ID	First Sound Fluency (FSF)			Phoneme Segmentation (PS)		
	Feb 2014	June 2014	Nov 2014	Feb 2014	June 2014	Nov 2014
9	32	60	73	26	78	91
13	39	34	63	27	50	74
15	39	45	48	27	52	65
16	41	56	59	37	58	67
17	14	43	54	20	44	45
18	2	6	27	3	4	53
20	44	44	44	48	59	62
21	23	48	56	17	62	69
23	35	48	57	16	53	66
24	21	28	62	23	32	64
TSW	29	41.2	54.3	24.4	49.2	65.6
AFR	23.4	47.7	54.1	18.05	53.3	62.4
CLASS	25.4	45.4	54.2	20.3	51.9	63.5

Note: TSW – Setswana speaking children's means score. AFR – Afrikaans speaking children's mean score. CLASS – Mean score of the whole class together

Basic letter-sound correspondence was measured by the Nonsense Word Fluency test. Comparing beginner readers reading of pseudo-words and real words showed that the scores for reading pseudo-words and real words for children learning to read in a transparent orthography, such as German, were highly correlated whilst the same scores for English children were not significantly correlated (Wimmer & Goswami, 1994)

The mean of the correct letter sound (CLS) scores of Setswana speaking children was very nearly the same as that of the class as a whole at the beginning of the year and half a score point above that of the Afrikaans children. By the middle of the year, the mean of the Setswana speaking children was 6.6 score points lower than that of the rest of the class and by the end of the year this gap had increased to 10.6 score points between the Afrikaans and Setswana speaking children constituting the most significant difference between the scores of the two groups.

The WWR score of all, except one (learner 18, see discussion at the end of this section), of the Setswana speaking children, improved from the beginning to the middle and from the middle to the end of the year. By the end of the year their score on this test component was 1.7 score points lower than the average of rest of the class and 2.7 score points lower than the average of the Afrikaans speaking children.

Table 5.3 Nonsense Word Fluency (NWF) scores.

Student ID	Nonsense Word Fluency (NWF)					
	Correct Letter Sounds (CLS)			Whole Words Read (WWR)		
	Feb 2014	June 2014	Nov 2014	Feb 2014	June 2014	Nov 2014
9	20	42	63	0	15	21
13	10	35	68	0	12	20
15	18	57	91	0	18	29
16	23	39	101	5	14	32
17	9	25	33	0	7	9
18	7	13	21	0	0	1
20	12	18	31	2	5	6
21	12	32	34	0	11	12
23	8	46	56	0	14	18
24	2	16	42	0	4	14
TSW	12.1	32.3	54	0.7	10	16.2
AFR	11.6	38.9	64.6	0.5	10.6	18.9
CLASS	11.8	36.5	60.8	0.6	10.4	17.9

Note: TSW – Setswana speaking children's means score. AFR – Afrikaans speaking children's mean score. CLASS – Mean score of the whole class together

The *DIBELS* Oral Reading Fluency assessment (DORF) has four different indicators, namely *words correct*, *accuracy*, *retell* and *retell quality*. All the Setswana speaking children increased their number of *words correct* from the middle to the end of the year. Accuracy improved for the Setswana speaking group as a whole with some significant gains in the number of words read and accuracy for some of the children – for example, learner 16 managed to read 15 words more at the end of the year and at 96% accuracy and learner nr. 24, one of the lowest performing readers in the group, improved by 20 words from the middle to the end of the year by which time this learner could read at 92% accuracy. Whereas, halfway through the year, the average retell score of the Setswana speaking children was 5 words, by the end of the year this score had improved to 8.9 words.

By the middle of the year the Setswana speaking children's mean score on words correct was 3.3 words below that of the Afrikaans speaking children. By the end of the year the Setswana speaking children's mean score on words correct had increased by nearly ten words per minute and was 5.9 score points below that of the Afrikaans speaking children.

Although reading comprehension lies outside of the scope of this inquiry it is notable that the scores of the Setswana speaking children and their Afrikaans speaking peers differ quite significantly. The gains made by the two groups over time from the middle to the end of the year however are very similar – 78.1% for the Setswana speaking group and 76.3 for the Afrikaans speaking children.

Table 5.4 Oral Reading Fluency

	DIBELS ORAL READING FLUENCY							
	Words Correct		Accuracy		Retell		Retell Quality	
Learner ID	June 2014	Nov 2014	June 2014	Nov 2014	June 2014	Nov 2014	June 2014	Nov 2014
9	36	51	95%	100%	17	11	3	1
13	31	38	91%	90%	19	16	2	2
15	39	43	98%	98%	0	7	0	1
16	38	53	100%	96%	5	16	1	2
17	3	19	60%	86%	0	0	0	0
18	0	2	0%	29%	0	0	0	0
20	10	16	77%	80%	0	7	0	1
21	21	21	88%	84%	3	3	1	1
23	23	35	92%	90%	6	17	1	3
24	3	23	75%	92%	0	12	0	1
TSW	20.4	30.1	78%	85%	5	8.9	Mode: 0	Mode: 1

AFR	23.7	36.0	80.5	91.8	7.1	12.5	Mode: 0	Mode: 2
CLASS	22.6	34	80%	89%	6.4	11.2	Mode: 0	Mode: 2

Note: TSW – Setswana speaking children’s means score. AFR – Afrikaans speaking children’s mean score. CLASS – Mean score of the whole class together

At the beginning of the year, the Setswana speaking children’s *DIBELS* composite score was 5.2 score points higher than that of the Afrikaans speaking children in the class. By the middle of the year, it was 14.8 score points lower and by the end of the year this gap between the two groups had widened to 18.2 score points.

Table 5.5 Setswana children’s *DIBELS* Composite Score

<i>DIBELS</i> COMPOSITE SCORE			
ID	Feb 2014	June 2014	November 2014
9	46	185	198
13	39	158	153
15	45	212	200
16	60	189	210
17	29	55	100
18	10	13	4
20	60	89	73
21	29	138	102
23	24	169	146
24	25	23	132
TSW	36.7	123.1	131.8
AFR	31.5	137.9	150.0
CLASS	32.4	134.4	146.8

Note: TSW – Setswana speaking children. AFR – Afrikaans speaking children

In Figures 5.1 and 5.2 a presentation of the *DIBELS* Composite score for the class is presented. Although benchmarks are not included in this study, (see 1.3.4), these charts are included here to show the reader how results on the *DIBELS* measures can be used to indicate what portion of a group of learners have attained the required levels of performance on the early literacy measures and, therefore how effective instruction was.

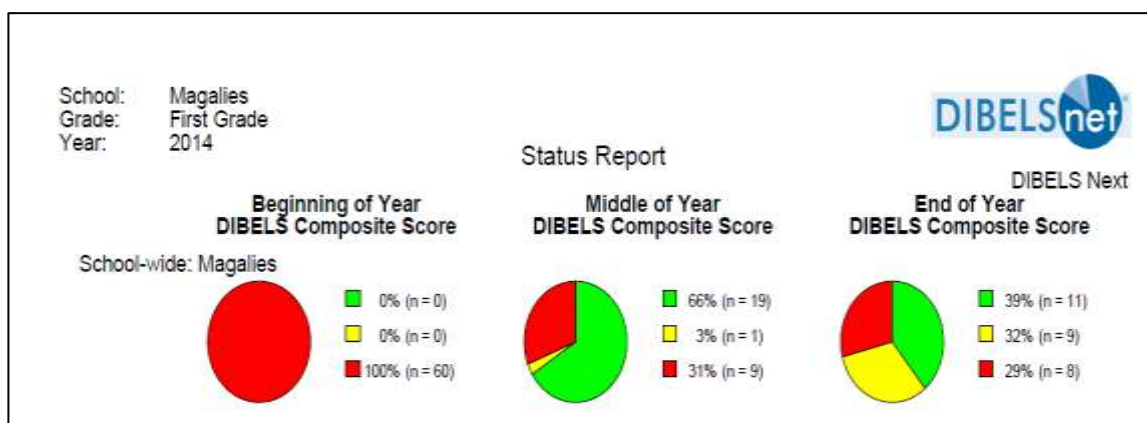


Figure 5.1 Composite Score Status Report

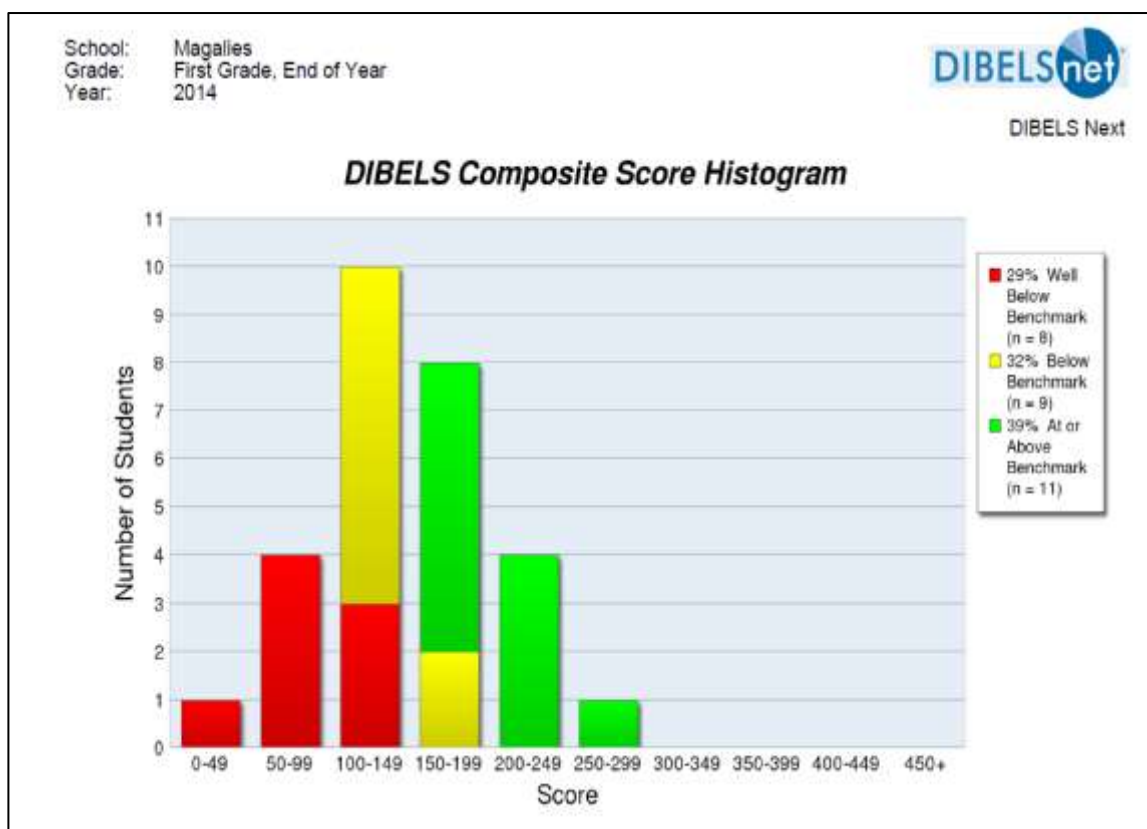


Figure 5.2 Composite Score Histogram

The sample size in this study is small. Ten Setswana speaking children were studied within a class of 30 children. This means that the performance of a single child could impact significantly on the average of the group. An example of this is learner 18 who not only had the lowest score on every assessment within the Setswana speaking group but also had the lowest score in the class. For this child receiving instruction according

to the guidelines of the national curriculum was clearly not enough. Timeous intervention guided by effective assessment is clearly indicated. Another factor which might have impacted the Setswana speaking children's performance in the assessments in the middle of the year was that most of them transferred to the newly appointed grade one teacher (see Addendum Z). Notably the class was divided between the two teachers on the grounds of who needed the most assistance - the lowest performing children remained with the original grade one teacher because of her expertise in remedial teaching.

5.3.2 The theme derived from the quantitative data

From the analysis of the quantitative data it appears that over the period of their grade one year, all but one of the Setswana speaking children (Learner 18) had made significant progress in their development of phonemic awareness, decoding skills and early reading proficiency. By the end of the year the mean of the Setswana speaking children's composite score was 15 score points below that of the class average which, although very small, suggests a trend of a widening gap between the two scores over the year. The focus of this study however, is on the phonemic awareness development of the Setswana speaking children over the period of their grade one year. The quantitative component of this study aimed to answer the first research question, namely, *what is the phonemic awareness development profile of the Setswana speaking children at a small town Afrikaans school?* The theme which derives from the analysis of the quantitative data is therefore:

1. During their grade one year, Setswana speaking children's phonemic awareness development progressed (showed an upward trend) to a level and at a rate which is on a par with that of their Afrikaans speaking peers.

5.4 QUALITATIVE DATA

In the next section the qualitative data will be presented and discussed. First of all, however, a breakdown will be given of some aspects of the qualitative data and in particular of household resources and mother's level of education in order to show how the qualitative data informs the quantitative data and whether certain home-related factors have a bearing on individual learner's performance.

Table 5.6 DIBELS Composite scores and the availability of household resources

Learner number	DIBELS Composite Score (November 2014)	Exposure to printed material /2	Water	Electricity	Household resources /10
9	198	No data	YES	YES	No data
13	153	YES	YES	YES	8
15	200	YES	YES	NO	4
16	210	YES	YES	NO	4
17	100	YES	NO	NO	4
18	4	YES	YES	YES	5
20	73	NO	YES	YES	5
21	102	YES	NO	YES	8
23	146	YES	NO	NO	4
24	132	YES	YES	YES	7

For the purpose of assessing a possible link between household resources and the children's early literacy ability, I made use of the DIBELS Composite score and compiled a table which enables a view of significant links between these resources and the learners' scores.

Although this sample size is by far too small to small to derive any significant statistically significant analysis about a possible link between their composite scores and the

availability of household resources from, I still deemed it worthwhile exploring this data in a descriptive way in order to see if any strong patterns emerged.

Because exposure to printed material is an important variable in children's early reading (Ngorosho, 2011) this resource has been noted these in a separate column. I also deemed it worth exploring to see if the children's performance was linked in any way to their access to running water and electric light. Furthermore, I assigned each one of the household resources that were in the questionnaire, namely access to email; internet connection, printed material, cellular phone, computer, television, radio, electricity and, running water a score point of one. I added the total household resources which children had access to in the last column.

As far as the availability of amenities such as water and electricity is concerned, it does not seem that there is a significant pattern in the scores. It could perhaps be noted that the four children with the highest scores all have access to running water. However, the two learners with the lowest scores have access to both running water and electricity. Therefore, in this study, there does not seem to be any significant link between amenities and children's early literacy scores.

As can be seen from the two highest scores (learners 1 and 2) and the two lowest scores (learners 18 and 19), the overall availability of household resources also do not seem to be linked to children's early reading performance.

Table 5.7 DIBELS composite scores and mothers level of education

Learner number	DIBELS composite scores	Mother's level of education
9	198	
13	153	2 – 3 year diploma
15	200	2 – 3 year diploma
16	210	Grade 10

17	100	Grade 11
18	4	None
20	73	Illiterate
21	102	Grade 12
23	146	Grade 11
24	132	Grade 10

As has been noted before, the sample size in this study is very small and therefore no statistically significant analysis is possible. Even so, I deemed it prudent to plot the children's DIBELS Composite scores and their mother's level of education in a table in order to get a view of any strong patterns that might be present.

The only two mothers who have tertiary qualifications are the parents of two children who obtained among the four highest scores. Also, the mothers or primary caretakers of the two lowest scoring learners are the only two mothers who are either illiterate or have no education at all.

5.4.1 Interview with parents – data set 2

This data collection tool was designed as an interview schedule which could be administered to parents, guardians and main caregivers³⁴ of the Setswana speaking children in the study who were purposefully selected. Nine female respondents were purposefully selected and interviewed. Their ages ranged between 23 and 59. Of these, eight were the biological mother and one the paternal grandmother of the grade one Setswana speaking child in question. All of the participants were Setswana speaking and all of them were interviewed in Setswana by a Setswana first language speaking research assistant (see section 1.3.4.4).

³⁴ All but one respondent in this data set were the biological mother of a child in the study. The only exception was the one grandmother who is referred to as such when the text refers to her specifically. Therefore, for ease of reference, In the rest of this chapter parents, guardians and main caregivers will be referred to as 'parents' or 'respondents'.

The main purpose of the design of this instrument was to address those research questions which had to do with the home environment of the Setswana speaking children namely:

Research question 2: *How does their home environment support the phonemic awareness development of Setswana speaking children at a small-town Afrikaans medium school?*

Research question 3: *What are the perceptions of the parents, of their children's attending an Afrikaans-medium small-town school, which could impact the children's phonemic awareness development?*

These research questions had the following aims:

To identify, describe and document aspects of their home environment that might impact on the children's phonemic awareness development.

To explore and document parents' perceptions of their children's attending of the school which could relate to the children's phonemic awareness development in Afrikaans.

These aims were used to guide the design of the instrument. Specific questions were included with the prospect of gaining information on these aims (see Table 4.11).

The interview schedule (see Addendum L) was designed to elicit responses that would reflect some demographic information about the children's home background and socio-economic status as well as how parents supported their children's early literacy learning. Questions were also included on parents' beliefs about the role of the school in enabling their children's early reading skills in Afrikaans and the possible tensions they experienced within the situation as well as the value they felt it added to their children's lives.

The schedule was tested in the field by administering it to a parent from a dual-medium (English-Afrikaans) school in the area. During the pilot it became abundantly clear that the schedule was too long (it took two hours to administer). The respondent became fatigued and answered with increasing vagueness after the first hour and a half. The interview was made shorter and administered to another parent from that same school.

After this interview the research assistant and I were satisfied that the parents would not suffer undue fatigue because of an overly lengthy interview process.

Because of the extensive time I spent at the school I thought it possible that parents might have come to see me as one of the teachers and that this perception of me would influence their answers to questions about the school. For this reason, Paulina and I decided that I would not be present in the room when she interviewed the parents. By this time Paulina had had some valuable experience in interviewing various respondents during the research which I conducted for my Masters study (Van der Vyver, 2012a). After the interviews Paulina reported that some of the respondents had been tense at first but that she chatted to them about their day to day lives and their children and that they had relaxed after a while. Paulina also thought that it had indeed been better for me not to be present during the interviews. She conducted the interview in Setswana and then translated the responses into English.

The first section of the schedule (section A), comprised questions aimed at getting information about the child's family, home environment and their socio-economic situation. Questions 12, and 13 aimed to establish the age and relationship of the respondent to the child while question 8, 9 and 14 aimed to establish the education level of the respondent and, where applicable, the other parent. Furthermore, this section contained questions on parents/guardian's employment status (questions 3, 10 and 11), the number of adults and children in the household (question 4 and 6), household income (question 7) and also whether any of the children in the household received government grants. Finally, this section aimed to get information about parents' motivation in choosing the school (question 15) and about the children's attendance of preschool (questions 16 and 17).

Section B, questions 1 – 11 aimed to elicit a YES/NO response to prompts regarding the availability in the child's home of basic commodities such as water and electricity; early literacy resources such as books and magazines; electronic communication resources such as e-mail and cellular phones and; information resources such as radio, satellite TV and the internet.

In the third section (section C), some graded scale responses were used to explore how often, before the child started school did parents engage with their children in language activities such as story telling; singing songs; shared reading; playing sound and word games; and, learning the names of and writing the letters of the alphabet before grade one. Parents were invited to indicate, verbally, how regularly they exposed the preschool

child to these activities by selecting one of the following responses: *'Never or hardly ever, Once or twice a month, Once or twice a week, every day or almost every day.* In addition, parents were asked to indicate which language was used during the specific early language activity.

Section D comprises three sections. The first section, D1, by making use of a graded scale, aimed to determine the value parents set to certain aspects of school - ranging from strong disagreement with a statement, through moderate disagreement, moderate agreement and strong agreement. Statements dealt with perceptions of school related aspects such as: Distance of the school from home; transport to school; sport; religion; safety; learning achievements of learners at the school; learning Afrikaans and English; teacher's level of qualification; financial assistance to parents and; the effectiveness of school management.

Section D2 consisted of two open ended questions in which parents were asked to identify and list, in order of importance, that which they deemed most important for their children to learn at the school. Section D3 made use of the same graded scale as section D1 to help determine parent's beliefs about the school. Statements about factors such as teacher competence; standards of achievement; subject content and teaching methods; the school's disciplinary atmosphere and; progress monitoring were presented to the parents.

Section E aimed to get some demographic information on the language or languages which parents use at home, within the community and for employment (questions E1 – E3). Parents were encouraged to express their beliefs regarding the utility value of different languages for employment within the area, the province and the country (question E4 – E6). Questions E7 dealt with parents' perceptions of whether Setswana speaking children would be able to find it easier to learn to read in English or in Afrikaans while question E8 encouraged respondents to motivate their answer to question E7.

In questions E9 and E10 parents' perceptions of their own ability to read and write in Afrikaans were elicited. In questions E11 and E12 respondents were encouraged to say how well they think they would be able to read the following texts in Afrikaans: Directions on how to use medicine; a recipe; a school newsletter and; a magazine article. Next, parents were asked to read an example of each of these texts (see Addenda T, U, V, W). Parents were then requested to say how well they felt they could write the following texts in Afrikaans: A shopping list (dictated by the interviewee); fill out a form for a

clothing account; a note explaining why a child was absent from school; and, a letter to the local town counsellor regarding the electricity supply to their home. This format was then repeated in question E13 – 16, except that the examples and materials presented were in English (see Addenda T, U, V, W).

Section F comprised some YES/NO questions (F2, F3, F5, F6, F8, F9) - as well as some clarifying questions (F1, F4, F7, F10) - regarding aspects of home-school communication and collaboration. These aspects include parents' meetings, parent-teacher meetings and school governing body meetings – as well as the level of participation in school events which they were invited to. Finally, question F11 aimed to gauge how often parents checked their children's homework.

Questions G 1 – 8 dealt with parents' perceptions of their children's learning to read. These questions were formulated as graded response questions which ranged from 'I disagree a lot', 'I disagree a bit', 'I agree a bit', and, 'I agree a lot'. Questions were asked about the perceived ease with which Setswana speaking children learn to read in Afrikaans (G3), English (G5) and Setswana (G1). These questions were each followed by a question which aimed to gauge the utility value parents set to literacy in each of the languages – Afrikaans (G4), English (G6) and Setswana (G2). Parents' satisfaction with their children's literacy progress was gauged in the same way (G7), as was the trust which they vested in the school's ability to remedy any difficulties the child might experience with reading (G8). Question G9 required parents to indicate who or what they felt were most responsible for their child's reading success. The following options were given as response: 'The teacher', 'I as parent/guardian/main caregiver', both the teacher and I' and, 'government'. Lastly, parents were asked to indicate, on a graded response option, how often they currently read to their child – 'never', 'once a week or less', 'more than once a week' or, 'every day'.

All the questions in section H were designed to be open-ended in order to gain additional subjective data from the parents on some of the aspects already covered in the interview schedule. These questions were deliberately scheduled to be administered toward the end of the interview so that, by then, parents would have relaxed and would be more likely to have built a rapport with the interviewer. First of all, parents were invited to talk about their expectations of the school and to what extent they felt these expectations were being met (H1). Next, parents were asked how involved they thought they were in their children's schoolwork (H2). Parents were also encouraged to talk openly about their perceptions of how well the school communicated with them in terms of their children's reading progress and, if applicable, how they thought communication

between the school and parents could be improved upon (H3). Thereafter, parents were asked to describe what they saw as barriers and obstacles to their children's learning to read and how they thought these barriers could be overcome. Parents were encouraged to think and talk about actions they thought they could take at home to support their children's reading in Afrikaans (H5).

In a more general vein, during the last two questions of this interview (H6, H7), respondents were asked to talk about how they thought the school was supporting Setswana speaking children and to make suggestions about how they felt the school could improve support of these children. Parents were thanked for their contributions and I ensured that they had my correct contact details before they left, should they need to contact me.

I will now proceed to illustrate how some of the questions were designed to elicit responses that would meet the objectives of the design of this instrument and how the translation process (from Setswana to Afrikaans) was used to retain maximum meaning. In the next few paragraphs some answers to questions will be presented verbatim. Each parent respondent received a code which started with PR followed by a number from one to nine.

In order to get information about a certain aspect more than one question on the same topic was posed in different ways (Abowitz & Toole, 2010). An example of this is the similarity in the topic of the following two questions and the way this elicited different responses from a parent. This data constitutes valuable information on a strategy employed by this mother to help her child to read despite the fact that she (the mother) cannot read Afrikaans:

Question H4: *What do you see as barriers or obstacles to reading?
How can these (barriers) be overcome through support in the home?
What suggestions do you have?*

Question H5: *What can you do at home to support your child's
reading in Afrikaans?*

Respondent PR3 gave the following information in answer to these questions:

Response to question H4: *The biggest obstacle is not being able to
read in Afrikaans, but my child reads in Afrikaans. I can try to learn
Afrikaans.*

Response to question H5: *She reads to me in Afrikaans then I tell her to make me understand (the passage) in Setswana. Then I can understand and then she can understand what she has read to surpass the understanding I have (of what she has read).*

The respondent did not give a lot of information to question H4, although she mentions a strategy for addressing the perceived barrier, namely, to learn to speak Afrikaans. More information was given, at a later stage (H5), about her more immediate strategies to address this language barrier to her child's reading practice at home.

Questions were also asked in a different format so as to elicit responses that would give a comprehensive indication of parent's perceptions and actions. An example of this is shown here in the different format of a limited response question and an open ended question

Question D3.3 (limited response)

D3. Statements about what you believe about your child's school	I disagree a lot	I disagree a bit	I agree a bit	I agree a lot
3. My child's progress is carefully monitored by the school and the school provides regular and useful information on my child's progress				

Question I3 (open ended question): *How would you describe the communication between the school and the home? Do you ever receive feedback about your child's reading? If not, how do you think can the communication between home and school be improved? What suggestions do you have?*

Also, notes were taken of any additional information the respondent might volunteer as a result of a limited choice question. An example of this is the respondent PR2's additional remark at Question G12 – a question which required the selection of one of a series of

responses indicating to what a degree the respondent agreed or disagreed with the statement. Here follows the question, her response and the additional remark she made:

G12: It is easy for a Setswana speaking child to learn to read in English:

PR2 - response:

I disagree a lot	I disagree a bit	I agree a bit	I agree a lot
X			

PR2 - Additional remark: *'If it is so hard for me to learn to read in English, then what about the little ones!'*

This additional information yielded rich data which highlighted the discrepancy between the perceptions of parents who either cannot read English or who can read English well.

The following open ended question aimed to get information on parent expectations and the degree to which these expectations are met by the school:

Question 11: What are your expectations of the school? Is the school giving your child what you expect it to give your child? Give some examples from your child's life.

To this question respondents replied as follows:

PR1: *The kids must be free with the teacher. The teachers support the kids otherwise they call us to discuss.*

PR2: *Yes, sports, reading and fast writing.*

PR3: *They encourage the child to speak and to take part in sport.*

PR4: *There are some changes – she can now speak Afrikaans and write it.*

PR5: *The teachers support the children to give my child self-confidence to be able to present themselves and work hard.*

PR6: *There are a lot of changes. He could not read well. Now he is able to read.*

PR8: *Yes, miss A from the crèche and the teacher in grade one. They are doing very well. My child can now speak Afrikaans fluently.*

In order to gauge the importance parents ascribed to their children learning different skills at school the following question was posed as an open ended question:

Question D2. *What are the most important skills that your child should learn at school? List these in order of importance?*

Interestingly, *learning to read* and *learning to write* were rated as the second and third most important skills, after *sport*. Upon further investigation it appeared that the school was well known for giving all its pupils the opportunity and the support to take part in sport. The school sponsors sport clothes and equipment for those learners who cannot afford it. Of specific relevance to this inquiry, *learning to speak English* was rated above *learning to speak Afrikaans*. Upon further prompting it seemed that parents believed that their children would learn English more effectively at this school than at the other schools in the area, including those schools where English is the LoC.

Listed in order of frequency and importance allocated to skill by parents were the following skills:

Sport

Reading

Writing

Debate, drama and dancing

Self confidence

Learning to speak English

Learning to speak Afrikaans

Computer skills

On the topic of home-school communication and collaboration, all parents reported that the school involved them in events:

Section G, question 5: *Have you been invited through a school newsletter or otherwise to volunteer in helping out e.g. to make food or sell food at the school functions such as athletics or to do physical work, such as gardening at the school?*

Although all parents indicated that they had engaged in helping out at events, they also reported that they often found it hard to understand the (Afrikaans) school newsletter regarding such events. An example of this is that all parents gave positive responses to questions G5, G6 and G7 about the school involving them in events. However, note comments about difficulty in accessing information in the school newsletter:

PR3: *I can't read the newsletters in Afrikaans, so J (my child) reads the newsletters to me.*

PR4: *I run to my neighbour, she is Afrikaans and she helps me if I can't understand it (the newsletter).*

However, most parents indicated that they were satisfied with the communication between school and home (Question I3).

It seems, therefore, that parents were satisfied with the communication process although the language posed a challenge in the process. They accepted that the newsletter was in Afrikaans and, as indicated by some of the responses above, parents seem to have put strategies in place to overcome this hurdle to accessing information from the school. Also, although parents attended parent's evenings, all proceedings were in Afrikaans, which made it difficult for some of them to understand. Once again, parents reported that they sat with friends who understood Afrikaans during the proceedings or that they linked up with friends afterwards to get important information that might have been announced at the meetings.

All parents selected the box containing the option '*I agree a lot*' in response to the following fixed-response question:

Section D3, Question 4: *I am satisfied with the disciplinary atmosphere of my child's school.*

There was a clear distinction between the perception of some of the parents of the capabilities and classroom practice of the two grade one teachers which was indicated by comments made in addition to the following fixed response question:

Section D3, Question 1: *'My child's grade one teacher seems competent and dedicated'*

Although all the parents indicated that they completely trusted the grade one teacher who had been at the school for years, those whose children were in the new teacher's class indicated that they were not as confident in the abilities of the new teacher.

Below are some of the parents' additional comments to fixed response questions in, Section D1 which aimed to gauge parents' perceptions about the school.

Section D1, question 15: *The principal manages the school well.*

PR 4: *We bring our children to this school because of Redelinghuys³⁵. He makes sure the teachers are here at school every day. We know our children are safe at this school.*

PR 9: *Redelinghuys³⁶ is strict. The children must be at school. If they dodge (are absent without reason) he will take his bakkie³⁷ and come and see what is wrong...or if they are just dodging³⁸ (school). If there is a problem he calls you to come and talk or if you have a problem you can just come and talk (to him).*

Parent expectations of the school were reflected in their response to the following open ended question:

Section I, question 1: *What are your expectations of the school? Does the school give your child what you expect it to give to your child? Give some examples from your child's life.*

³⁵ Parents and other community members (Setswana and Afrikaans speaking) call the principal by his last name, although they address him as 'Meneer' (Sir) as do the staff and children at the school'.

³⁶ Pseudonyms are used throughout for ethics purposes

³⁷ In South Africa, a light utility vehicle is known as a 'bakkie'.

³⁸ Although this response was translated from Setswana, the co-researcher and I wanted to keep the essence of this response and to use the word dodge in the place of its Setswana colloquial counterpart 'dotcha'. 'Go dotcha' is a colloquial Setswana term, derived from the English term 'to dodge' and is used to refer to the action of evading ones duties.

PR2: *The kids are free with the teacher. Teachers support kids otherwise they call us to discuss problems.*

PR7: *To give my child self confidence to present themselves and to work hard. Yes, the teachers support the children.*

PR8: *Yes, miss A from the crèche (the grade R teacher) and miss B in grade one (the grade one teacher). They are doing very well. My child can now speak Afrikaans fluently.*

Question I6 aimed to elicit answers on whether parents felt that the school supported the Setswana speaking children sufficiently. Parents responded variably, indicating that although some parents perceived the school as supporting the children with physical resources such as clothes and food, others felt that the children needed more academic support:

PR2: *The after school classes help. The school supports the children and they know it. There is a feeding scheme and they get uniform and sport stuff.*

PR3: *They don't (support the children).*

PR4: *Helps them engage more with learners who speak Afrikaans.*

PR5: *(They do) nothing to help the children. If a child can't cope they will fail (the child) until the child passes Afrikaans.*

PR6: *They treat them the same than others. They must take them and give them more support.*

PR7: *They make an effort with the Setswana speaking children. They do group work and speeches and a food kitchen, uniform and after school classes. Also free sport training.*

PR9: *They support us a lot with a lot of things. School fees and sports.*

Data indicating support from the school in terms of physical resources such as school uniforms, sports clothes and sports equipment, food, transport to and

from sporting events is corroborated by other sources. Two examples of this from are presented here:

From researcher diary – 15 May 2015:

(The science teacher) called the Setswana speaking girls in her netball team during break time and gave them each a pair of sport shoes. Addressing me she said “my black children in the team cannot afford tackies³⁹ - so I buy them tackies myself.”

From researcher diary – 25 April 2014

On the last day of the school term shopping bags full of food are given to those children who take part in the school nutrition programme to take home so that they have food during the holidays. I asked the principal about this and he said that for some of the children the food they get at school is the only food they get and that they need to be sustained during the holidays.

Question 17 dealt with what parents thought the school could do more to help Setswana speaking children. Parents made the following suggestions:

PR1: There must be afterschool classes for us, who don't understand Afrikaans. It will be good for the parents.

PR2: I ask that they do not become impatient. That they help them (the children) to read in Afrikaans.

PR3: That the school uses English in meetings as much as possible. That the school letters get printed in English as well as Afrikaans. Extra classes in the afternoons to help with the homework.

PR4: Give them extra classes and teach them individually, for example, explaining the meaning of a single word to them.

PR5: There must be a Setswana speaking teacher who will be able to explain things in Setswana and Afrikaans.

³⁹ Sport shoes

PR6: Extra classes. Supporting the children better during lessons.

PR7: They must check who is struggling with Afrikaans, for example, when the children do speeches. They must identify the kids who are struggling or who don't participate.

PR9: I am happy with what (grade one teacher's first name) does for my child.

One response to this question indicated that at least one parent perceived me as a teacher at the school:

PR8: We got the lady by the name of Sonja. She can speak Setswana. She can help our children understand and speak this language (Afrikaans).

Lastly, an example of some incongruent data from this data source is described here to show that such data could yield valuable information (Onwuegbuzie & Johnson, 2006). Nearly all the parents noted it as very important that the school is a short distance from home. This data does not correspond with observations made by the researcher and is refuted by the fact that nearly all parents noted it as very important that there is a school bus to transport their children. It is possible that parents misreported their distance from the school so as to not risk compromising their children's attendance of the school.

In retrospect, it is my opinion that some questions could have been included which could have helped me to explore, in greater depth, parents' perceptions on the difficulties and tensions which arise from having ones child attend an Afrikaans medium school in a small-town farming community could have yielded rich data had I included them.

5.4.2 Interviews with teachers - data set 3

As with the previous method of data gathering, the information that was captured through interviews with the principal and some of the foundation phase teachers was elicited by way of an interview schedule which was originally designed purposefully to gauge the perceptions of the different stakeholders at the school on aspects of the double construct of this investigation, namely, phonemic awareness development and learning in a second language. However, teacher's poor knowledge of phonemic awareness development and their confusion of the term with 'phonics' and 'phonological development' precluded an in depth examination, through the interviews conducted, of

how they instructed phonemic awareness and how they addressed the challenges posed by having Setswana speaking children learn this skill in the classroom. Questions were subsequently adapted to refer to a more general focus on reading.

For gathering data from this source semi-structured interviewing was used in order to render the interview process more flexible and to give the researcher the opportunity to get in-depth information by posing additional questions to the ones which are included at the design phase of the instrument. The interview is guided by these pre-set questions which affords the researcher to respond to the interview situation and to any new information which the interviewee might generate during the interview (Merriam, 1998).

Four participants were purposefully selected. I believed that they would be able to provide information which stems from the different vantage points afforded them by the varying positions they occupied in relation to the Setswana speaking children in the study (see Figure 5.1). Semi-structured interviews were conducted with the school principal, the head of department for the foundation phase, the grade one teacher and the grade R teacher, who is also the head of the preschool.

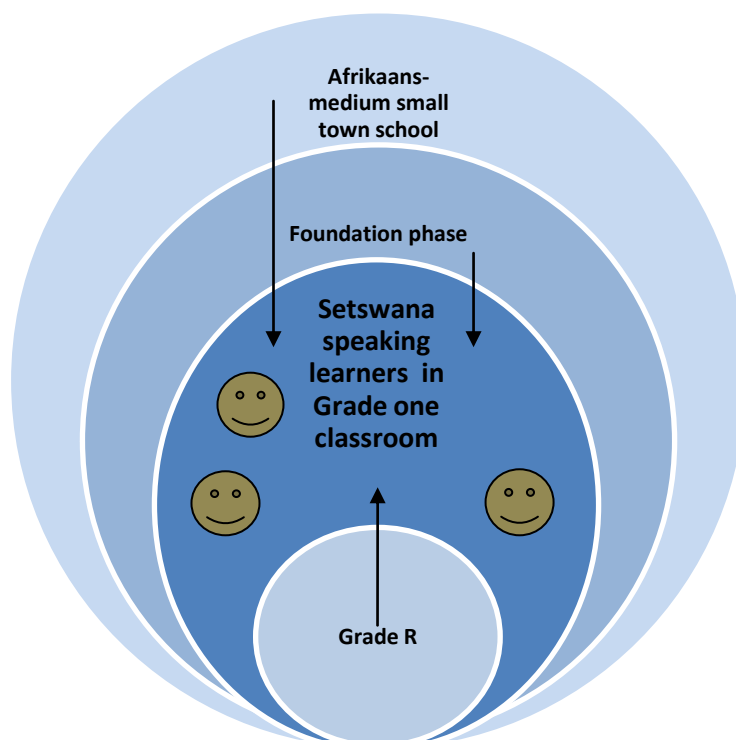


Figure 5.3 The Setswana speaking learners in the grade one classroom within the larger situation of the school

The principal was selected because his position predisposed him to giving information about the school and its orientation to language of instruction and the acquisition of literacy skills, specifically as it pertains to the Setswana speaking children; the curriculum and the directives from the provincial department of education as well as how these are interpreted and implemented at the school. Also, since he had been principal at the school intermittently over the past 15 years, he was seen as a rich source of data regarding the dynamic of the school as social institution - its population, processes and the rules that direct the actions of the different stakeholders – teachers, parents and children.

The head of the foundation phase department (HOD) was selected because her dual role as grade two teacher, as well as a member of the school management team rendered her a valuable source of data. I hoped to gain information from her, not only about the approach of the foundation phase to phonemic awareness development and learning in a second language, but also as the grade one children's future teacher.

The grade one teacher was selected because she could give more specific details about the Setswana speaking children in the study, her teaching methods and classroom practice and how she approached phonemic awareness development instruction especially with regard to the Setswana speaking children.

I selected the grade R teacher because most of the children had been with her in the previous year or years, and because she could possibly impart information about how she approached phonemic awareness development in her classroom practice with a view of preparing the Setswana speaking children for grade one.

A synopsis of each of the participants' demographic details is given in Table 5.8 below.

Table 5.8 Demographic information of participant in interviews with stakeholders at the school

Participant	Gender	Age	Qualification	Teaching experience in years
School Principal	Male	45 -50	4 year Teaching degree	25
Head of foundation phase department	Female	55 – 60	4 year Teaching Diploma	38
Grade one teacher	Female	45 - 50	4 year Teaching	25

			Diploma	
Grade R teacher	Female	35 - 40	4 year Teaching Diploma	15

The interview with the principal was conducted by appointment in the principal's office. Each teacher was interviewed in her own class during break time.

The wording of questions differed depending on the interviewee and his or her situation. For example, a question posed to the principal might refer to 'Setswana speaking children *in the school*', whereas the same question posed to the grade one teacher would refer to 'Setswana speaking children *in your class*'. Questions were derived from specific themes - most of which cut across all interviews. An indication of these themes and how they were integrated across the interviews appear in Table 5.9 below.

A few probing questions about phonemic awareness during a preliminary observation phase, prior to the design of the instrument, indicated that the teachers were not sure about exactly what phonemic awareness was. Because the teacher questionnaire (dataset 5) had been designed to gauge teacher's knowledge about phonemic awareness, I decided not to confound participants by using terminology they were not familiar with. I therefore did not ask any questions specifically about phonemic awareness during the interviews but rather to focus on the teacher's perceptions about the Setswana speaking learners and their learning in a second language.

Table 5.9 Themes of questions from interview schedules of interviews with stakeholders at the school

Themes of questions asked (wording might differ)	Principal	HOD	Grade one teacher	Grade R teacher
General challenges experienced by the individual in his or her specific situation	X Question 1	X Question 1	X Question 1	X Question 1
Strategies to address general challenges	X Question 2	X Question 2	X Question 2	X Question 2
Perceptions of the greatest challenges around Setswana children in classroom/attending the school	X Question 3	X Question 3	X Question 3	X Question 3

Strategies to address challenges around Setswana children in classroom/attending the school	X Question 4	X Question 4	X Question 4	X Question 4
Communication between school and parents	X Question 5	X Question 5	X Question 5	X Question 5
Views on what motivates parents of Setswana speaking children to enrol their child in this school	X Question 6	X Question 6	X Question 6	X Question 6
Views on Grade one class size	X Question 7	X Question 7	X Question 7	
Views on how to prepare grade R children for grade one		X Question 8	X Question 8	X Question 7
Views on the language component of the curriculum		X Question 9	X Question 9	X Question 8
Views on support from the education department	X Question 8	X Question 10	X Question 10	
Views on communication within foundation phase		X Question 11	X Question 11	X Question 9
Views on parent expectations	X Question 9	X Question 12	X Question 12	X Question 10
Views on influence of children's socio-economic status on their education	X Question 10	X Question 13	X Question 13	X Question 11
Views on community perceptions of Setswana speaking children in the school	X Question 11 - 14	X Question 14 - 17	X Question 14 – 17	X Question 12 – 15

From the interview with the principal in response to Question 6 which aimed to elicit information on perceptions on what motivates Setswana speaking parents to enrol their children at the school the following response was recorded:

The ideal would be for Tswana⁴⁰ speaking children to go to a Tswana-medium school, but the quality of education is what makes the parents decide on (the name of the school). Every parent wants what is best for his child and they know that at this school the standards (of education) are higher than at the other schools in this area.

The school's identity as an 'Afrikaans school' comes forward strongly in the discourse of most participants - the school principal, all the teacher's interviewed as well as many of the parents who were interviewed.

Talking about the large number of children in the grade on class (34 at the time) the grade one teacher and the principal responded as follows:

The grade one teacher:

Sometimes I feel overwhelmed because I don't get to spend enough time with each one of the children...not the time they deserve. And I am responsible to every child. Every one of these children in my class is in my care and they each need to get from me what the parents believe I will give them.

The school principal:

When there are too many children in the class, then they do not get the individual attention which they should be getting, but we also do not want to lose our 'small-school' identity, because parents know, at this school, every single child counts.

The HOD (talking about the school principal) - this data corresponds with what the parents said about the principal (see. 5.4.1).

We are very fortunate to have this principal...a dynamic principal with the best interpersonal relationships I have seen in a long time. He is the man who came and united this community. (Working) with a man who really cares...one wants to give so much more in your work. It is

⁴⁰ Afrikaans and English speaking people commonly refer to the Setswana language as 'Tswana'. The correct term is however 'Setswana'.

a fact – if the principal and the top structure is good it filters through to everyone – the community, the children, the staff, everyone.

HOD (talking about the school's monitoring of children's performance):

(Learner) problems had already been identified in the first three weeks of the school year and interviews with the parents to discuss these problems were held to make parents aware (of the problems). After that, every teacher took the children who struggled and worked out individual intervention programmes for them.

Principal (talking about teachers' dedication):

When you have teachers who are committed, then they don't want to leave any (poorly performing) child behind, even sometimes when it is clear that the child has reached the limits of his capabilities...the teachers do not want to give up.

5.4.3 Innovation configuration of classroom practice related to children's phonemic awareness development – data set 4

Video and audio recordings of early literacy instruction and activities were made throughout the year. This resulted in a vast quantity (total hours) of material. This data source was first intended to gather data for the researcher's field notes, but in true pragmatic mode, and to afford a more acute focus on the teacher and her practice, it was repurposed to form an innovation configuration of the teacher's classroom activities during literacy sessions, so as to more effectively address research question 4: *What school support is there for the phonemic awareness development of Setswana speaking children at an Afrikaans-medium small- town school?* - in terms of specific and observable classroom actions taken by the teacher.

An innovations configuration of the early literacy skills classroom practice was created in the following way. First of all, I paired school days for which I had video or audio material of classroom proceedings which were two days apart but which had all been recorded within week 2 – 4 of the school year. This selection process was constrained by certain logistics such as that I did not have video material for combinations of consecutive days and I wanted to include all the different schooldays – Monday to Thursday (I did not do classroom observations on Fridays), instead of using recordings of only certain days

which might contain data skewed by variations in the day to day school activity schedules such as sport periods (which made classroom time shorter, by an hour, on Tuesdays and Thursdays) and other activities etc. The dates of the audio and video recordings which were used to create the innovation configuration are reflected in Table 5.10.

Table 5.10 Combinations of recorded material selected for the creation of an innovation configuration of classroom practice

	Monday	Tuesday	Wednesday	Thursday	Friday	Total time of audio and video recording
First school week			15 Jan School starts	16 Jan	17 Jan	
Second school week	20 Jan Set 1	21 Jan	22 Jan Set 1	23 Jan	24 Jan	Combination A: 1h 12m 48s
Third school week	27 Jan	28 Jan Set 2	29 Jan	30 Jan Set 2	31 Jan	Combination B: 1h 06m 51s
Fourth School week	3 Feb Set 3	4 Feb	5 Feb Set 3	6 Feb	7 Feb	Combination C: 59m 53s
						TOTAL: 3h 19m 32s

According to Hall and George (2000), creating an innovation configuration is a way of recording data and ‘identifying and describing what one would observe in a setting in which the innovation is in use’. Innovation configurations can be valuable tools in personal and peer observations, self-reflection, and evaluation (ibid). In this case the innovation configuration was used to observe and record the extent to which those aspects of classroom practice which are deemed important - in the literature on the topic - for phonemic awareness development were implemented.

An innovation configuration comprises different components which each signify a function. Components can also be arranged into clusters – each of which describes a theme of the innovation. The seventeen components in this configuration have been arranged as row headings within the leftmost column of the matrix, and also into five clusters denoting the different early literacy skills that were observed namely, phonological awareness, phonemic awareness, phonics, reading and writing.

5.4.3.1 Creating components

The seventeen components of the innovation configuration were generated as follows. First of all, from Table 3.3, where are listed the suggested sequence of instruction of phonological awareness skills as suggested by Adams (1990); Johnson and Roseman (2003); Schuele & Boudreau, (2008); and as reflected in the national curriculum statement (DBE, 2011) aspects of phonological awareness instruction were extracted and listed making sure there were no duplicates. I teased out each aspect which could indicate a different skill or operation, for example, I took apart the phrase in the last column of Schuele and Boudreau's (2008) suggested sequence 'Delete, add, manipulate phonemes' and turned this into three separate phrases namely, 'delete phonemes', 'add phonemes' and 'manipulate phonemes'. I then created a table in which I arranged all of the phrases from that table underneath each of the authors or sets of authors, grouping together, in horizontal rows, those phrases which contained the same words relating to an aspect of early literacy learning. For example, the following phrases were grouped into one row: 'ability to segment words into syllables' (Johnson & Roseman, 2003); 'words into syllables' (Schuele & Boudreau, 2008); and 'breaking up spoken words into syllables (DBE, 2011). They were then consolidated into a component of the innovation configuration namely, 'segment words into syllables'.

In some instances, phrases from more than one row were all collapsed into one component – especially those referring to phonological skills that are not part of phonemic awareness. An example of this is when all the phrases from the first five rows, which all referred to rhyme and alliteration, were collapsed into a compound component: 'Awareness of rhyme and alliteration; identify and manipulate patterns of rhyme and alliteration'.

Once initial components had been generated in this way, from the information in Table 5.9, the video material was watched to check for any patterns in the teacher's classroom practice which might lie outside of the components listed. These aspects of early literacy instruction were included in the configuration. One example of this is that it was clear that the teacher focused on letter sound correspondence from the very beginning. A distinction was thus made between purely aural activities and those which focused on letter-sound correspondence. This, in my opinion warranted the inclusion of components which showed this distinction, especially since, in the absence of classroom instruction on certain aspects of purely aural work, the teacher focused on teaching letter-sound correspondence. This can be seen in the differences in scores between *phoneme blending* (under *phonemic awareness activities*), which has a score of 0, and that of

blending (under *phonics*) which has a score of 58 (see Table 5.11). Other components, which were not part of the initial list of aspects of phonological awareness development instruction (see Table 5.11) include instruction on writing. Even though writing does not form a part of learning to read per se, I decided to include these components because the teacher often used writing as a way to teach awareness of sounds. An example of this is the high score for the component 'Shaping letters by hand in the air and linking letter to sound'. Because the teacher clearly set a high value on writing and used writing activities to teach awareness of sound and also allocated a large proportion of her time to this activity, I decided to include the last component, namely 'Writing on individual small blackboards or paper and linking letter to sound'. Even though I only had video evidence of this for one lesson I had more evidence for the focus on this activity from other recordings as well as from my own observations.

5.4.3.2 Generating variations

The components of an innovation configuration are operationalised through variations (Hall & George, 2000) or degree of implementation (Hall & Hord, 1987). In this configuration the variations appear as column headings in the uppermost row with the different classroom actions taken by the teacher with regard to the components specified. The actions denoted by each variation are, from left to right; 'introduce/demonstrate/revise topic or activity'; 'elicit class response'; 'elicit individual response'; 'give feedback on response'; and, 'repeat/practice response' (see Table 5.9). The scoring of these activities are according to a binary system – either zero (no such activity observed for the function) or one (activity for the function observed once).

Table 5.11 Presentation of innovation configuration

Item	Introduce/ demonstrate/ revise topic or activity Score: 1				Elicit class response Score:1				Elicit individual response Score:1				Give feedback on response Score: 1				Repeat /practice response Score: 1				
School week	2 nd	3 rd	4 th	T	2 nd	3 rd	4 th	T	2 nd	3 rd	4 th	T	2 nd	3 rd	4 th	T	2 nd	3 rd	4 th	T	Total
PHONOLOGICAL AWARENESS ACTIVITIES EXCLUDING PHONEMIC AWARENESS (121)																					
1. Awareness of rhyme and alliteration; Identify and manipulate patterns of rhyme and alliteration	6	1	7	14	2	1	7	10	0	0	0	0	0	0	4	4	3	0	0	3	31
2. Awareness of words in sentences	0	2	5	7	0	4	6	10	0	3	5	8	0	7	8	15	0	2	3	5	45
3. Segment words into syllables	0	1	1	2	0	32	9	41	0	0	0	0	0	2	0	2	0	0	0	0	45
4. Onset-rime awareness	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHONEMIC AWARENESS ACTIVITIES (91)																					
5. Awareness that syllables can be divided into phonemes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6. Identify first and last sound	21	0	0	21	21	0	0	21	6	0	0	6	14	0	0	14	6	0	0	6	68
7. Phoneme blending	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8. Segment first and last sound	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Item	Introduce/ demonstrate/ revise topic or activity Score: 1				Elicit class response Score:1				Elicit individual response Score:1				Give feedback on response Score: 1				Repeat /practice response Score: 1				
9. Correct pronunciation of sounds	2	1	3	6	1	0	3	4	0	0	0	0	1	0	3	4	0	0	3	3	17
10. Phoneme identification	0	0	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	2	6
PHONICS ACTIVITIES (231)																					
11. Letter-sound correspondence	21	6	8	43	17	8	12	41	10	0	2	14	19	2	3	26	11	0	0	11	135
12. Identify first and last letter sound	5	0	4	9	7	0	2	9	5	0	3	8	10	0	2	12	0	0	0	0	38
13. Blending letter-sounds into words	4	4	5	13	3	8	14	25	1	7	0	8	3	0	9	12	0	0	0	0	58
WORD READING ACTIVITIES (238)																					
14. Whole word reading	19	9	10	38	45	25	14	84	10	6	21	37	36	7	17	60	3	7	0	10	229
15. Simple sentence reading (2-3 words)	0	2	0	2	0	2	0	2	0	2	0	2	0	3	0	3	0	0	0	0	9
WRITING ACTIVITIES (161*)																					
16. Shaping letters by hand in the air and linking letter to sound	18	0	6	24	9	6	3	18	5	0	0	5	6	3	0	9	4	3	0	7	63
17. Writing on individual small blackboards or paper and linking letter to sound	38	NA	NA		8	NA	NA		17	NA	NA		22	NA	NA		15	NA	NA		(98)

5.4.3.3 Discussion of innovation configuration

There were 121 recorded instances of phonological awareness activities which exclude phonemic awareness. Thirty one instances of activities focusing on rhyme and alliteration were recorded. This accounts for roughly a quarter of the total instances of phonological awareness activities, other than phonemic awareness activities. The teacher spent little time on rhyme and alliteration, mostly reciting rhymes without focusing on the rhyming words. The teacher often used rhyming and or alliteration as opportunities to practice whole word recognition or letter sound correspondence. No individual responses were elicited and few instances of feedback or practice and repeat exercises are recorded.

There were 45 instances of literacy activities which aimed to create an awareness of words in sentences. In this case the teacher demonstrated activities less than the number of times she elicited classroom and individual responses. During these activities the teacher gave twice as much feedback as demonstrations and followed up with practice and repeat exercises.

There were as many instances of activities focusing on segmenting words into syllables. Although the teacher only demonstrated two examples she used that as the starting point for eliciting 41 class responses. There were no instances recorded for activities which aimed to create awareness of onset-rime.

Phonemic awareness activities

There were 91 instances of phonemic awareness activities of which the vast majority (roughly two thirds of the phonemic awareness activities) were focused on identifying first and last sound. The teacher elicited the same number of class responses as demonstrating the skill. She also elicited some individual responses. The teacher also gave feedback and initiated practice and repeat activities. There were no instances of activities around the awareness that syllables can be divided into phonemes.

There were no activities recorded which focused on the segmenting of first and last sound. There were no instances of phoneme blending. There were 17 instances of classroom activities which focused on the correct pronunciation of sounds. There were six instances of phoneme identification.

Phonics activities

There were 231 instances recorded of activities which focused on phonics. Roughly a quarter of these focused on blending letter sounds into words.

The majority (238) of recorded literacy activities focused on word reading. Reading activities comprised mostly the presentation by the teacher of words on flash cards which the children then read. Sometimes the teacher pointed to specific words in the big book sometimes she wrote words on the blackboard and asked children to read them. During whole word reading activities the teacher elicited twice as many class responses and just as many individual responses as during her demonstrations of an activity. Furthermore, the teacher followed whole word reading activities through with plenty of feedback and lots of opportunities for practice and repetition of activities, making this the literacy activity during which the teacher applied her efforts most thoroughly.

Apart from writing activities, reading constituted, even in the first three weeks of the school year, the most frequent literacy activity. At this point in the school year, the teacher focused on whole word reading, which alone, exceeds the number of phonemic awareness and phonics activities put together.

Although writing activities were only video recorded for one of the sessions, data from the researcher observations (Data set 7), interviews with teachers (Data set 3) and the interview with the HOD and the school principal about the monitoring and support visit by the department (Data set 8) all indicate that writing is deemed important as proof of children's learning progress.

Although they form part of the researcher observations (data set 7), in conjunction with the innovation configuration data presented above, at this point I would like to focus the reader's attention on the observations which were made from watching the video recorded sessions from which the innovation configuration also derives (see Table 5.11). This is an example of how, as researcher, I endeavoured to remain flexible and constantly in pragmatic mode. Although daunting at times – because of the large body of data I worked with - this approach allowed me to arrange data in ways that afforded me the best vantage point from which to get a clear picture of the situation under investigation.

I present the information gained from the innovations configuration in Figure 5.2 to enable the reader to see, at a glance, how literacy sessions were spent and which to what depth the teacher focused on the different literacy components.

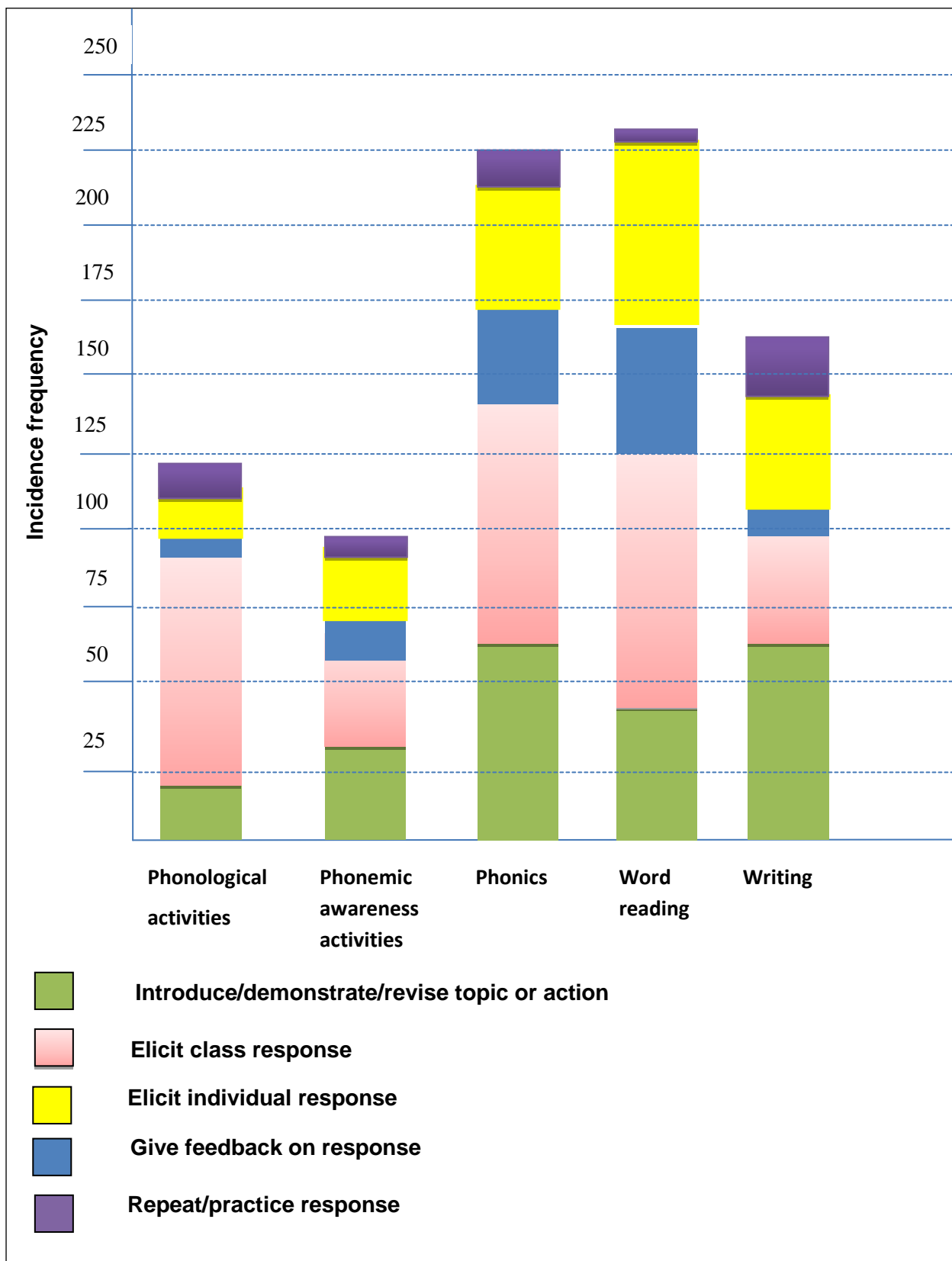


Figure 5.4 Histogram of the incidence frequency of literacy activities

5.4.4 Teacher knowledge questionnaire – data set 5

This data set consists of information collected from a self administered paper and pencil questionnaire that was designed for the purposes of this study. This instrument (see Addendum J) was administered to all the foundation phase teachers from grade R to grade three and to the grade four to seven Afrikaans teacher (see 4.5.1).

Demographic information about as well as the number allocated to each of the participants is given in Table 5.12.

Table 5.12 Demographic information of respondents: Teacher knowledge questionnaires

	Respondent number	Gender	Age	Qualification	Teaching experience in years
Grade R teacher	TR 1	Female	38	4 year Teaching Diploma	15
Grade one teacher	TR 2	Female	47	4 year Teaching Diploma	25
New additional grade one teacher	TR 3	Female	37	4 year Teaching Diploma	15
Head of foundation phase department and grade two teacher	TR 4	Female	58	4 year Teaching Diploma	38
Grade three teacher	TR 5	Female	47	4 year Teaching Diploma	15
Grade 4 – 7 Afrikaans home language teacher	TR 6	Female	27	Final year B.Ed. in service teacher	5

I will now proceed to explain how the research aim was operationalised in this questionnaire. The instrument was designed by collating a number of items from similar questionnaires in the literature (Wessels, 2011; Cheesman, McGuire, Shankweiler & Coyne, 2009; Wolmarans; 2008)

Eighteen questions to gauge whether teachers knew what phonemic awareness is and what they understood by terminology within the field of phonemic awareness and its instruction were included in the questionnaire. The questionnaire started off with seven

multiple choice questions (Question B1 – B7) which were adapted from Cheesman, McGuire, Shankweiler and Coyne (2009), of which the following is an example:

Question B2: Phonemic awareness is:

- (a) *the same as phonics*
- (b) *understanding the relationships between letters and the sounds they represent*
- (c) *the ability to identify and work with the individual sounds in spoken words*
- (d) *I'm not sure*

The next section (section C) comprised eleven questions of which two were YES/NO response questions and the rest were open ended questions, I also included three questions which all addressed the same construct (questions C1, C2, C10). I present question C2 here as an example:

Question C2: How do you instruct phonemic awareness? Describe your practice by giving examples of a few classroom activities.

Question D.1.a – D.1.h, required respondents to give examples of phonemic awareness operations such as phoneme isolation (question D.1.a), phoneme identification (question D.1.b) and phoneme categorisation (question D.1.c).

Thirteen questions were included to get an indication of teachers' own phonemic awareness. Questions D.2.a – D.2.e required respondents to count the number of phonemes in five words and, in a similar vein, questions D.6.a – D.6.e required the breaking up into phonemes of five more words. Because experienced readers are often hampered in their phonemic awareness activities by their orthographic knowledge (Moats, 1994), two questions which required the teachers to identify the common sound in four words (to each question) in which the sounds /k/ and /t/ (for Afrikaans) were represented by different graphemes. Finally, respondents were asked to list as many words as they could in which the letter 'e' represented different phonemes.

To gain a better understanding of what the teachers' perceptions were about their own knowledge of phonemic awareness instruction and about what their experiences were

as teachers of that set of skills, seven questions, of which two were YES/NO response questions and the rest were open ended questions, were included (questions C3 – C6, C8, C9 and C11). An example of one of the open ended questions is given here:

Question C5: *What is your biggest challenge in the classroom with regard to phonemic awareness instruction?*

The questionnaire was administered to the teachers during a pre-arranged session after school. Teachers sat at the tables outside the staffroom, where they usually sat during break times. Teachers were informed that the session would be voice recorded in order to provide additional information about the test. The electronic recording of the session proved to be useful in determining which questions teachers struggled with. An example of this is teachers inability to identify the common phoneme in a list of four words despite the researchers oral repetition of the words.

Because this data set was designed to be analysed in qualitative mode, questions which were included to meet a specific objective often yielded data which addressed another objective. An example of this is respondent T3's response to question C4 (which aimed to get information on teachers' experiences as instructors of phonemic awareness skills), the response to which showed clearly that this teacher did not know what phonemic awareness was. Her response to this question indicates that she confuses the terms 'phonemic awareness' and 'phonics'.

Question C4: *If you could, what would you change (about the curriculum guidelines) on phonemic awareness?*

Respondent T3: *To go slower with phonics in English...more individual work with phonics...spend at least two weeks on one phonic.*

None of the teachers scored above 52% on the phonemic awareness component of the questionnaire while they all scored in excess of 72% on the general language questions.

5.4.5 School documents - data set 6

Although the documents from which the information in this data set was derived were not designed for the purposes of this study, they remain important sources of data as it

is the only set of data that gives fairly objective information on the relationships and interactions between the different stakeholders in the situation under investigation, namely the children, the teachers, the school principal, the parents, as well as of structures such as: the school governing body, the foundation phase department at the school and local and national structures of the Department of Education. What was especially useful about this data set is that I was able to compare my own notes which were taken those during meetings which I had the privilege to attend with the official minutes of those meetings. To show how this was done, I give an excerpt from the minutes of a foundation phase meeting as well as a sample of my own notes taken during that same meeting. Incidentally, the interlinking of these two pieces of data with data from other sources extends to information reflected in the innovation configuration (See Table 5.9) and data gained from the interview with the grade one teacher. This is an example not only of validating data between sources but these data also bear testimony to some tension between what the curriculum prescribes and what the teacher in the classroom finds practicable.

Minutes of foundation phase meeting – 15 October 2014 (translated from Afrikaans):

Under the heading *HOD* – eighth bullet:

We do too much written work and too little oral work and too little inculcation. If you work strictly according to your timetable (as prescribed in the CAPS document) you will find it easier to get through your daily work.

Researcher field notes – 15 October 2014 (Translated from Afrikaans):

(The HOD) says teachers spend too much time on letting the children do written work. This is strange (given that) she said at the beginning of the meeting that teachers have to make sure that the children's red departmental books are up to date as those are the ones which the (representatives of the) department (of education) look at to see what is happening in class and how the children are progressing – evidence that children are learning.

Interview with grade one teacher – 25 April 2014 (translated from Afrikaans):

It is about inculcation and repetition, but I think, as soon as the new term begins, then we take that time table (CAPS document) where they say so many minutes for this and so many minutes for that. Then...we take it, because we do not do it according to that time table, because it doesn't work...then we see where we can borrow time. Or to say (to the child) "you have now written one sentence and by this time you should have written four."

As previously discussed (see. section 4.2), during the planning phase of the research, the IQMS whole school evaluation was not intended as a data source, because no one knew, at that point, that it was going to take place. However, this document served a valuable purpose in substantiating one of the themes which emerged as the research process went along – namely the school's functionality.

5.4.6 Researcher observations – data set 7

Although some data from the observations which I had made prior to the design of this inquiry is included in this set of data, this instrument was purposefully designed to gain information about the day-to-day functioning of the school, its rules, schedules and cycles; its rituals and ceremonies; and how these affect the subjects in this inquiry, namely the Setswana speaking children learning within a situation which reflects the dual construct of the inquiry, namely their phonemic awareness development and second language learning, I made notes, in a diary, of different events and happenings at the school - including activities both in and outside of the classroom, as well as interactions between the different role players in the situation such as, casual interaction between teachers at break time and between parents and teachers in informal situations.

For this purpose, I kept a diary in which I noted down incidents and events relating to all situations as well as my own reflections thereupon. In order to gain data at times when writing down events as they happen were impractical I took photographs and made video recordings and voice recordings of events. My position as participant researcher meant that the teachers came to trust me and because of my prolonged field visit my presence was accepted in the staff room and at informal meetings. It afforded me a different perspective of the teachers' perceptions and attitudes toward the second

language learners and phonemic awareness than what I would have had, had I been an outsider researcher. I refer here specifically to casual conversations between teachers in the staff room at break time which gave me an in depth perspective on some of the tensions operant within the system which emerged as an important theme in the data (see section 5.6).

Despite my position as participant researcher, I decided that in order to avoid researcher bias I would use my own observations mainly to substantiate data from other sources. I often used a recording device to save time and to capture data 'as it is'. As discussed (see 4.5.3) I have included my observations of the material in this data set. Below are some examples of data. These are diary entries which illustrate a more reflective mode in contrast to the 'reporting style' which derives from my replaying recorded data and reflecting upon the event as it was recorded (see Table 5.11).

From researcher's diary: 5 February 2014

At the staff table during break time today Teacher D, the grade 3 teacher, complained about three Setswana speaking children in her class who she felt were really struggling with maths. She was quite frustrated and at the end of her tether and talked about it for quite a while – not without reference to their being black. After explaining how poorly they were doing she said that it leaves her no other choice but to speak to their parents and tell them that those children would have to stay behind after school so that she could help them because that is the only way that they could possibly have any chance at passing maths this year (translated from Afrikaans).

From researcher's diary: 26 May 2014

I had to come and fetch something at school today after school. When I came up to the staff table, there was Teacher D with a group of five Setswana speaking children – two boys and three girls – doing mathematics (translated from Afrikaans).

From researcher's diary 16 April, 2014.

The principal told me today that another (a second) grade one teacher had been appointed so that the grade one class can be

divided into two separate classes. The two new classrooms near the sports fields will be used for the grade ones.

I started the diary on the 20th of January and made entries into it on those days I spent at the school. The entries that I had made in that period of time were used for purposes of this study.

Next, I will present the observation data which I recorded when I looked at the video recorded sessions which were used to create the innovation configuration (see section 5.4.4).

Table 5.13 Observations of video recorded literary sessions: First four school weeks⁴¹

Observations: Sessions 1 and 2 20 and 22 January 2014 School week 2
Teacher sits on a small chair at the front of the 'floor space' area of the classroom, in front of the white board, by the door. Children sit on the floor in front of her.
Teacher elicits first sound of words by referring to earlier activities of the day. For example: <p style="text-align: center;"><i>Wat het ons vanoggend geel ingekleur wat met 'n 's' begin? Die son.</i> <i>(What did we colour in yellow this morning? It is a word that starts with 's' – The sun).</i></p>
Teacher lets children with similar ability stand up in groups of four and lets them read words from flashcards. Employs this 'small group work' as assessment strategy. Puts Setswana speaking children together in groups so that she can correct their pronunciation.
Teacher makes sure that two of the children who are struggling (one with a hearing problem) gets individual attention.
When reading a rhyme together from the big book the teacher focuses children's attention on identifying the correct letter sound and reading whole words and eliciting the meaning of words instead of focusing on rhyming words or alliteration.

⁴¹ All phonemes in this table refer to Afrikaans phonemes

Teacher (while talking to me) refers to the pressures of the curriculum and says that she addresses this by integrating different learning areas. For example, she lets the children practise number words 'een', 'twee', 'drie' ('one', 'two', 'three') during the literacy session as well as during the maths session.
Teacher refers to 'sounds we have learnt' when referring to letters written on the black board.
Teacher motivates the early learning of the 'ie' sound by saying that since the letter name for 'i' in Afrikaans has the same sound than the phoneme 'ie' she teaches this phoneme early on so that the children do not mistakenly write 'dri' instead of 'drie' (the number name three).
14 out of the total of 39 minutes of a recorded session are spent writing on individual blackboards.
Children spontaneously volunteer responses during the session. Even when the teacher had moved on to another activity they still volunteer responses to previous prompts by teacher. This is acknowledged by the teacher. Children even volunteer their knowledge by giving responses without them having been elicited, like saying, "Juffrou, 'slang' begin met 'ssss.'" ("Teacher, 'snake' starts with 'ssss'")
Teacher seems sensitive to the needs of young children and arranges a break or snack break as soon as a few children indicate the need to go to the toilet or say they are hungry.
Teacher takes every opportunity to teach – for example, she elicits new vocabulary during the snack break by referring to the snacks the children eat, such as a <i>bunch</i> of grapes etc.
Encourages children and often acknowledges a right answer with praise. Also provides further prompts when the class response or individual response is incorrect.
Manages the classroom situation all the time – class never gets 'out of hand' although teacher does revert to punishment (<i>stand at the back of the class</i>) and threats (<i>you are going to stay in during break time</i>).
Teacher's orthographic knowledge does impact upon pronunciation. For example, when phoneme blending /s/ and /o/ teacher first pronounces 'so' (the Afrikaans word meaning 'so' or 'like that') before self correcting and pronouncing the /o/ as /o/ and not as /oo/
Teacher pronounces /b/ as /be/

Teacher pronounces /k/ as /ke/
Teacher acknowledges erroneous response to prompts. For example, acknowledges. 'Oros' (The name of a South African cordial the first sound of which is pronounced /ou/) to the prompt: "Give me a word that starts with the sound /o/."
Teacher acknowledges erroneous response to 'give me a word that starts with the sound /o/ as correct. 'olifant' ('elephant' in Afrikaans, the first sound of which is pronounced /oo/.
<p>Teacher refers to curriculum guidelines for the first week and relates how it requires children to write answers in their workbooks. Teacher points out that the children can't write yet – it is the fifth day of the school year.</p> <p>Teacher (says to me) that she follows her own order of introducing the sounds and that she goes according to the pace set by the class. Refers to the olden days when sounds were introduced more gradually and says current pace to quick.</p>
Teacher makes reference to 'homework' and tells the children that their mothers must help them with the work.
A Setswana speaking girl speaks Setswana to a friend.
<p>Observations of video recorded sessions 3 and 4</p> <p>28 and 30 January 2014</p> <p>School week 3</p>
Teacher moves new Setswana speaking child, a girl (learner 9) to the front and tells her that she will have to catch up with the words they are learning to read quickly.
7 words on flash cards: 'Pappa', 'Biebie', 'Kalla', 'Vlooi', 'Mamma', 'sy', 'hardloop'. Many of the children know most of these words by sight.
Encourages the new Setswana speaking child (learner 9) to partake in the flash card word reading activity.
<p>T: Ek wag 'n bietjie met die 'a' want die Tswana kinders sê 'bol' nie bal nie – die o en die a is vir hulle bymekaar. (I am waiting a little with the teaching of the /a/ because the Setswana speaking children say 'bol' /b/ /o/ // not 'bal' /b/ /a/ //</p> <p>From my knowledge of Setswana I know that, in general, this is not the case, except for this one word which is taken from the English word 'ball').</p>

During the syllable clapping the teacher mistakenly claps the Setswana name – Boikarabelo – with only 5 syllables instead of six.
The (Christian) prayer before snack break is in the form of a rhyme.
The teacher checks that everyone has food and sends those that do not have any or who do not have enough to the school kitchen to go get some food.
Teacher uses the snack break to expand vocabulary and teach life skills. For example, she uses a bunch of grapes and builds vocabulary around that teaching words like 'tros' (a bunch of grapes). Then explains that wine is made from grapes. Cautions that children should not drink wine as it 'kills off their brain cells'.
Teacher adjusts the bandage on a child's hand.
One of the parents of a Setswana speaking child comes to the door of the classroom during class time to see the teacher. This is encouraged for the foundation phase. Speaks English to the teacher who speaks English back. The mother asks the teacher about an instruction on the homework sheet which she found hard to understand. The teacher apologises for having made a typing error and promises to fix it. The teacher reminds the mother of the <i>Whatsapp</i> forum for grade one parents and encourages the mother to contact her whenever she has a problem. Information about a sporting event is given and both the teacher and the mother seem comfortable and relaxed.
Observations: Sessions 5 and 6 3 and 5 February 2014 School week 4
During the literacy session (3 February) teacher sits in front of children, in the 'floor space' area, in front of the white board, on a small chair. Kids sit randomly and informally on the floor in front of her.
Teacher integrates maths and vocabulary – near, far, under, on etc.
Integrates maths and word reading of number names on board during maths session – 5 minutes +
Identifies a boy who seems to be ambidextrous and tells asst to look out for which hand could be the dominant one.
Small group word reading on flash cards, puts 7 of the Setswana speaking children and one of the slower learners together in a small group. In this instance the teacher neglects to give feedback on the words, presumably because it is a 'competition' and

she waits for them to respond. However, does not correct after four incorrect responses on the same word.
Identifies a possible problem with vision in one Setswana speaking girl (learner 9) who squints at the flash cards, sways, looks disinterested and looks around and does not take part in the small group word reading activity. Observes child's response to the word cards when she stands closer and further away. Comments on the squint and says she has noticed it previously. Expresses the intention to contact the child's father and get permission to have her eyes tested.
Teacher expresses her confusion (to me) why the children say /be/; /de/ and /ge/ instead of /b/; /d/ and /g/.
Teacher says /de/ for /d/.
Teacher repeatedly says /be/ for /b/
Teacher integrates subjects and activities very well.
Refers to home work and what children need to show their mothers about the home work.
Children seem to feel free to comment on the teacher's writing on the board. E.g. when the teacher writes 's' on the board, one girl comments on what she perceives as a similarity between the numeral '2' and the 's' for 'snake': Die twee het nou 'n slang geword, Juffrou. (The two has now become a snake, Teacher). The teacher demonstrates that the numeral '2' and the letter 's', when written, do not start at the same spot.
One of the Setswana speaking children volunteer the similar sounding Setswana word for dam (Afrikaans for dam), namely 'tamo'. The teacher acknowledges this information, repeats the Setswana 'tamo' and says that it is 'very interesting'.
During giant book reading the teacher turns the book so that the children can read along with her. She tracks with her finger and repeatedly hesitates before the rhyming (and other) words to give the children the opportunity to respond with the correct word.
The class confuses the letter 'a' and the letter 'd' on flashcards. Teacher shows the difference and presents the 'a' and 'd' cards repeatedly and elicits the class' response.
During phoneme blending teacher starts with two phonemes VC and CV and then moves on to three phonemes CVC
New Setswana speaking boy, (learner 18) cannot speak Afrikaans at all. Cannot

respond to the question 'which school did you go to before coming here?' He does answer the question 'where do you live?' with 'Doringkraal' – the place where he lives.

From observations such as these I gained some valuable data on the day to day life in the classroom, as well as on language interactions between the teacher and the children and among the children. It also rendered rich data on the teacher's literacy instruction practice and her knowledge of phonemic awareness development and its instruction. Some errors in her instruction of phonemic awareness skills and in her pronunciation of phonemes also came to the fore.

These observations also served to highlight aspects of the teacher's general classroom practice, which Hattie (1999) (see section 2.8.7) deems as important effects on learner achievement. Some of these classroom effects which are apparent from these observations are: Reinforcement; direct instruction; remediation and feedback; and a pleasant class environment.

5.4.7 Interview with school principal and the HOD following a monitoring and support visit by representatives of the DBE at district level - Data set 8

This interview was not purposefully designed but was conceived of when a concatenation of events presented me with a unique opportunity to capture data about the contradictory perceptions of the DBE, its directives and the support it lends the school. I deviate here from the usual format in which I present interview data in this chapter because this interview, presented on its own, would merely represent a few perceptions of two members of the school management team on the DBE. To my mind however, this short interaction with the principal and the HOD of the foundation phase at the school, combined with some observation data and as well as the information presented in a report document written by members of the DBE renders audible the dissonant voices within a real life education system.

This impromptu interview serves as a prime example of how the process of data analysis was not a stand-alone phase in this research. Instead, even as data is being gathered it need to be analysed. Because the entire interview in its 'raw data' form is part of a vignette which I present in the discussion of a finding in chapter 6 it will not be presented here. I therefore refer the reader to section 6.3.6).

5.5 QUALITATIVE DATA ANALYSIS: CONTENT CODES, CATEGORIES AND THEMES

The process of analysis was inductive, working from the information in the seven sets of data and systematically abstracting content in three processes, as described in the design (see section 4.6) Analysis commenced with the search for an organising principle for working with the data. It was evident that the best way to proceed would be to work from the source of the information, such as from documents of a specific type, or interviews with specific people. The source of the data would thus be the principle according to which the data would be organised.

5.5.1 How the data was organised

After all the data had been gathered, photo copies of each piece of data were made and the original copies filed. All the photocopies were put into a separate file and the file components named by data set, name and a number. The preceding section was presented according to these labels, although in the writing of the dissertation (section 4.2) I shortened them.

5.5.2 CODING OF THE DATA PER SOURCE

I read through each data set separately to reacquaint myself with the content. To illustrate how I proceeded with data analysis from there onward, I will use data set 3; *Interviews with teachers, April – September 2014*, as an example. Each interview was read through separately and units of meaning related to the research questions were identified with the purpose of each interview question as guiding principal. These different bits of data were recorded on paper by hand. Next, those that seemed to deal with same general topics were clustered together by using different coloured 'sticker tags' (see Figure 5.2).



Figure 5.5 Coding of the data

From each interview, responses or parts of responses from different questions were selected, and semantically grouped together. For instance, all the bits of data that had something to do with 'sticking to time schedule in CAPS' were put together and labelled as such. Codes which fitted together were then

5.5.3 Deriving categories from codes

I created codes for each one of the data sets in this way and built up groups of codes that fitted together into categories which I gave preliminary labels and refined these as I went along. Once this procedure had been followed for all seven the qualitative data sets (Data sets 1 – 7) each data set was assigned a colour of paper onto which all the final categories for each one was printed.

5.5.4 Thematisation of categories

Next, these categories were cut out into strips and pasted into seven columns, each representing a data set on a large white blank poster board onto which vertical lines had been drawn to form columns underneath a numbered label for each data set (See Figure 5.6).



Figure 5.6 Categories arranged underneath each data set

The printed strips with categories were then read one by one. During this process I tentatively decided which of the categories belonged together. I then grouped these together semantically in preliminary groups on a separate large white poster board (see Figure 5.7)

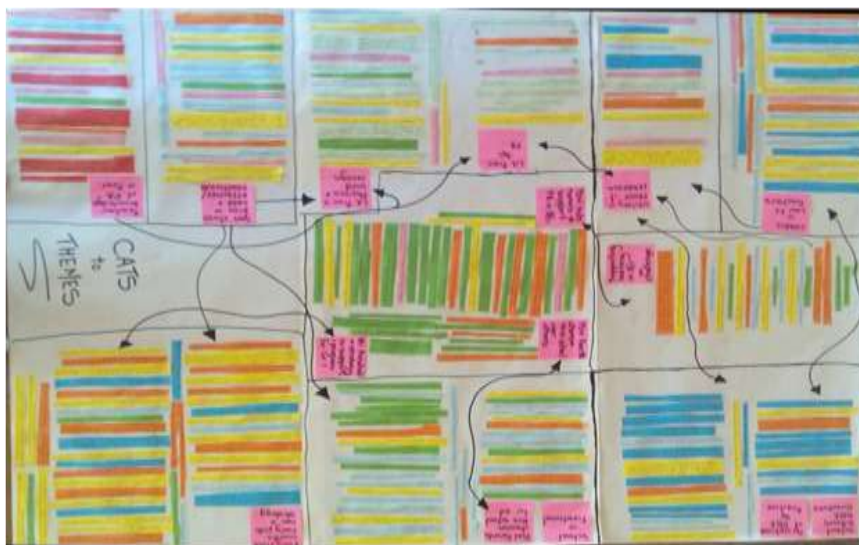


Figure 5.7 Categories arranged into preliminary themes

Next, the categories of each data set were read through and examined for common ground. Some of them were placed in a group which was tentatively labelled 'School functionality'. All the categories which seemed to speak to this aspect of education were organised under this label. Some examples of categories from different data sets that were placed under this tentative heading are listed below:

From data set 2 – *Interviews with parents* the following categories were placed under 'school functionality':

- Parents perceive the principal as an approachable and effective manager of the school.
- The school supports children from low resource backgrounds with physical and logistic resources such as transport and school uniforms.
- The school offers all children equal opportunities to take part in sport and other co-curricular and extra-curricular activities.

After grouping the categories into themes I spent some time looking at how some of the themes fit together. I drew some arrows in black marker to indicate some of these links so that I could refer back to this project when I wrote about the themes later in chapter six (see Figure 5.7).

Some of the single preliminary headings gave rise to more than one theme. An example of this is the heading: Parents actively choose this school for their children - the categories of which spawned two more themes, namely 'Afrikaans preschool as strategy to prepare for grade one' and 'Setswana speaking kids homes do not support PA (phonemic awareness) in Afrikaans'. Some of the multiple preliminary themes were also collapsed into one theme, for example, the themes 'literacy practice = not phonemic awareness' and 'literacy practice = phonics and word recognition' were collapsed into one theme. Next, I progressively refined my preliminary informal working theme labels into their final form.

Below, in Figure 5.8 is a schematic representation by Ragpot (2013) of the process, as conceptualised by Henning (2011).

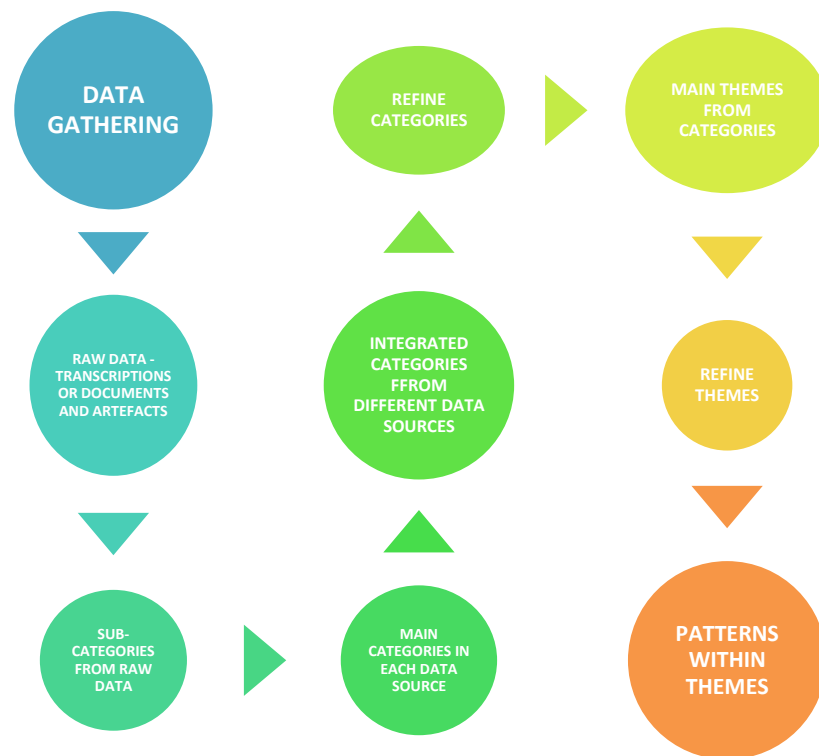


Figure 5.8 Inductive data analysis process. After Henning (2011). Taken from Ragpot (2013, p. 158)

5.6 THE CONSOLIDATED THEMES EMANATING FROM THE ANALYSIS OF QUALITATIVE DATA

The process of inductive data analysis which I have described in this chapter ultimately led to a number of themes that are the outcome of the research. I here list the themes after which I will proceed to discuss the pattern that I have identified across them. In chapter 6 they will be discussed as the findings of the inquiry.

The themes are:

1. Setswana speaking parents choose this school for their children's education.
2. Setswana speaking children's home environments do not support phonemic awareness development in Afrikaans.
3. Setswana speaking parents send their children to the Afrikaans preschool at the school in preparation for grade one.
4. Supporting learning in Afrikaans is perceived to be a challenge.
5. The school adheres strictly to the DBE's directives, despite scepticism.
6. The school is functional and child centred.
7. The national curriculum is the teacher's strict guide.

8. Literacy practice is limited to phonics and word recognition with no purposeful focus on phonemic awareness.
9. Writing is seen as evidence of learning.
10. Teachers lack knowledge of phonemic awareness.

Across these qualitative themes there is a pattern. Despite the various challenges which parents and teachers face from within the immediate and larger situation, there is a common quest for literacy and quality education for the children. Because of their commitment to this aim, there is development, but there are also various tensions within the dynamic of the situation. This pattern will be discussed in detail in chapter six. However, in order to give the reader an idea of this motif in the findings, a few exemplars will be briefly discussed here.

For the parents there are tensions between choosing a school on the grounds of its perceived functionality and the quality of education it will provide, knowing that, because their children will be learning in Afrikaans, they would not be able to help their children with homework and would likely need help in accessing information from school newsletters and other communication.

There are tensions between the school and the larger education context within which it functions. Whereas this school adheres strictly to the directives of the DBE, this obeying of often time consuming directives, is experienced by the grade one teacher, for example, as a sacrifice of time which could rather be spent on literacy practice.

There are tensions within themes, such as, for example, the variance in views on the importance of adhering to the directives from the DBE mentioned above. This variance is clear in, for example the difference in the views of the HOD and the principal. The HOD expects that all guidelines and protocols should be closely followed by foundation phase teachers in their execution of administrative duties and in their classroom practice. The principal perceives a lot of these guidelines and the curriculum as putting undue pressure on the teachers and as an obstacle, especially in terms of time allocation, to the fulfilment of the schools mission – that of giving quality education equally to every child.

Some of the foundation phase teachers experience tension which are brought about by the dichotomous relationship between teaching children aurally and orally during literacy sessions whilst, at the same time, trying to make sure that children produce enough written work to satisfy the expectations of the DBE, the school management team and

parents - who all view written work as evidence of academic progress. Finally, there are tensions between the importance of phonemic awareness development and early literacy learning on the one hand, and the scant knowledge teachers have of the subject area on the other.

It is clear from these examples that tensions exist within the system and when looked at through the lens of CHAT, as will be done in the final chapter of this thesis, it becomes obvious that there are tensions between all the nodes of the system such as, between the LoC and the curriculum – which can both be viewed as *tools* used by the teacher in the activity of the children's phonemic awareness development.

In the dynamic of this situation with its tensions, the actions of the role players are orientated to addressing these tensions and doing so in the best interest of the children. Through exercising their political and professional agency the parents choose the school because they believe that this school, over other, more accessible, less costly in terms of time and fiscal resources, will provide their children with a quality education which will enable their children to become sufficiently literate to be able to succeed at school and to enter the job market. At the same time, through exercising their agency as educators, the teachers and the school management team continuously innovate ways to ensure that they remain optimally accountable for the education of every child in their care. This agency forms a second and unexpected pattern complimentary to that of tensions in the study.

Within the situation of this school and its community there are tensions and challenges brought about by aspects of the local and the societal. But in response to these tensions the stakeholders in the children's education have decided to exercise their agency as parents and educators and through doing so to look for strategies with which to address the challenges they are faced with in their common quest of optimizing the children's chances of succeeding in becoming literate, succeeding at school and ultimately, in life.

In the next section the qualitative themes and the results from the quantitative data will be merged toward the final analysis of the study.

5.7 MERGING QUANTITATIVE AND QUALITATIVE DATA

From the results of the quantitative data it is clear that during their grade one year, Setswana speaking children's phonemic awareness development progressed (showed

an upward trend) to a level and at a rate which is on a par with that of their Afrikaans speaking peers, thus addressing the first research question.

The link between aspects of the children's home environment (research question 2), and their parents' perceptions (research question 3), and how these impact upon the children's early literacy performance will be discussed in chapter six. Likewise, the experiences of the educators at the school with regard to literacy instruction and second language learning (research question 5), and how the school, functioning within the larger education system of the country, supported the development thereof (research question 4) remains to be thrashed out. This will be done in chapter six. The qualitative themes that emanate from this research and the tensions which are apparent within the system are all connected to the outcome measured by the quantitative component of the inquiry. However, this is not to be seen as a mechanistic input-outcome relationship, but instead one of reciprocity and interdependence. While the school's functionality might contribute to the outcome of their phonemic awareness development, it is possible that parents' choice to have their children attend the school might be because of the children's success in early literacy learning at the school, which enables further learning.

5.8 CONCLUSION

In the final analysis it is clear that the quest to gain knowledge about the situation under research has been successful. In the process of gathering and analysing data, the research questions were answered in a way that remains true to the construct of the study. Moreover, despite various tensions within the situation of the study, there is consistency between the quantitative and qualitative findings. The coherence is not always reflected by harmony and unanimity between the themes, and instead, often manifests at the very point of strain in relationships between groups of people, aims and outcomes, and institutions and cultural artefacts such as language and the curriculum. Voices from within the situation in this study speak clearly - albeit not always in the same voice as those which are currently prominent in the literature and in the media on the subjects of Afrikaans medium schools; parent agency or; the benefits of adherence to the national curriculum.

To indicate cohesion between the quantitative and qualitative themes of this study and how they relate to the different aspects thereof, in Figure 5.9 they are depicted as a richer, more elaborate version of the original construct of the study.

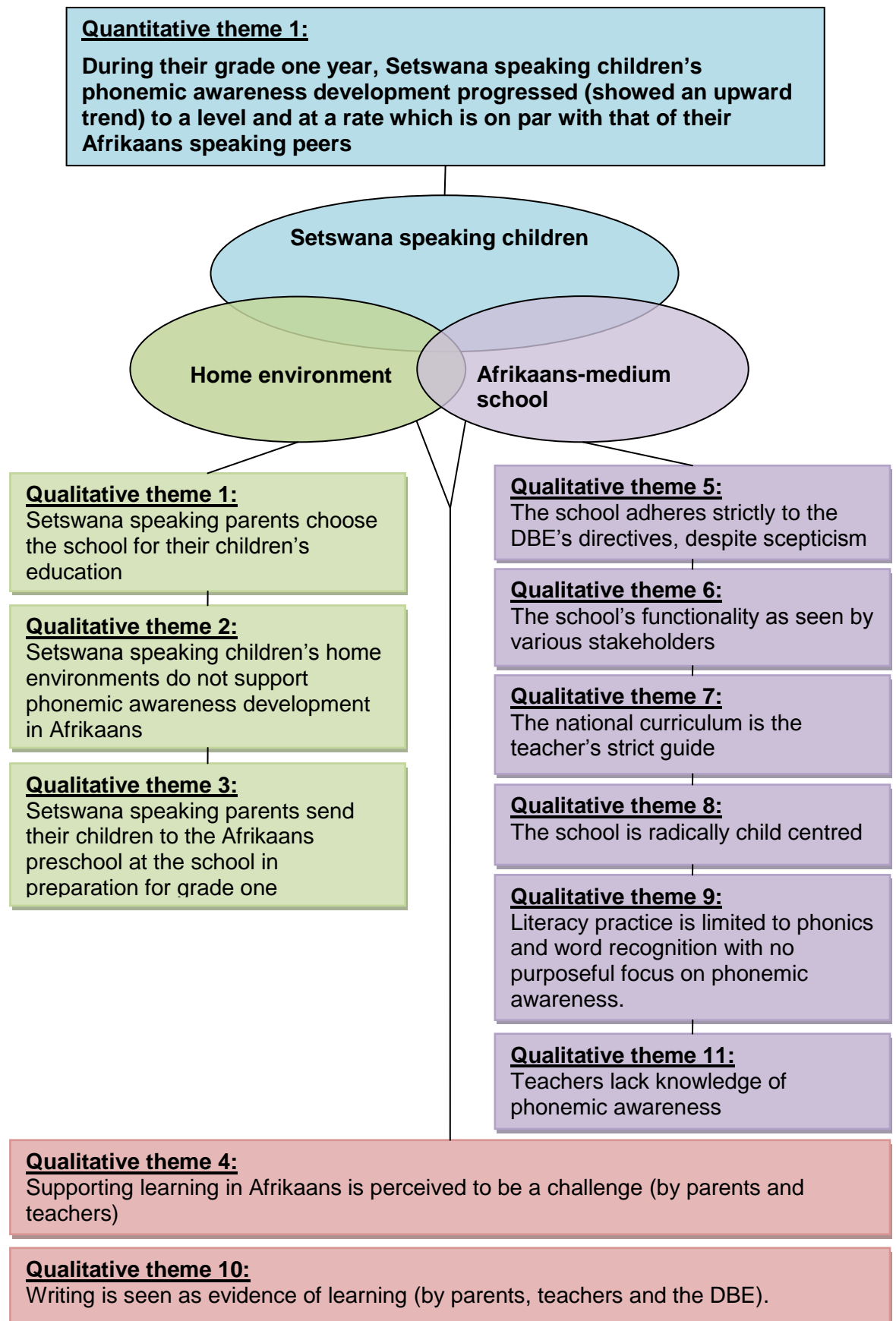


Figure 5.9 Quantitative and Qualitative themes derived from the construct of the inquiry

In this chapter the processes of gathering and analysing data were described. The final themes were presented and their bearing to the research questions and the construct of the study was shown. The pattern which derived from the themes – that of *tensions* between the different aspects within the situation, and also that of *agency* – exercised by the parents and teachers, was identified and briefly discussed. In the final chapter of this thesis, the findings of this inquiry will be elaborated upon and the relevance to curriculum development and decisions regarding language medium of instruction will be discussed. The limitations of the study will be discussed and recommendations made to the DBE for consideration in decision making processes about children learning to read in Afrikaans.

CHAPTER 6

DISCUSSION AND CONCLUSION

6.1 INTRODUCTION

At the beginning of this, the final chapter of this thesis, the research questions which guided this inquiry will be restated. The topic of the study is: The phonemic awareness development of Setswana speaking children at a small-town Afrikaans school. The main research question is:

1. What is the phonemic awareness development profile of Setswana speaking grade one children within their peer group⁴² at an Afrikaans medium small-town school?

The following four questions aimed to capture the salient aspects of the situation, namely, aspects of the children's home and school environment which could play a role in their phonemic awareness development:

2. How does their home environment support the phonemic awareness development of the Setswana speaking children?
3. What are the perceptions of Setswana speaking parents, of their children attending an Afrikaans medium small-town school, which could impact upon the children's phonemic awareness development?
4. What school support is there for the phonemic awareness development of Setswana speaking children at an Afrikaans medium small-town school?
5. What are the experiences of the teachers and the principal at an Afrikaans medium small town school which related to the development of literacy skills of the Setswana speaking children at the school?

⁴² This study does not aim to give a statistical comparison between the Setswana speaking children and their Afrikaans speaking peers but rather a description of their phonemic awareness development profile based on their performance on some early literacy measures.

In this chapter, the main assumptions which were made at the outset of the inquiry will be re-examined for their relevance to the results of the research. Then, the theoretical underpinning of the study, namely Ziegler and Goswami's (2005) psycholinguistic grain size theory, will be revisited. After that, the consolidated themes that have been identified from the analysis of the data will be discussed together with the pattern which I have detected in the findings. I will also examine, in retrospect, whether the research questions have been effectively addressed by the research process.

6.2 ASSUMPTIONS AT THE OUTSET OF THE INQUIRY

As already discussed, the two main assumptions at the outset of this study were, first of all, that the Setswana speaking children would not develop phonemic awareness at the same rate or level than their Afrikaans speaking peers. This assumption was supported by evidence from the available literature that children who learn to read in a second language do not learn early literacy as easily as those for whom the language is their mother tongue. (see section 2.6). This assumption was refuted by the findings of the qualitative data which indicated that the Setswana speaking children indeed developed phonemic awareness and early literacy skills at a level and rate comparable to that of their Afrikaans-speaking peers.

The second assumption which I worked from was that there would be tensions within the situation that I expected would impact negatively on the phonemic awareness development and early literacy learning of the Setswana speaking children. The notion of tensions within an education setting was one which I had become familiar with during the research for my masters dissertation – research which focused on the development of an early childhood education curriculum at a rural informal settlement community (Van der Vyver, 2012a). In a way, my previous research situation had therefore prepared me for the tensions and complexities which I would encounter within the dynamic of my new research situation.

As it turned out, tensions did come to the fore prominently in the research situation. Indeed, these tensions can be viewed as one of the two overarching themes of this inquiry and will be examined at the hand of Engeström's cultural historical activity theory (CHAT) which was selected to provide a conceptual vantage point from which to gaze at the situation as a system (see section 4.2). The other theme which permeates the data was not anticipated, yet it is closely linked to the tensions which are mentioned here. This theme has to do with the agency or political will exercised by the parents, the

teachers and the school in a bid to promote the education, including the early literacy of the children in their care.

The ten qualitative findings of this inquiry will first be presented in their relation to the main finding of this inquiry as well as to the existing literature, after which the tensions within the system will be discussed in close conjunction to the advocacy exercised by the Setswana speaking parents and the Afrikaans speaking teachers - the emissaries of education within the community in which these children grow up.

6.3 DISCUSSING THE FINDINGS

The main finding of this research, which was derived from the quantitative part of this mixed method inquiry is: At this Afrikaans medium school, Setswana speaking children's phonemic awareness developed at a rate and level commensurate with that of their Afrikaans speaking peers. Furthermore, despite several factors⁴³ which seem to be working contrary to their early literacy development, and in the absence of any explicit intervention to ameliorate the effect of learning to read in a second language, the Setswana speaking children's early reading performance is not significantly lower than that of their peers. Ten qualitative findings were derived from qualitative methods which aimed to find out how certain aspects of their home environment and their school environment might have played a role in their early literacy learning.

6.3.1 Parents of Setswana speaking children choose this school for their children's education

According to Wolff (2011), most parents prefer their children to learn in their home language. However, societal pressure has placed proficiency in English as an essential requisite for access to South Africa's social, political and economic arena (Braam, 2004). Further to this, the stigma attached to Afrikaans as the language of oppression is oft mentioned - both in scholarly and popular literature (Chabalala, 2016 in press; Van der Waal, 2012).

Despite seemingly powerful motivators to the contrary, the parents of the Setswana speaking children in this small town in Gauteng choose the school over other, more accessible, more affordable primary schools which offer foundation phase instruction in Setswana or English as LoC. Information gained from interviews conducted with the Setswana speaking parents indicated that they choose this school for various reasons

⁴³ These factors form part of the findings.

apart from literacy learning. Reasons given by parents include; perceptions of the principal as an effective manager who cares about the children and of the teachers being better qualified than teachers at other schools in the area. To let their children attend the school presents the parents with a number of challenges, such as for example, difficulty in helping their children with homework and accessing information from the Afrikaans school letters (see 5.4.1). However, data indicated that most of the parents have devised strategies to ameliorate such challenges. These ambiguities reflect Maile's (2004) assertion that parents' choice of school is complex and influenced by an intricate dynamic of puzzling predicaments which are often not patently clear to outsiders.

As far as the school's language medium is concerned, Setswana speaking parents of children at the school dichotomously choose to have their children educated by teachers who come from and who work within an entirely different language background to their own. In looking at the situation of the research, one is acutely reminded of Braam's (2004) cautionary tenet that there might be a difference between the language of choice and the language of preference when it comes to parents chosen language of education. After all, language in education is the medium through which knowledge and skills are conveyed and, as such, forms the metaphorical vessel in which a society keeps and carries its knowledge (Prah, 2003). As mentioned in chapter one (see 1.1), many of the children who complete their primary school education at this school, enter the Afrikaans stream of the local dual medium high school, and some even go on to attend Afrikaans universities (Researcher notes – preliminary observations, 2013). The third research question speaks to this seemingly dissonant choice exercised by the Setswana parents. In the next few paragraphs some of the reasons for choosing the school which were elicited during the research process will be highlighted.

In accordance with parents who took part in another study at a rural informal settlement community in the same area, all the parent respondents in this study noted it as *very important* in their choice of school, that the school offered a safe school environment (Van der Vyver, 2012a). Parents also reported that it was *very important* to them that the school offers an active programme with lots of different things for the children to take part in. This sentiment was echoed in the importance ascribed to the opportunities offered by the school for children to take part in sport. This data is strengthened by additional information provided by two of the parents: That most of the other schools in the area do not offer children sporting facilities or the same perceived level of opportunity to take part in co-curricular or extra-curricular activities. Interestingly, in

another question, in which parents were asked to rate, in order of importance, the skills they were hoping the school would give their children, *sport* was rated first, above *reading and writing* which occupied second and third place on that list. Performing arts activities such as *debate, drama and dance* rated fourth (see 4.2.2) followed by *self-confidence* in fifth place. It seems that the parents put a high value to their children's participation in sport and other co-curricular and extra-curricular activities at the school. Data from the interview with the principal (data set 3) and from the researcher notes confirm that, at this school, every learner is expected to take part in every sporting event and in every performing arts event. It is possible that the parents in this study, view language in accordance with De Klerk's (2002a) proposal that language is often viewed as secondary to other, more important perceptions of what a school can offer children.

Although nearly all the parents noted it as very important for their children to learn to speak Afrikaans, parents also believed that their children would learn to speak better English at this school than at the other schools in the area. Notably, being able to speak English and Afrikaans are rated by parents in sixth and seventh place of importance on the list of skills parents were hoping the school would teach their children. This, together with evidence that parents thought that English was important for employment in Gauteng and the rest of South Africa and therefore, as various authors such Braam (2004), De Klerk (2002) and Norton (1997) suggest - to be able to speak English affords one entry into the market place.

Most people, regardless of socio-economic background, set a high value to the quality of their children's education (Wolff, 2006). This is supported by data which indicate that all the parents in the study thought it either very important or important that the principal manages the school well and that the teachers at the school were better qualified than those at the other schools in the area. This is affirmed by data showing that all the parents noted the high learning achievements of the learners at the school as a very important rationale for choosing the school.

The school's reputation was indicated as very important by nearly all the parents in the study, and most parents rated it as unimportant to choose a school just because other family members or friends' children attend the school. Certainly, within this small-town community, the parents of Setswana speaking children at the school do not uphold the status quo in their choice of school.

Nearly all the respondents deemed it very important that expenses were low at the school and most parents indicated it as very important or important that the school helps

parents who cannot afford school fees. This data is supported by the data from the interview with the principal (data set 3), observations by the researcher of a parents' meeting and by school documents such as financial statements (data set 6) which indicate that the school supports those children who cannot afford school fees.

Taking into consideration the data supporting this theme, it seems possible that the school, to the mind of these parents, forms part of the 'community' (Skogen & Krangle, 2003; Cleaver, 1999) of the small town within which it is situated. After all, speech, the speakers of a language and their social relationships are all interrelated (Norton, 1997). It appears that, in this case, there might be aspects of these 'social relationships' - presumably that between educator and learner - which holds certain benefits in terms of the child's education. These benefits might be in terms of what West (1992) describes as a desire for recognition, affiliation, safety and security which are closely tied to the access of resources in society. Although they might not be aware of the importance of phonemic awareness as a prerequisite for learning to read, the parents in this situation have come to trust the school with their children's safety and education and by implication, their literacy learning. It is therefore possible that the parents in this study, similarly to the Isixhosa speaking parents in De Klerk's (2002) study, perceive the school to offer their children an education which weighs more in terms of its utility value in society than adhering to language preferences.

6.3.2 Setswana speaking children's home environment does not support phonemic awareness development in Afrikaans.

Because language is learnt first at home a child's home environment has a significant influence upon proficiency in a second language (Omego, 2014). Research also indicates that when the LoC is one which a parent is proficient in, it is easier to support a child's education in that language (Pfleppson, 2011; O'Connor & Geiger, 2009; Benson, 2004). As elsewhere in South Africa (DBE, 2010), this is not the case for the children in this study. First of all, most of the parents in this study were more adept at speaking, reading and writing in English than in Afrikaans (see 5.4.1) Secondly, the children's pre school language and early literacy activities at home were conducted primarily in Setswana and English. Most parents worked full time and children were looked after by grandmothers or aunts who recited rhymes, sang songs and told stories - mostly in Setswana. Other early literacy activities which children were reportedly exposed to at home include learning the names of and how to write the letters of the alphabet. Both of these activities were done in English. The only indication from the data of an activity which bears direct relevance to phonemic awareness development in Afrikaans is a little

ditty of phonemes 'a-e-i-o-u' the first four phonemes of which, although recited in Setswana, corresponds exactly with those in Afrikaans⁴⁴.

Various home related factors which impact upon children's phonemic awareness development have been identified in research and discussed in the literature. Some examples of these are: Parent education, household income and poverty (Ngorosho, 2011; McCloyd, 1998); house wall material, light source and exposure to school-related literature (Ngorosho, 2011); exposure to reading related media (Foy and Mann, 2003); parental verbal skills (Winsor Pearson, 1997); and book reading between adults and children (Dickenson & McCabe, 2001). Some of the data gathered in this way are: The parents of the two children with the lowest scores also had the lowest education levels and the mother of the child with the lowest score was also the only unemployed mother in the study. As far as utilities such as the availability of electricity and running water is concerned, there was no significant pattern which linked this resource to the children's performance – the child with the highest ranking score in the group had no electricity at home and two children who scored above the median for the group had neither water nor electricity.

Reciting the letters of the alphabet in English, and learning to write them were the preschool language activities most frequently recorded and reported to have been engaged in far more regularly than book reading between adults and children. The absence of a clear relationship between the factors cited in the literature and the performance of the children in this study is not surprising given the small sample of children in this study. Given that the children in this study have developed early literacy skills at levels matching those of their Afrikaans first language speaking class mates it might be more relevant to examine what, within their home environment, could have supported their phonemic awareness development.

In lieu of clear evidence of factors from their home environment which support the children's development of phonemic awareness and early literacy skills, I want to suggest that the value which parents set on knowledge as a resource and the attitudes of parents to their children's education (Petrill, Deater-Deckard, Thompson, De Thorne & Schatschneider, 2006) might have a positive impact on the phonemic awareness development and the development of other early literacy skills by children. At least two of the parent respondents made non-prompted-for comments about how they keep reminding their children to do their best and to behave well because of the perceived

⁴⁴ See chapter 3.6 for more examples of correspondence between Setswana and Afrikaans phonemes

privilege of attending the school. This sentiment is echoed by some data from the researcher's casual conversations with parents of Setswana speaking children in other grades and with ex-learners at the school.

Parents reported on a number of strategies which they employ to support their children's reading, including letting them attend the school's homework sessions, and utilising community-based resources such as the library where the librarian often helps children with homework reading practice. Although their own limited proficiency in Afrikaans renders many of the parents incapable of assisting their children with language aspects such as, for example, the correct pronunciation of Afrikaans words, most of the parents seem to devise innovative strategies to ameliorate these shortfalls. An example of this comes from the response of one mother who reported that she listens to her child's reading and then asks the child to explain, in Setswana, what has been read. In this way, she gets an idea of whether the child understood what was read (see 5.4.1). Another example is the grandmother who is attending adult basic education and training (ABET) classes to enable her to help her grandson with his schoolwork (see 5). It would seem that despite challenges, the parents of Setswana speaking children at this school devise various strategies to aid their children's early school career. In the next section, I will look at one such a strategy and at the knowledge gains it might mean to the children in terms of phonemic awareness.

6.3.3 Setswana speaking parents send their children to the Afrikaans preschool at the school in preparation for grade one.

Although the scope of this inquiry does not include determining the extent to which the preschool teacher's classroom practice focuses on phonemic awareness development, it is notable that seven of the ten children in this study attended the Afrikaans preschool which is affiliated with the school. What is more, the two children with the lowest overall scores (learner 18 and learner 20) are two of the three children who did not go to this preschool. Attendance of the preschool is seen by parents and teachers alike as one of the most effective strategies in promoting the chances of Setswana speaking children learning to read in Afrikaans. Data from several sources, such as the parent interviews (data set 2), the interviews with the teachers (data set 3), as well as data from the researchers' field notes (data set 7) corroborate this perception. The benefits of taking part in phonemic awareness and phonics activities at an early age (5 years) has been shown to have a marked impact on the reading and spelling of children learning in a second language (Stuart, 1990). In South Africa, Pretorius (2014) has found that

children who are taught phonics and other early literacy skills before starting school find it easier to learn to read and write. Furthermore, Ntuli and Pretorius, 2005 posit that this positive effect is augmented when children learn in the same language through preschool and foundation phase

Of the five essential components which are necessary for reading, namely; phonemic awareness, phonics, reading fluency, vocabulary and reading comprehension (Snow, Burns and Griffin, 1998), phonemic awareness and vocabulary lie within the domain of the preschool teacher's literacy instruction. Since the home environment of the Setswana speaking children in this study does not seem to support the development of phonemic awareness in Afrikaans, it is possible that their attendance of the preschool equips the Setswana speaking children with these skills – thus ensuring that they enter grade one with a good chance of succeeding at early literacy learning. Also, despite the fact that not a lot of data was generated on the preschool teacher's practice with regard to phonemic awareness development, there is some indication, from the interview with the grade R teacher (see 5.4.2), as well as from data gained from a few observational visits to the grade R classroom during the time of research (data set 7), that, as far as her classroom practice is concerned, the grade R teacher favours oral and aural activities over written work. Moreover, this teacher reported that she does her best to focus on oral work in spite of pressure from parents to have the children produce written work as proof of their academic progress (see 5.4.2).

The fact that the preschool is not fiscally affiliated with the school, and that school fees there are not subsidised by the money from school fund raising incentives bears testimony to the investment parents are willing to make in their children's future scholastic careers. According to West (1992), a person's identity is closely linked to what one is able to do in the world and that power and privilege lie within the domain of those who have access to a range of resources. In chapter 2, I argued that phonemic awareness is a knowledge resource which is required to become literate in a language and that parents' choice of school signifies their agency in securing, for their children, the attainment of those skills considered necessary for progressing in life.

6.3.4 Supporting learning in Afrikaans is perceived to be a challenge

Parents, teachers and the school management team reported that supporting Setswana speaking children's learning in Afrikaans was challenging. Some of the specific challenges reported by parents have already been mentioned as have some of the

strategies which parents employ to address these at home and within the community (see 5.4.1) as well ensuring that their children are exposed to their target language from an early age at the Afrikaans preschool.

The next few paragraphs will deal with the specific demands which their children's learning in Afrikaans pose to the Setswana speaking parents as well as a few more of the strategies they employ to support their children's literacy learning. Thereafter, the focus will move to the challenges the teachers and the school management team face in their classroom instruction and general education provision to the Setswana speaking children as well as the tactics employed by the school to overcome these obstacles to the effective instruction of reading.

At the outset of this section it might be useful to take a look at parents' perceptions of the ease with which children learn to read in Afrikaans, English and Setswana. Although most of the parents strongly agreed that it was easy for a Setswana speaking child to learn to read in Setswana, parent opinions were divided on whether it was easier for a Setswana speaking child to learn to read in English or in Afrikaans. Four of the nine parents thought that it was easier for Setswana speaking children to learn in English and gave additional information responses such as 'the child is used to Setswana and English (from a mother whose English proficiency was markedly better than her Afrikaans); 'Afrikaans words are long', and 'I cannot help her in Afrikaans, I have to ask for help'. Five parents thought that it was easier to learn to read in Afrikaans than in English - despite the fact that two of these mothers were more proficient in English than Afrikaans. Some of the reasons given for this perception are: 'that is why we brought them here to the school', 'because she caught up quickly and don't have a problem reading', 'most of the words in Setswana are like Afrikaans'. One of the most striking additional comments made to the question of whether she thought it was easier to learn to read in Afrikaans or English came from the grandmother who had started taking adult literacy classes in order to be able to help her grandson with his schoolwork. The classes which she attends are in English and her first hand experience of the complexities of the English orthography is clear in her emphatic response: 'if it is this difficult for me as a grown up to learn to read in English, how difficult must it be for the little ones!'

When asked what they thought were barriers to their children's learning to read in Afrikaans, and what they thought they could do at home to support the acquisition of this skill, parents responded mostly in terms of the challenges they experienced in not being able to speak or read Afrikaans. Some of these responses include:

PR2: For me it is hard. He reads in Afrikaans and I cannot read.

PR3: Not being able to read in Afrikaans when the child reads in Afrikaans.

PR5: Nothing I can do because I can't read or write it (Afrikaans) well.

PR6: There are barriers like that he still can't pronounce some of the words nicely.

Parents, even those with no knowledge of linguistics and child development, can be valuable resources in their children's acquisition of a second language at school since achieving educational outcomes, specifically with regard to literacy also depends on the support learners receive at home (Ngorosho, 2011). Some suggestions made by parents to ameliorate these perceived barriers included the following:

PR1: Parents must be educated so that they can help children in Afrikaans. There must be a group of people who will help the children in Afrikaans after school.

PR2: I cannot read so I send him to the (community) library – they will help him there.

PR3: Extra classes will work but I can't afford the transport (from a parent who does not live close to the school).

PR7: I can help with pictures and the alphabet, but they must sound out 'a-e-i-o-u.' We read together and look at the pictures together

PR6: To get him together with others who speak Afrikaans.

PR8: To help the child to make letters and try to build a word.

Despite the challenges posed them by the language medium of the school (most of the parents speak, read and write better in English than in Afrikaans) they trust that the school will provide their children with the tools they need to become literate and moreover, that the school will be able to fix any problem their children have with reading. This is clear from parents' unanimous response to the question: "I trust the school can fix any problems my child has with reading": *Strongly agree*. Data from this questionnaire also shows that parents believe the school gives their children ample

opportunity to take part in sport, co-curricular and extra-curricular activities; that the teachers are perceived to be better qualified than at other schools in the area and; that their children will learn to speak English better at this school than at other schools in the area.

6.3.5 A school beyond mere functionality: Stakeholders' views

Parents choose the school because of its perceived effectiveness in providing their children with a quality, well rounded education (see section 6.3.4). The principal and the teachers all deem their school to offer education opportunities superior to any other in the area.

Although Setswana speaking parents from different points on the spectrum of socio-economic backgrounds choose this school for their children's education, data from the parent interviews indicate that many of the children in this study come from lower income households. Norton (1997) refers to the 'investment' which parents are willing to make in order to ensure that their child can attend the school of their choice. Although parents report on physical assistance from the school and despite this data being supported by other data from the research, such as the researcher observations (data set 7), there are other expenses related to their participation in sport and the performing arts which might put pressure on parents who do not have the fiscal resources to provide these for their children.

An IQMS 'President's Race to the Top' whole school evaluation was conducted during the research period and from the report document all indications are that the school is well resourced in terms of infrastructure, staff, teacher qualification, materials and leadership and that the school has various systems and processes in place to monitor its functionality and to optimise the school experience of the children at the school. The following data from that document supports this finding:

All managers have clear roles and responsibilities, delegated in a fair and equitable manner. There are educators who are entrusted with management responsibilities. The principal monitors the SMT members, supports and holds them accountable for delegated tasks. Duty lists exist to ensure that all teachers and staff have clear roles and responsibilities that they perform on a daily basis
IQMS Whole School Evaluation Report (p.4)

Table 6.1 presents a summary of evidence of the school's levels of functionality as viewed by various stakeholders. Some examples of verbatim quotes from interviews appear in this table as well as some notes by the researcher referring to some analysed data. Data which were gathered through fixed response questions and text from documents have not been transcribed here, but their sources are referenced in the last column of the table.

Table 6.1 Summary of evidence in the data of the school's functionality

Author	Factors	Evidence in data	Detail
Pretorius (2014)	Basic organisational functionality and good governance.	x	IQMS Whole School Assessment Preliminary report (2014, p. 2 - 5) Interview with HOD Interview with parents
	Manageable class size.	x	Interview with principal Interview with grade one teacher Researcher observations
	Teacher professionalism	x	IQMS Whole School Assessment Preliminary report (2014, p. 5 - 7)
	Appropriate authority relations and discipline	x	IQMS Whole School Assessment Preliminary report (2014, p. 2 - 3) Interview with parents
	Safety and security	x	IQMS Whole School Assessment Preliminary report (2014, p. 11) Interview with parents Researcher observations
	Focus on learner needs.	x	Interview with principal Interview with HOD Researcher observations
	Accountability and high expectations	x	IQMS Whole School Assessment Preliminary report (2014, p. 8 - 10) Interview with HOD Interview with Principal Researcher observations

			Interview with parents Whole school Assessment
Christie (2008)	Race and gender discrimination	See discussion below	Researcher observation
	The value set on home language of learners	See discussion below	Researcher observation Interview with Grade R teacher
	Strong leadership with a curriculum focus	x	IQMS Whole School Assessment Preliminary report (2014, p. 2 – 3; 9 - 12) Minutes of foundation phase meeting Parent interviews
	Clear goals and high expectations of staff and students	x	Interview with principal Interview with parents Interview with HOD Researcher observations at a SGB Meeting IQMS Whole School Assessment Preliminary report (2014, p. 2 - 5)
	Emphasis on quality of teaching and learning	See discussion below	IQMS Whole School Assessment Preliminary report (2014, p. 5 – 11)
	A supportive school environment	x	Interview with parents Interview with HOD Interview with principal Researcher observations
	A culture of monitoring and evaluation	x	Interview with HOD IQMS Whole School Assessment Preliminary report (2014, p. 7 - 9)
	Parental involvement and support	See discussion below	Interview with parents Researcher observations
Taylor (2006)	LoC and learner's home language are	-	

	the same		
	Curriculum leadership	x	Minutes of foundation phase meeting Interview with HOD
	Managing books, stationary, materials	x	IQMS Whole School Assessment Preliminary report (2014, p. 9 - 10)
	Quality assurance measures	x	IQMS Whole School Assessment Preliminary report (2014, p. 8)
	Time management	x	IQMS Whole School Assessment Preliminary report (2014, p. 2) Minutes of foundation phase meeting Researcher observations
	Monitoring assessment of learner progress.	x	IQMS Whole School Assessment Preliminary report (2014, p. 7 - 8) Interview with HOD

Although signs of racial prejudice were observed in the discourse of some of the teachers when talking about the political situation in the country, there was no manifestation of it visible in the day to day running of the school or in their treatment of the black children or in the teacher's classroom practice. Notably however, members of the SGB - apart from the school secretary and a teacher, who were both female and white – comprised white males only.

There is very little evidence of the school as institution setting much value to the home language of the Setswana speaking children. Although an incident of the grade one teacher responding warmly to a Setswana speaking child's mention of a Setswana word which sounds similar to the Afrikaans word (see Table 5.11 – Observation session 5 and 6) is recorded, as well as an observation made by myself (Data set 7) indicates that the speaking of Setswana in the classroom is not encouraged:

(Researcher notes – diary entry 25 April 2014)

(In the grade one classroom while the teacher is not there) the classroom assistant tells (a Setswana speaking girl)

to stop speaking Setswana to her friend because “this is an Afrikaans school.”

Other data such as data from the interview with the grade R teacher indicates that although there is a willingness to help the Setswana speaking children adapt to the Afrikaans preschool, their speaking their home language is not desirable there.

From interview with the grade R teacher:

When we hear them speak Tswana then we tell them they have to speak Afrikaans. They have to try, just try. What I also do, because I cannot speak Tswana – I will ask a Tswana child “what does one call this or that in Tswana” (albeit not in perfect Setswana, the respondent gives some examples of Setswana words which she has learnt: The Setswana words for ‘tall’ and ‘small’ – additional note by researcher).

Apart from substantial evidence in support of the school being functional, a significant body of data (see Table 6.1) also point to a radically child-focused orientation in the way the school and the teachers interpret the school’s vision and mission statements. These are formulated as follows (translated from Afrikaans):

Vision statement: *Let everyone achieve what he or she is capable of.*

Mission statement: *Outstanding academic and extra-curricular achievement through the help of: Our Creator, our parents and our educators.*

This also comes to the fore in data from the parent interviews, such as the following additional comment made by a parent about the school principal’s management of the school and a proposal made by the school principal at an SGB meeting (translated from Afrikaans:

PR 3: Redelinghuys (the school principal) is a hundred and ten percent. He works for the children and not for anybody else. Always it is the children with him. The children always come first.

School principal at SGB Meeting (talking about the prospect of establishing a boy's hockey team):

At this school, our aim is to develop every single child to his full potential. Not all of the boys are good at rugby. Here they can all play rugby if they want, but when they go to high school then only the best (rugby players) get to play. If we teach them to play hockey, they will have another sport to take part in when they go to high school.

Although parents report that the school involves them in meetings and events held at the school, there is some evidence that parents also feel that the effectiveness of home-school communication could be improved upon. Parents find it hard to access information at parents meetings where all proceedings take place in the language medium of Afrikaans; and from the school newsletter, which is printed in Afrikaans (see 5.4.1). Also, from the researcher's field notes the following diary entry indicates that although it might be done with good intentions, the school might exclude parents of children from resource-poor backgrounds from fully partaking in school events:

From researcher's diary: 2 August 2014

It seems that there are some instances when the school calls only upon those parents whom they think have the resources, for assistance with certain events such as the golfing day and then do not make demands on parents whom they think cannot afford to help. Note for data: resources – selective engaging of parents in school events.

6.3.6 The school adheres strictly to the DBE's directives, despite scepticism

From the data supporting the previous finding it is clear that the school fits the bill of a 'functional school' as described in the literature provided on the topic. Part of this status though, is derived from the school's adherence to the administrative directives of the DBE – as is shown by the data from the report documents resulting from the monitor and support visit, namely the GDE monitoring report (see Addendum Y) and the IQMS whole school evaluation (see Addendum A). In describing this finding, I deviate from the format which I have been using thus far in my discussion of the findings and, instead, present this finding in a format which I deem will effectively convey the gist of the

finding, namely as a vignette of events following a visit to the school by representatives of the DBE.

The questions which I asked of the members of the school management team during this impromptu interview were not premeditated but conceived of in the moment when I realised, in true pragmatic mode, that it presented a unique opportunity to gather rich data about perceptions of some of the school stakeholders about the role of the DBE and the importance of adhering to departmental directives. The data thus rendered didn't quite fit the bill of an 'interview' since it was never designed as such. Because I did not have a recording of the grade one teacher's part, I have allocated that part of the data to 'researcher observations'. The discussion with the two members of the school management team was voice recorded and transcribed. The report by the representatives of the DBE⁴⁵ which forms part of the school documents and which were analysed for the purposes of this inquiry, has been included here to substantiate the data. Finally, the day's events strongly supported observations which I had previously made about this topic. I therefore decided to capture these events as a vignette. I got all parties' permission to use the information I gained from this event, which I present here, as part of my research. I round off this vignette by showing some evidence from the relevant document on which the representatives of the DBE reported on their visit, showing how data from different sources can be used to give different perspectives of an event, thus strengthening the reliability of the research.

This vignette represents analysis which did not form part of the original research design but came about as a result of some unexpected events which happened during the research period. As researcher, I thought these events fit together around the topic of the school's strict adherence to the directives of the DBE despite their scepticism about the department's knowledge of aspects of education and their ability to support the school.

6.3.6.1 A vignette of events following a monitor and support visit by representatives of the DBE at district level

One morning in April when I arrived at the grade one class to do classroom observations, I found the teacher distraught. She related to me that she had been reprimanded by some of the members of the school management team because her class's red departmental workbooks had not been found to be completely up to date at the time of a recent monitor and support visit by district representatives of the DBE. She

expressed her frustration at the focus on having the children produce written work as proof of their academic progress and literacy. I asked her if she would give her consent for me to discuss this with some of the members of the school management team. She acquiesced and I subsequently requested an interview with two members of the school management team. The proceedings of a part of this meeting are presented verbatim with the permission of the principal and the head of department of the foundation phase at the school.

Researcher: "How did the monitor and support visit go on Thursday? (The grade one teacher's name) seems upset about it."

HOD: "They (the representatives of the DBE) asked me for our assessment programme. And they looked through a few of the children's workbooks. I told them how we do assessment...about our assessment programme and about our intervention programme. They were very impressed with our files. They asked me to translate it for them because they could not read the Afrikaans. But they were very impressed with our admin files."

Researcher: "What were they so impressed with?"

Principal: "They (the representatives of the DBE) come and then they take our books that we get from the department. Then they look to see if the children have worked a certain number of pages in it. That is their inspection. Not to see at what level we teach. They want to look in a file and see – have you done your lesson planning – you can put any lesson plan in there, they just want to see it there. They have a set of forms with lists that they look at...so don't read too much into this visit. I can tell you, that is what they came here to check – the teachers' admin that has to be done. We cannot get past that – it has to be done whether you like it or not. I think that is what kept the grade one teacher back. She should have done that admin a long time ago".

HOD: "Yes, I think it was the admin that got her down..."

Researcher: "No, it was the children's bookwork (in their departmental workbooks) which was not up to date..."

HOD: "Still..., look, the grade one teacher works according to the pace of the child...which is right. But, there is still a standard – by a certain time the children have to have achieved a certain level...a certain amount of work in their books have to be done by a certain time to show that they have mastered a certain skill. They were very impressed and wrote some examples of our admin down on a piece of paper."

Principal: "Look, if there were any negative comments in their report, then we are doing very poorly because our standards at the school are not the general standard at other schools. The subject advisors (of the DBE) do not really know much...to be honest; I don't think they have a clue of what needs to be done in the classroom."

HOD: "We requested this visit because we want them to come and tell us if we are on the right track. And I told the (foundation phase) teachers about this meeting last year already. And I said they must be ready for it. I can show you the minutes of the meeting⁴⁶...They were supposed to have come at 8. By eleven o' clock they were still not here...They got here after one o' clock. They looked at the files and at a few books."

Principal: "And they were gone within 40 minutes. They never went into a classroom to see how the teachers teach. To them, the only evidence of the children's learning is on paper. But education is not something that happens on paper. It is something that happens in a classroom between a teacher and a child."

Note: Data from this conversation is supported by data from the report document⁴⁷ which was recorded by the representatives of the DBE during the monitor and support visit. Two of the comments from that document are presented here:

Written next to the heading: *General challenges pertaining to curriculum practice* was the following comment: "The school's challenge is to give the learners ample opportunity to succeed and this they do through reading and through planning", and next to that, underneath the heading '*Support rendered*' was written: "Excellent practice!"

Written next to the heading: '*Availability and utilisation of appropriate resources*' was written "DBE workbooks are used and controlled. The books are neat and well used and maintained. The school have all resources and are used to enrich learning". Next to this, underneath the heading '*Support rendered*' was written: "Keep it up! (see Addendum Y)

6.3.7 The national curriculum is the teachers' strict guide

The foundation phase teachers at this school are expected to adhere strictly to the CAPS curriculum (see 5.4.2). The minutes of foundation phase meetings (see Addendum U), the frustration of the grade one teacher and her covert diverting away from the exact prescriptions of the policy document in her classroom practice (see 6.3.6)

⁴⁶ The minutes of that meeting (15 October, 2014) form part of the documentation used as data in this study and the information mentioned by this SMT member has been verified.

speak to this. Because of her diversion from the strict schedule of letting children produce written work on time, the grade one teacher is reprimanded (see 6.3.6). Great importance is ascribed to strict adherence to the schedules and prescriptions of this document, by the HOD of the foundation phase at the school.

The CAPS curriculum has been criticised in the literature for its overly prescriptive nature (Davids, 2015; Naidoo & Muthukrishna, 2014; Ramatlapana & Makonye, 2012). It has been suggested by Naidoo and Muthukrishna (ibid) that the stringent specifications of this document cause teachers to experience tension between adhering to the schedules and stipulations of the CAPS and the reality of the classroom. The opposing expectations posed by these two aspects of their professional lives often result in teachers employing coping strategies such as ostensibly complying with the policy instructions whilst deviating from them in their actual classroom instruction. Indeed, during her interview, the teacher reported that this was the only way she could conceive of to be able to give every child the attention she felt they deserved during literacy sessions – by taking time from other areas of instruction, such as English second language and physical education and spending it on literacy instruction instead.

The children in this study were taught mostly according to the guidelines of the national curriculum. Although the Setswana speaking children as a group progressed in their development of phonemic awareness and other early literacy skills, on a par with their peers, in the case of learner 18 (see Table 5.5) and others, instruction according to the curriculum was clearly not enough. Early identification of problems through effective assessment could have made the difference. Unfortunately teachers lack knowledge of assessment of individual problems and of remediation of these through a change in teaching strategy or through intervention.

6.3.8 Written work is seen as evidence of learning

An aspect of the directives of the DBE which came to the fore prominently in the data was the importance ascribed to children's production of written work as evidence of learning. From the data it is clear that the production of written work by the children are seen by parents, teachers and representatives of the DBE as tangible proof of learners' progress (see section 5.4.1; 5.4.2; 5.4.6). Children from grade one to six each received two workbooks per subject per year. Each workbook contains 128 worksheets and written work is meted out over four worksheets per week, eight weeks per term. One can thus detect, at a glance, whether or not a child's work is 'up to date'. According to the

information given on the DBE website about these workbooks⁴⁸ the workbooks aim to help teachers “in their everyday teaching and in ensuring that their learners cover the curriculum”. The curriculum requires that a quarter of the total time allocated to first language literacy per week is spent doing written work. Of the 105 minutes allocated to writing, an hour should be spent on ‘handwriting’ – the correct shaping of letters.

Although early writing in the form of invented or unconventional spelling helps children to understand how print and sound work together (Bear, Invernizzi, Templeton & Johnson, 2008; Bissex, 1980), data from researcher observations in the grade one classroom (data set 7), interviews with the principal and the HOD (data set 8) as well as the emphasis placed on the administration of weekly spelling tests, also for the grade one children, during foundation phase meetings (data set 6) suggests that correct spelling and not experimental spelling is the focus at the school. Richgels (1987) cautions teachers not to expect children to produce perfect spelling too soon and Mackenzie (2011, p. 322) cautions that pressure to produce accurate spelling and writing early on in the child’s writing development can be to the detriment of the learner who, through written work, explores the relationship between sound and symbol.

Although written activities were recorded for only one session out of the six which were used to construct the innovation configuration from (see section 5.4.4), if one took that one session as representative of the others during which writing activities were not recorded, writing activities would be the early literacy skill which received the most attention. From other data, (e.g., researcher observations, interview with grade R teacher, interview with grade one teacher, interview with principal, GDE report on monitor and support visit, and the IQMS Whole school assessment report) it seems that written work is the one classroom activity which gives parents and educators a tangible measure of learners’ academic progress. This is supported in the data presented in the vignette presented in section 6.3.6. Davids (ibid) criticises this acute focus on assessment of learning of the current curriculum as one of the ways that education designers have lost sight of the activity of teaching and learning, outside of what can be tangibly measured.

Invented spelling activities have been found by Martins and Sylva (2006) to enhance the development of phonemic awareness and Tangel and Blachman (1992) have found it to be an important indicator of a child’s level of phonemic awareness development. One has to bear in mind the nature of the Afrikaans orthography which has a close

⁴⁸ (see <http://www.education.gov.za/Curriculum/Workbooks/tabid/574/Default.aspx>)

correspondence between grapheme and phoneme. Although no literature could be found on the topic, I want to suggest that it is possible that invented spelling, in a shallow orthography such as Afrikaans, might not be as far different from the correct spelling as it would be in an opaque orthography, such as English. During writing activities the teacher gave a lot of oral feedback which implies oral reiteration of letter-sound correspondence. Feedback, according to Hattie (1999), has one of the most powerful effects on learning. It is therefore possible that the time allocated to writing in the class, despite the focus being on producing correctly shaped and spelt words, might still have served to enhance the phonemic awareness development of all the children in the study. Further research on this topic could render valuable information on the value of writing as an important classroom activity for early literacy acquisition in Afrikaans.

6.3.9 Literacy practice is limited to phonics and word recognition with no purposeful focus on phonemic awareness

Most of the data which contributed to this finding came from video recordings of literacy sessions. Some entries from the researcher diary, made on those days when the sessions were not video recorded corroborate the video recorded observations. An innovation configuration was created of six sessions from the first four weeks of school (see Table 5.9). The nature and frequency of classroom activities which focused on the development of certain early literacy skills were noted in this configuration (see figure 5.2). The activities were allocated five headings namely, 'Phonological awareness activities excluding phonemic awareness', 'Phonemic awareness activities', 'Phonics activities', 'Word reading activities' and 'Writing activities' (Table 5.9; Figure 5.2).

Phonemic awareness instruction and practice constitutes the early literacy activity which was engaged in less frequently than any of the other during early literacy activities in the classroom (see Figure 5.2). Phonological awareness activities which, according to the literature (Adams, 1990; Schuele & Bodreau, 2008), should be focused upon before phonemic awareness were engaged upon considerably more frequently during literacy sessions than any of the phonemic awareness activities were. These activities, presented here in descending order of the frequency with which they were engaged upon, are: Awareness of words in sentences; segmenting words into syllables and the awareness of rhyme and alliteration and being able to identify and manipulate patterns of rhyme and alliteration. No activities which focused on onset-rime awareness were recorded.

During activities which focused on phonemic awareness, the teacher focused on first and last sound identification to the exclusion of other phonemic awareness activities, such as phoneme deletion and phoneme blending. This pattern is confirmed by information from the teacher questionnaire (see section 5.4.5). Very little attention was given to the correct pronunciation of words (see Table 5.9) and evidence suggests that the teacher regularly accepted incorrectly pronounced phonemes as the beginning sound of a word (see Table 5.10) and, as noted in van den Heuvel (2005), enunciated phonemes incorrectly.

Evidence from the data begs the question whether the high level of compliance to the curriculum directives which is required of the grade one teacher does not perhaps, as Ramatlapana and Makonye (2012) suggest, compromise her autonomy as educator and does not hamper her in her instruction of, for example, early literacy skills. Perhaps if this teacher did not perceive herself under such pressure to teach children letter-sound correspondence of so many graphemes in such a short time as she reports (see quote at the top of section 6.4.2.10) she might have spent more time on phonemic awareness activities. Moreover, had she been less concerned with the time frame within which the children have to learn to read a certain number of words, perhaps she would have spent more time teaching decoding skills instead of having the children practice and re-practice recognising whole words. Although the Setswana speaking children developed phonemic awareness skills as fast and as well as their Afrikaans speaking peers, it might be possible that the entire group of children might have fared better at phonemic awareness and other literacy skills. Perhaps, if their teacher had not felt so torn between following the curriculum and her instincts of what the children need to be able to read, and had she worked from a sound base of theoretical and scientific knowledge of reading instruction, as Cheesman, McGuire, Shankweiler and Coyne (2009) propose teachers do, she might have been more successful at teaching the children in her class early literacy skills.

Phonics and word reading activities were engaged upon in nearly equal portions during the periods recorded (see Table 5.9; Figure 5.2) and each of these represented more than double the number of activities than phonemic awareness. Furthermore, the pattern of attention given by the teacher during phonics and word reading activities differs from the other activities as these constitute the areas in which the teacher most often gave feedback or had the class practice the activity more than once. As far as recorded data is concerned, most of the literacy activities focused around these two components of early literacy learning. This is in accordance with findings by authors such as Poskiparta,

Niemi, and Vauras (1999) that showed that in highly regular orthographies, a lack of focus on phonemic awareness during literacy instruction does not necessarily handicap children's learning to read words. As Lerkannen, Rasku-Puttonen, Aunola and Nurmi (2004) suggest, an emphasis on phonics might be sufficient to support phonemic skills in the first year of school.

Finally, apart from a few general classroom strategies, such as grouping Setswana speaking children together in order to practice word reading from flashcards, the teacher did not employ any explicit instructional strategies to ameliorate the effects of developing phonemic awareness or learning to read in a second language. In essence, the Setswana speaking children received the same attention and instruction as their Afrikaans speaking peers. Finally, it has to be borne in mind that is that phonemic awareness is a skill which is not confined to literacy sessions only. Since it is an oral and aural activity, it also forms an intrinsic part of all other classroom activities which makes it difficult to quantify it.

6.3.10 Teachers lack knowledge of phonemic awareness

Apart from confusing the terms 'phonemic awareness' , 'phonics' and 'phonological awareness', the teachers in this study showed poor knowledge of how phonemic awareness is supposed be instructed. As Pretorius (2014) points out, educator knowledge of early literacy instruction is especially important for teachers who teach children who are learning to read in a language other than their mother tongue.

In contrast with their fairly good performance on items which aimed to gauge their knowledge of other aspects of language, such as being able to identify a homonym (see 5.4.5) or to divide words into syllables, teachers' poor knowledge of phonemic awareness is clear from their responses to almost every question posed.

Some teachers, notably the grade one teacher, responded relevantly to the question: *Why do you think phonemic awareness is important?*

TR1A: *If the child cannot distinguish auditory between the sounds which they hear, they will not be able to blend sounds to form words or to sound out words when they read and write.*

As has been found for teachers elsewhere (Abbott, Walton, & Greenwood, 2002; Mather, Bos, & Babur, 2001; Troyer & Yopp, 1990), the teachers who took part in the questionnaire, showed that they were unsure of what they needed to do to promote

children's phonemic awareness and early literacy. Responses focused mainly around the identification and instruction of first and last sounds

TR1A: *I show (the children a picture) of a ball and ask them what sound it starts with. Then I ask them what names start with 's' and which pictures start with 'l'.*

TR1: *I ask them: What (sound) does this word start with? What (sound) does this word end with?*

TR2: *We clap hands when we hear a certain sound, for example 'p'. I ask them: Whose name starts with 'k' or 's'? I ask them which farm animals names start with 'g'?*

TR3: *I ask them: What do you hear first/last. Sound and clap every sound. Write down each letter, then colour in the word that starts with e.g. 'l'.*

TR4: *Spell the word. Let's look at the word. Let's clap the syllables in the word. What does the word mean? Let's use the word in a sentence.*

To a question on what skills they thought were important for a child to learn to be prepared for reading, some teachers indicated that although they did not know the term for it, they recognised the importance of aural work:

TR: *Sight words are nonsense. Yes, they can see (the words perhaps), but then they always make spelling mistakes*

T1A: *Listening skills and recognising sounds*

T1B: *They should first know all the sounds and be able to distinguish between them and be able to blend them*

T2: *Listen to words and stories*

T3: *(To) know what he is interested in and to read books about that (topic).*

Unlike the Afrikaans teachers described by Wessels (2011), who overestimated their knowledge and did not see themselves in need of development in that area, only one teacher in this study (the grade R teacher) indicated that she thought she had sufficient knowledge of phonemic awareness development. All the teachers indicated that they did not think that the DBE gave them enough support in instructing 'klankleer' (the study of sound).

Supported by the literature (Spencer, Schuele, Guilot & Lee, 2008) the teachers' own phonemic awareness was poor, as indicated by their responses to a question which required that they count the phonemes in each word in a list of five words with two, four, five, five and nine phonemes respectively. The five words consisted of 25 phonemes in total. One teacher managed to correctly count the phonemes of four of these words. The other teachers could only do so for one or, at the most, two of the words. In a question which required teachers to apply phoneme segmentation to a list of five words with seven, four, five, five and three phonemes respectively, one teacher successfully segmented three words into phonemes and two teachers could segment one word each into phonemes. The other two teachers scored nil on this item.

Similarly to teachers in studies reported on in the literature by authors such as Cunningham, Perry, Stanovich and Stanovich (2004); Moats (1994), and Moats and Foorman (2003), their orthographic knowledge was found to impact negatively on the teachers' ability to recognise speech sounds. This showed in their inability to identify, the common phoneme in a list of four words in which the phoneme in common was represented by a different grapheme in each word. Although there was no time limit on the questionnaire even after the researcher had repeated the list of words orally, several times, teachers still could not identify the common phoneme (see 5.4.5).

From their responses to questions which aimed to elicit information on their classroom practice of phonemic awareness development instruction and assessment it is clear that being able to identify the first and last sound in a word were the skills most focused on. This is also reflected in the innovation configuration of the grade one teacher's classroom practice where this type of activity predominates during phonemic awareness activities.

6.4 THE FINDINGS IN THE BALANCE

Having come to the end of the discussion of the findings of this investigation, I deem it prudent to examine which of the aspects indicated by the findings support the

development of phonemic awareness indicated by the main finding namely, that the Setswana speaking children progressed according to the same trend as their Afrikaans speaking peers on items which measured their phonemic awareness development and other early literacy skills. Of course, this weighing of the aspects of the research situation in relation to the main finding is relevant to this study only, as these same findings, as factors within a different situation, might mean something entirely different. For example, albeit that the close adherence to the curriculum does not seem to have impacted very positively on the teacher's classroom practice, in another, less functional school setting, such obedience to the curriculum might have a positive effect on learners early literacy learning. In fact adherence to the curriculum is one of the requirements set as an indicator of school functionality (Christie, 2008) (see section 2.8.7). In this inquiry however, the close adherence to the tenets of the curriculum was found to be a factor which hampered, at least for this grade one teacher, her ability to effectively instruct early literacy instruction.

I propose that upon close examination of these findings, a very important question pertaining to this study arises; a question which, as researcher who had come toward the end of an inquiry, I would be remiss not to consider. This is; what influences could the Setswana speaking children's success in phonemic awareness development in their grade one year be ascribed to? After all, the last four research questions had, as their aim, to explore aspects of the children's home and school life which could impact upon their development of this important early literacy skill. Furthermore, it seems clear from some of the findings that there are certain aspects of the situation, both within their home environments and at school, which might work contrary to the development of phonemic awareness and early literacy.

To elucidate, I offer here a diagrammatic presentation of the findings. It is important to bear in mind that this is a purely conceptual representation of the findings of this research. Decidedly, the findings are not each assigned a 'weight' in terms of its possible effect on phonemic awareness development. Instead, the analogy of a scale is used here to indicate a certain overbalance on the side of factors which could, broadly, be seen to count against the development of phonemic awareness and early literacy skills. This seeming imbalance cannot be ignored and I will therefore, address it in the next section.

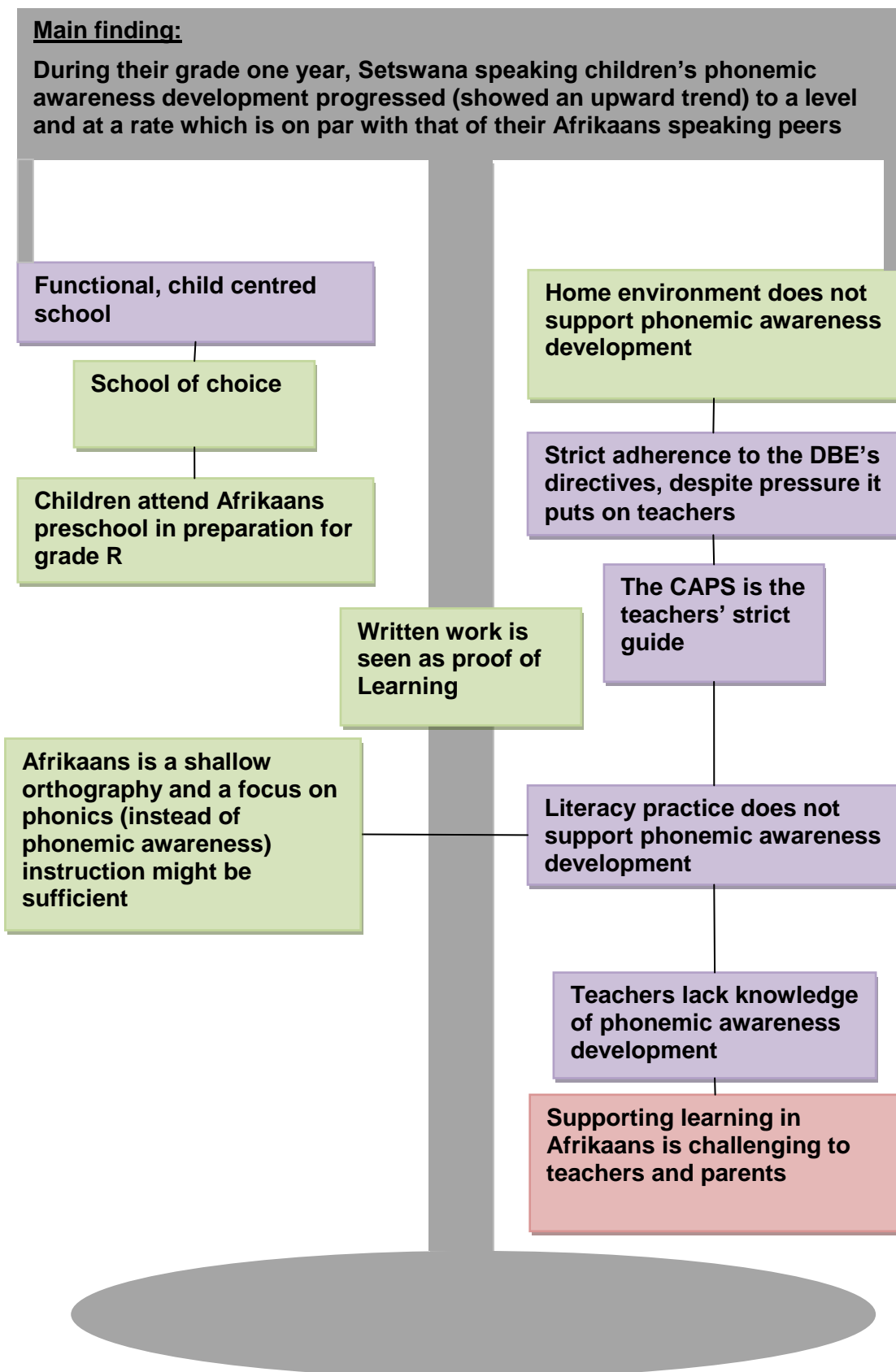


Figure 6.1 The findings in the balance

In this diagram I have construed the main (quantitative) finding as the 'beam' of a balance beam scale. From this beam 'hang,' conceptually, the qualitative findings. On the left hand side are arranged those findings upheld by literature, which seem to support the quantitative finding, namely that of phonemic awareness development and early literacy development of the children in the study. On the right hand side of the 'scale' are arranged those findings which possibly work contrary to the development of phonemic awareness. These findings are also supported by the literature as cited in the discussion of each of them in this chapter.

On the middle upright support of the beam, I have put the finding 'writing is seen as evidence of learning' in a neutral position because, although this was a prominent theme within the research, it is not clear whether this aspect of early literacy worked for or against the children's phonemic awareness development (see 6.3.8). Certainly, from the data, it seems that writing was something the teacher felt she had to have the children do a certain amount of in order to comply with the curriculum. However, writing was also one of the classroom activities during which the teacher paid a lot of individual attention to children, offering instruction and verbally mapping sounds onto the letters that were being written. It is therefore possible that the instruction of this activity benefited children's phonemic awareness development.

From the diagram it is clear that the factors which have enhanced the children's phonemic awareness and early literacy development are few compared to those which could have worked counter to the successful development of such skills. In an attempt to address this 'shortfall' I invite the reader to revisit psycholinguistic grain size theory in search of an answer to this conundrum.

6.4.1 Revisiting psycholinguistic grain size theory

According to Rayner, Foorman, Perfetti, Petetsky and Seidenberg (2001), early reading success depends on the resolution of three issues that pose challenges to the beginning reader. Psycholinguistic grain size theory which was developed by Ziegler and Goswami (2005), postulates that reading success depends on how effectively these problems can be overcome.

This theory and its application to orthographies of different depth were discussed in detail in chapter three (see section 3.6). Here, only its relevance to Afrikaans will be examined. Through a review of the limited available literature on the Afrikaans orthography, and its close association to Dutch (Gooskens & Van Bezooijen, 2006), it

was assumed that because of its systematic phonological and orthographic structure (Cockroft, Broom, Greenop and Fridjohn, 2009) Afrikaans is a shallow orthography.

The first of these problems is the issue of availability. Although some phonological units, such as rhyme are available to the child before reading starts, others, in particular phonemes, are not that readily available. This means that the beginner reader can only learn that phonemes exist and that they map onto certain aspects of the orthography once reading instruction commences (Ziegler & Goswami, 2005). This is true for young readers of Afrikaans too.

Secondly, consistency refers to two issues namely; that some orthographic units can be pronounced in multiple ways and that some phonological units have multiple graphemic representations. Because Afrikaans is relatively close to being an isomorphic or one-to-one orthography, these issues do not present early readers of Afrikaans with the same challenges as they would encounter were they to learn to read in an opaque orthography such as English which requires homomorphic or many-to-many grapheme-phoneme mappings.

Thirdly, there is the problem of granularity. This refers to the learning load brought about when the access to phonological units favours larger grain sizes, such as syllables and rimes over smaller units such as the grapheme and the letter. In Afrikaans, which has a strong correspondence between phoneme and letter symbol, children only need to learn the relatively few sounds and their corresponding graphemic representations to be able to read (see Figure 3.1).

Finally, there is the relationship between consistency and granularity. Inconsistency in less transparent orthographies, according to Treiman, Mullenix, Bijeljac-Babic and Richmond-Welty (1995) is more pronounced at smaller grain sizes than at larger ones. This means that a child learning to read in a deeper orthography cannot rely on the letter or the grapheme to represent a specific sound and therefore has to use several different reading strategies. Early literacy practice in a shallow orthography means that the child could learn to read by applying one strategy only, namely letter to sound conversion. Children learning to read in Afrikaans will therefore, in general, take a shorter time to learn to read than children learning to read in English because, as indicated by Rayner, Foorman, Perfetti, Pesetsky and Seidenberg (2001), instruction in recoding phonological representations at a smaller grain size, such as the letter or the grapheme seem sufficient.

Considering the question as to which instructional model would be the most effective for successful early literacy acquisition it seems that teaching children letter-sound correspondence would be the most effective way to help learners who are learning to read in Afrikaans. In research conducted on monolingual and cross-linguistic settings it was found that children who learn to read in transparent orthographies develop both reading and phonological awareness faster than children who learn to read in a deeper orthography like English (Goswami, Porpodas & Wheelwright, 1997; Nikolopoulos & Goulandris, 2000; Patel, Snowling & de Jong 2004; Porpodas, 1999; Seymour, Aro & Erskine 2003; Aro & Wimmer 2003).

Although by the end of the year the Setswana speaking children, on average, read five to six words fewer per minute, compared to the rest of the class, they read so with 85% accuracy. In summary, therefore, it seems clear that the transparent Afrikaans orthography could be a significant factor in the success with which the Setswana speaking children learn to read.

6.4.2 Tensions and agency – parents and teachers will⁴⁹

As I have indicated at the end of chapter 5 (see 5.6) and at the beginning of this chapter a prominent aspect of the pattern which has been detected in the findings is that of tensions. As I have signified in chapter one (see 1.11), this was one of the assumptions which I made at the beginning of the study. It was partly in anticipation of this, that I had selected cultural historical activity theory as conceptual framework for this study (see 1.6.1). I will therefore use CHAT to discuss the various tensions which was detected within the dynamic of this situation. I will conceptually ‘place’ each of the findings within two nodes of the activity system. Then I will discuss the tensions which arise as a result of that suppositious position. In each case I will show how the parents and educators – the people who make up the *community* within this activity system, effectively used their agency and political will so that, with the use of the *tool* of learning to read in a shallow orthography children retained momentum in their *acting* toward the *object* of phonemic awareness and eventually to actuate the desired *outcome* - that of having progressed on a par with first language speakers of the LoC, toward literacy.

For ease of reference, I again present here the diagrammatic representation of CHAT (see Figure 6.2). I have selected to keep only the labels at the different ‘nodes’ of the conceptual activity system. Tension between these ‘nodes’ will be discussed, each time

⁴⁹ ‘Will’ is meant as a verb here – the hyphens indicating the possessive ‘have’ have been left out on purpose.

in conjunction with one of the finding of this study. The *subject* of the activity, namely ‘Setswana speaking children developing phonemic awareness’ will not be discussed in conjunction with any of the other ‘nodes’ since it can be assumed that any tensions within the system would, by implication, affect them.

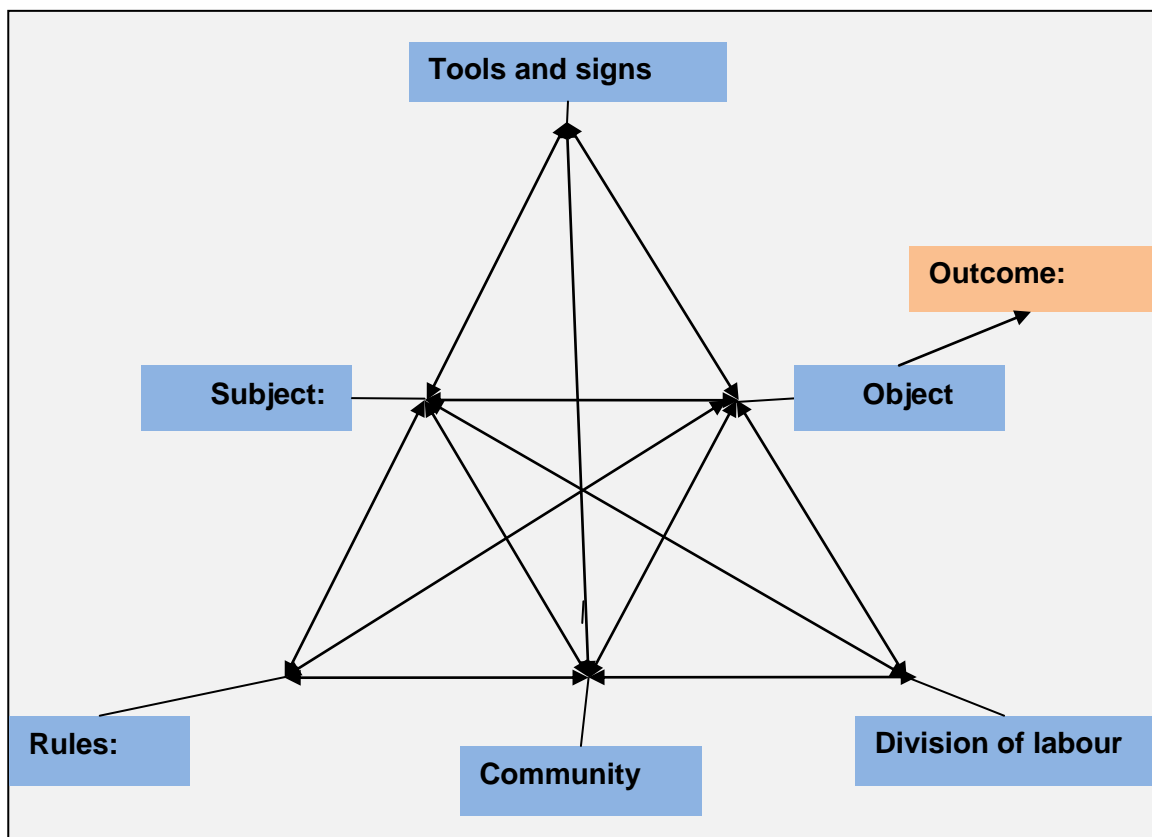


Figure 6.2 The main ‘nodes’ on the Cultural Historical Activity Theory diagram.
Adapted from Engeström (2011)

This discussion will deal with only the most prominent tensions which emerged from the consolidated themes. It is not meant as an exhaustive discussion of all possible tensions within the research situation as depicted by the activity system. A sample of the raw data which is representative of the tensions described in the section will follow each heading. For the sake of aesthetics these data will be referenced in a footnote.

6.4.2.1 Tension between Tools and Signs and Community: Setswana speaking parents choose this school for their children’s education

A lot of the problem is...I can’t help her in Afrikaans. Even the school newsletter is in Afrikaans and I don’t know it, so I run to my neighbour

to help. She is Afrikaans and she helps me to understand it (the newsletter). - Parent⁵⁰

As members of the *community* parents exercise their political will by selecting to let their children attend the school which they believe offers the best education opportunities. Parents are motivated to exercise this choice because this school possess, to their minds, *tools* such as teacher competence, effective management structures, disciplinary protocols, and curriculum implementation. Moreover, parents trust the school's ability to utilise these tools to the end of optimising children's academic and scholastic wellbeing. Tension lies in parents knowing that they would not be able to assist their children with homework as this rests upon an assumed ability to access these *tools* and use the language of the classroom, namely Afrikaans. They therefore entrust the teacher with mediating the activity through the use of the tools of LoC and the curriculum. Looking at the activity from this perspective, the LoC becomes a *rule* – one which, for some of the parents at least, diminishes their power to access information about the children's schoolwork or to support aspects of schoolwork, such as homework.

6.4.2.2 Tensions between Tools and Signs and Division of labour: School is functional and child centered

One of the biggest challenges is the curriculum...I feel...with the English (second language)...some days I feel I am not exactly where I should be with it. I don't always understand how the children make it their own...I don't know how they do it, especially the Setswana speaking children...I feel that we should first get on top of the Afrikaans sounds in the first and second term and then only start with the English. (Teacher carries on to explain how different graphemes represent the same sound in English and Afrikaans) – Grade one teacher⁵¹

Gazing at the school as a functional institution by the standards of the DBE or, alternatively, of the parents as representatives of the *community* within the activity (see section 6.3.5), it could be said that within the system of the school the division of labour is effective. In other words, the school is functional because everyone – the principal, teachers, members of the school governing body and the supporting staff – all know what should be done, by whom, at which time and according to what standards.

⁵⁰ Parent PR4; Parent questionnaire

⁵¹ From interview with grade one teacher, 25 April 2014

Moreover, at this school, the wellbeing of the children is central to all efforts. Herein lies the tension: when the directives of the department, especially with regard to administrative protocols are taken as a *tool* – presumably one which should help optimise the levels of functionality of the school – it is perceived by the teachers to obstruct them in the execution of the duties required by the division of labour as they see it.

6.4.2.3 Tension between Tools and Signs and the Object of the activity: Teachers lack knowledge of phonemic awareness

A teacher's response to the question⁵²: Describe/give an example of phoneme blending:

Candle + wax = candlewax. It is when you put two words together.

The *teachers' knowledge* on the subject and on its instruction is one of the primary *tools* in this activity. The teachers in this study lack knowledge about phonemic awareness, how it develops and how it should be instructed. This causes tension between the *tool* and the *object*, namely that of the Setswana speaking children's development of phonemic awareness and early literacy learning. However, the main finding of this inquiry shows that the Setswana speaking children did develop these skills at least as well as the Afrikaans speaking children in their class. It is my argument that the development of their early literacy was enhanced by another *tool*, namely that of the Afrikaans orthography in which the children were learning to read - a shallow orthography with a regular grapheme to phoneme mapping.

6.4.2.4 Tension between the Tools and Signs and Rules: The national curriculum is the teachers' strict guide

"When the (foundation phase) teachers ask me what they should be doing about this or that (aspect of their teaching), I tell them to go read the CAPS. Everything they need to know is in there. Everything".

A curriculum can be seen as a *tool* which is applied toward attainment of the object of the action in the activity of literacy learning. The curriculum in this case is not a *tool* which the teacher has autonomy over to tailor according to the unique situation in her classroom. The *tool*, in this case, has to be applied according to strict *rules* – the

⁵² TR3 From teacher questionnaire, Question D3

prescriptions of the HOD derived from her interpretation of the directives of the DBE. Interestingly, here, the HOD, who is a co-member, alongside the teacher, of the *community*, becomes the strict enforcer of the *rules* – potentially increasing the tensions within the situation. In an attempt to mitigate the situation, the teacher uses her *agency*, albeit covertly, to adjust her classroom practice - another *tool* - and applies the *curriculum-as-tool* in what she believes to be the most effective way to benefit the children, while straining under the pressure of delivering against the requirements in the *rules* of how the *curriculum-as-tool* should be used.

6.4.2.5 Tension between Community and Rules: The school adheres strictly to the DBE's directives, despite skepticism

We should teach one sound at a time and inculcate before we continue. The department jumps around between the different sounds and so nothing gets properly inculcated – Grade one teacher⁵³

The school and its stakeholders can be viewed as the *community* in the children's acting toward phonemic awareness and early literacy. As described above, the teachers feel encumbered in their quest to give each child the opportunity to develop to the best of their ability. This encumbrance, teachers feel, is brought about by the restrictive rules of the DBE – rules which the teachers perceive as robbing them of valuable time during which they could apply their resources more effectively toward early literacy. These rules are often seen by the teachers and the principal as superfluous and enforced by officials who do not have the knowledge or the competence to do so. The school, part of the community, uses their agency by requesting a monitoring and support visit and by following up when the DBE, at district level, does not respond to this request.

6.4.2.6 Tension between Rules and the Object of the activity: Written work is seen as evidence of learning

Parents expect children to do work on paper, that makes it difficult because the parents want to see results. And the only way to show them results or outcomes is to show them - I have assessment books – then you can show them, look, this is what your child has done this

⁵³ From teacher questionnaire, question C4: What would you change about the current departmental directives on phonemic awareness

term. If you do everything orally or with clay then they (the parents) say: How do they know you assessed correctly? – Grade R teacher⁵⁴

The importance ascribed to the production of written work by children as evidence to parents, teachers, members of the school management team and representatives of the DBE that the children are learning comes to the fore in several data sources, such as interviews with teachers (see 5.4.1; 6.3.8); documents (see 5.4.6), researcher observations (see 5.4.7). This, together with the production of correct spelling, is one of the most prominent *rules* in the activity system. It is allocated considerable time during literacy sessions (see 5.4.4; 5.4.7) and is at the crux of the tensions which arise as a result of the monitor and support visit by representatives of the GDE (see 6.3.6). The classroom teacher had neglected to abide by the rules of consistent use of the workbooks because she had opted to let the children practice reading, and thus the children had fallen behind in producing the required amount of writing in their departmental workbooks. The tension herein lies not so much in whether or not this classroom activity supports or hinders the development of phonemic awareness as such (see section 6.3.8), but in the effect it has on the teacher who, standing at the helm of the children's literacy learning uses her own initiative in how she conceives of her role in the *division of labour* to act against the prescriptions of this particular rule. In doing so, perhaps she focuses instead on early literacy instruction on activities other than teaching children to shape letters perfectly or to produce correct spelling.

6.4.2.7 Tension between Rules and Division of Labour: Supporting learning in a second language is a challenge

The earlier the children come to preschool the better. If they get here at least in Grade RR then by the time they get to grade R they understand Afrikaans. – Grade R teacher⁵⁵

Because the Tswana moms don't always know what is expected of the children for homework the children's homework is often not done. So I allow a little time in the morning for them to do homework. – Grade one teacher⁵⁶

⁵⁴ From interview with grade R teacher

⁵⁵ See footnote above

⁵⁶ From interview with the grade one teacher

That Afrikaans is the LoC at this school, is an explicit *rule* within the system. The school's language policy bears testimony to that – this is an Afrikaans medium school and there is little evidence that other languages are accommodated outside of what is required by the curriculum. This imposes certain restrictions upon members of the community - parents and teachers - performing their duties according to the *division of labour* in the system. Parents whose support of their children's education includes, especially at grade one level, helping children with homework, can often not do so effectively because they do not understand Afrikaans. Parents also find it difficult to access information about school events which is disseminated through the *tool* of the school newsletter, because it is printed in Afrikaans.

When the gaze rests upon the teachers as the performers of duties within the division of labour, and the pace at which instruction in first language skills is supposed to take place according to the national curriculum statement, is taken as the *rule*, it is not surprising that the teachers report that they find it challenging to support the Setswana speaking children in their education. Were it not for the teacher's exercising her agency and to act in defiance of some of the *rules* - regarding time, for instance - by helping the Setswana speaking children with their homework after school, or in the morning before normal classroom activities start, then perhaps the children's actions toward the object of developing phonemic awareness would not have been quite so successful.

6.4.2.8 Tension between Community and the Object of the activity: Setswana speaking children's home environments do not support phonemic awareness development in Afrikaans

Unfortunately I cannot help him with homework. Because I cannot read and write - Parent⁵⁷

The parents (of the Setswana speaking children) work all day. Or they cannot read and write. Or they don't understand Afrikaans. So it is difficult for them to help with homework. I am at school from just after six in the morning. Then the children, also children from the other grades, come to me to help them with homework. – Grade one teacher⁵⁸

⁵⁷ Response from PR2 during interview with parents

⁵⁸ From interview with Grade one teacher

Parents, as pivotal members of the *community* of the activity in the system, are not ignorant of the fact that what the home environment of the Setswana speaking children offers them in terms of early language activities does not directly enhance the children's chance of reaching the objective, namely the development of phonemic awareness and early literacy skills in Afrikaans. Parents, however, take action in promoting their children's pre-literacy skills in Afrikaans by enrolling them, as early as possible, in the Afrikaans pre-school. Herein too lay tensions. These will be discussed in the next section.

6.4.2.9 Tension between community and division of labour: Setswana speaking parents send children to the preschool

*Seven of the ten Setswana speaking children in the study went to the Afrikaans preschool before grade one. Notable the two lowest performers on the DIBELS Next assessments did not attend the preschool*⁵⁹

As discussed earlier (see section 6.3.3), Setswana speaking parents enrol their children in the Afrikaans preschool in a bid to ameliorate the lack of support which their home environments provide for the development of the children's early literacy skills in Afrikaans. In light of the children's success in developing phonemic awareness it seems that this strategy works. Parents entrust an essential part of the *labour* of preparing their children for grade one to the grade R teacher and other teachers at the preschool. Although it might seem as if the parents are absconding their duties here, as a matter of fact, this might be where they exercise their agency the strongest. Evidence from the study shows that those children who did not go to the preschool before grade one scored the lowest on the assessments overall.

6.4.2.10 Tension between division of labour and the object of the activity: Literacy practice is limited to phonics and word recognition with no purposeful focus on phonemic awareness

'Sometimes I feel overwhelmed. There is just not enough time in the curriculum to properly inculcate the sounds...and I am accountable to every child in my care. I can't just leave them when they struggle.' - Grade one teacher

⁵⁹ Data from parent questionnaires collated with data from the *DIBELS Next* assessments (see section 5.3.1)

In this view, the teacher becomes the person assigned by the *division of labour* within the activity to ensure that the *action* of phonemic awareness development by the children maintains its momentum toward the *object* of the activity, namely, ‘children who have developed phonemic awareness’. The *labour* here is her teaching in the classroom which comprises instruction in phonics and word recognition and writing – activities which might not optimise the attainment of the *object* the way explicit instruction in phonemic awareness might have done – especially for those children who are struggling. The tension here lies not only between the division of labour and the outcome, but also in the dichotomy of the tools at the teachers disposal – her knowledge-tool which is deficient in this specific area, and the curriculum-tool which she is expected to follow stringently by the *rules* (see 6.3.7). I propose, once again, that the shallow orthography of Afrikaans as *tool* in the hands of a teacher who is totally committed to her role as educator and also to the children in her care is one of the main factors which impact on the Setswana children’s progress in phonemic awareness and early reading during their grade one year.

6.5 LIMITATIONS OF THE STUDY

The study investigated the phonemic awareness development of ten Setswana speaking children in a class of thirty children at a small-town school in a rural hamlet of Gauteng. The following limitations have been identified and apply to this investigation.

This size of the sample is small and obviously not representative of all Setswana speaking children learning to read in Afrikaans. The results of this research can therefore not be generalised to other settings apart from the one at this school. Moreover, the classroom practice of only one teacher is captured in the data – again, a limitation which precludes generalisation to other classrooms in South Africa.

The adapted and translated *DIBELS Next* assessments were not standardised and therefore the benchmarks for progress could not be utilised fully for the purposes of this inquiry. Information on the performance of Setswana speaking children and their peers against the benchmarks could have provided valuable data about the level of effectiveness of the teacher’s classroom practice and could have served as an important baseline for further research on the topic.

Ambiguity in the literature on many of the phonemes of Setswana precluded a comparison of Afrikaans and Setswana phonemes, a factor which I deem could possibly have enhanced the findings on the strength of similarities between the two languages.

6.6 IMPLICATIONS OF FINDINGS

The findings of this inquiry could have implications for policy, teacher training, and research. These will be discussed in the next few paragraphs.

6.6.1 Knowledge contribution

This research is the first on the phonemic awareness development of Setswana speaking children learning to read in Afrikaans. It therefore makes a considerable knowledge contribution as the first of its kind on this topic. However, research is only useful if it has utility value (Bryman, 2006). At a time when education in South Africa is in such a crisis with regard to literacy performance of learners in the country, this study could contribute to the scholarly literature on the orthographic depth of Afrikaans and on how Setswana speaking children learn early literacy in Afrikaans. Furthermore, it has implications for teachers who are confronted with learners from diverse language backgrounds in one classroom, noticeably for educators in Europe where shallow orthographies, such as Dutch and Finnish could be used as the target language for early reading acquisition instead of English. Also important is that teachers at Afrikaans schools be made aware of the possible education hurdles which children, especially those from resource poor backgrounds, who had not attended Afrikaans preschools, have to face. It might be prudent if grade one teachers were equipped with the knowledge and resources, specifically pertaining to early literacy in Afrikaans, which might be needed in order to ease the transition into an Afrikaans school for those children.

6.6.2 Implications for policy

True to the construct of this inquiry, namely that of phonemic awareness development in a second language, this section will discuss the influence of the findings, in conjunction with literature, on two important factors which affect children's early literacy acquisition. Firstly, this section will speak to the current debate about abolishing Afrikaans institutions and the assumed demand for English as LoC, and secondly to the orthographic depth of Afrikaans and the effect this has on phonemic awareness development and reading acquisition.

To address the poor literacy performance of South African learners is currently one of the priorities for educationists in the country. Some of the findings of this thesis seem to counter the rationale behind the trend of reducing the number of Afrikaans medium schools. Firstly, counter to popular belief, upon examining some of the available

literature, there seems to be a demand by parents for more Afrikaans medium schools in Gauteng (see section 2.3.2; Table 2.3). In fact, from the statistics cited in chapter 4 it seems that some 34 000 children in Gauteng who attend English medium schools attend those schools despite English not being the preferred LoC. Furthermore, there seems to be a shortage of 27 Afrikaans medium schools to satisfy the language preferences of another 21 635 children who are not Afrikaans first language speakers.

Secondly, from the findings of this inquiry the following seems clear. The children in this study come from home environments which do not support their phonemic awareness development in Afrikaans. Furthermore, their learning to read in a second language poses challenges to their parents and teachers alike. The teachers' poor knowledge of phonemic awareness development and the ambiguity about the subject in the current curriculum document probably contributes to literacy instruction which does not directly support this early literacy skill. However, despite all these challenges, the children in this study developed phonemic awareness at a rate and level commensurate with that of their peers.

The following findings seem to support the phonemic awareness development of the children in this study. The school which they attend is functional, and quite radically child centred and, because of this, this is the parents' school of choice. To support their children's learning in a second language parents enrol their children at the Afrikaans medium preschool at the school where they learn and play in an Afrikaans language environment before going to school. This exposure seems to assist them when, upon entering grade one, they start learning to read in Afrikaans. Finally, although no formal comparison with other orthographies could be found in the literature, Afrikaans is a shallow orthography, closely related to Dutch, and because of its close letter-sound correspondence, children will find it easier to learn to read in than, for example English, which of all the alphabetic orthographies, is the most opaque.

6.6.3 Teacher education

Institutions which offer teacher training to future foundation phase teachers need to include explicit training on the importance of phonemic awareness development and the most effective instruction thereof to optimise children's early literacy development. Also, the assessment of phonemic awareness and of early reading needs to feature prominently in teacher education. Prospective teachers should learn that assessment is done, not only as a means of producing evidence to parents, school management teams and the department of education, but that the main objective of assessment is to gauge

which aspects of learning the child needs help with and to be able to use assessment results to design explicit strategies to address any deficiencies that might have come to the fore. Training in the application of standardised assessment instruments such as *DIBELS Next* could help teachers to get an objective measure of progress or the lack thereof.

Furthermore, training teachers need to know the difference in orthographic depth of the language(s) in which they teach reading as well as the different reading strategies which apply to the different orthographies and the instructional methods which support reading in a specific language. Teachers also need to have some knowledge of the phonemes of the home language of the learners who are not first language speakers of the LoC. Also, as has been discussed, the abolishment of Afrikaans places of education should perhaps be put on hold and it should be reconsidered whether Afrikaans teacher training institutions might have an important role to play in the future of education in the country.

6.6.4 Assessment instrument

Translated and standardised versions of the *DIBELS Next* assessments into South African languages other than English could provide a useful tool with which teachers could benchmark as well as track learners' progress and diagnose specific areas where learners experience difficulties in order to design explicit instructional interventions to address these in time.

6.6.5 Future research

During the process of reading, conducting the empirical research and finally, analysing the data, a few areas for possible future research have been identified. From a perusal of the findings, prospective researchers will be able to identify several topics which could be explored through research, especially when looking at the tensions between the different aspects within the dynamic of this researched situation. I will however, only highlight those few which I deem most important here.

First of all, given the debate around language in education, and the strong opposition to Afrikaans as language medium of education which finds expression in several protest movements as well as in the media, it might behove policy makers and researchers alike to invest in further research about the role which the nature of the Afrikaans orthography and other transparent orthographies, such as for example, Setswana, play in children's phonemic awareness development and early literacy acquisition. I deem this particularly important to the South African education situation where gross inequities (Spaull 2012)

practically preclude most of South African children from receiving an education that would make a difference to their situation. Certainly, if it is possible that by learning to read in an orthography which is shallower than English - the most opaque of all alphabetic orthographies - children learn to read faster and with less trouble, then this should be investigated.

Secondly, research on teachers' perceptions of the disparities between policy directives and what they find feasible in real classroom situations could be investigated in different education settings in South Africa. Teachers are at the crux of education. They stand in front of classrooms full of children every day, and it is in their hands, ultimately, that children's academic progress lie – regardless of what is written in policy documents or what directives are conceived of to guide their actions.

Thirdly, although districts and schools can do little to directly address the socio-economic aspects which affect children's education, they can affect how children learn to read in the classroom. It is my opinion that in-depth research on the specific aspects of teaching early literacy, such as specific instruction and classroom activities and how these align with the nature of the orthography of the target language, be conducted.

6.7 SUMMARY

Looking back on the design of this research, I would say that the research project has achieved its objective, namely, to answer the five research questions. I will briefly outline how these research questions were addressed through the design of this mixed method study.

In order to answer the primary research question a quantitative research component was conceived of and implemented in the form of five aspects of the *DIBELS Next* assessments, namely, letter naming fluency, first sound fluency, phoneme segmentation, nonsense word fluency and oral reading fluency. The results from these assessments were analysed and show that the Setswana speaking children's phonemic awareness had developed commensurate with that of their Afrikaans speaking peers. Furthermore, the data indicated that their oral reading fluency had progressed along the same trend.

Four additional research questions aimed to capture aspects of the children's home and school environment which could play a role in their early literacy learning. These research questions were addressed through qualitative methods. Upon analysis of data

thus gathered, it appears that some factors which are reflected in the findings, such as the school's child centred orientation, together with its high level of functionality, support the main finding. Other findings, such as that children's home environment does not support phonemic awareness development in Afrikaans, stand opposed to the children's development of phonemic awareness.

Upon further analysis of the findings a distinct underlying pattern appears. This pattern is of tension between different aspects, structures and role players within the situation and, at the same time, one of agency and political will exercised by the parents and the teachers. These underlying themes of tension and agency offers a new picture of the research situation – one in which stakeholders function within a complex dynamic wrought with ambiguities. Within this situation parents and teachers encounter various obstacles to the children's early literacy learning in Afrikaans. These challenges inspire parents and educators alike to work out strategies and innovations that enable them to support the children's phonemic awareness development and early literacy learning.

In this, the concluding paragraph of this thesis, I want to invite educators, academics and policy makers alike to shift their focus somewhat away from the perception of Afrikaans as the language of oppression and broaden their view to include the aspects of the language which seem to make early literacy acquisition less of a hazard than what it currently is. In a country where 75% of children already struggle against great odds (Spaull 2012), it is our duty to render these children all the assistance we can. Perhaps, instead of blindly demolishing Afrikaans institutions of learning because of past political ideologies, we should utilise the technical aspects of the language which seem to work in favour of an easier road to early literacy acquisition. Afrikaans, like German, happens to be a language which had been used at some point in time (not exclusively, but also) by people who committed vulgar atrocities against others in the name of nation building. Yet, knowing that a certain popular brand of German made car had originally been conceived of as the 'transport of the nation' by a despot, does not deter us from recognising its current utility value. I argue that policy makers would be grossly remiss in their duty to the children of this country if they knowingly withhold a means of attaining the important milestone of literacy earlier and easier than when children, especially those from resource poor backgrounds, learn to read in English.

REFERENCES

- Abbott, M., Walton, C., Greenwood, C. (2002). Phonemic awareness in kindergarten and first grade [Electronic version]. *Teaching Exceptional Children*, 34(4), 20–27.
- Abel, L. (1997). Teacher development mediation: A cognition-based reconsideration. Unpublished doctoral thesis, University of the Western Cape, Bellville, Cape Town, South Africa.
- Abel, L. (2003). Challenges to reading teachers in multilingual settings in South Africa. *Reading For All In Africa*, 18-37.
- Abel, L., & Rhodes, S. (2001, July). Cognition and the Web. Paper presented at African Connects, International IT Conference, Cape Town, South Africa.
- Abowitz, D. A., & Toole, T. M. (2009). Mixed method research: Fundamental issues of design, validity, and reliability in construction research. *Journal of Construction Engineering and Management*, 136(1), 108-116.
- Adam, A. (2014). *The development of a school-wide progress monitoring assessment system for early literacy skills*. Unpublished doctoral dissertation, North-West University).
- Adams, M. J. (1990). *Beginning to read: Learning and thinking about print*. Cambridge, MA: MAT Press.
- Adler, P. A., & Adler, P. (1987). *Membership roles in field research* (Vol. 6). Sage.
- Alexander, N. (2003). Language education policy, national and sub-national identities in South Africa. *Council of Europe, Strasbourg*.
- Alidou, H., Boly, A., Brock-Utne, B., Diallo, Y. S., Heugh, K., & Wolff, E. (2006). *Optimizing learning and education in Africa – the language factor*. Paris: ADEA.
- American Speech-Language-Hearing Association (ASHA). (2010). Social Language Use (Pragmatics). Retrieved May 11, 2014 from www.asha.org/public/speech/development/pragmatics.htm.

- Anderson, R. C., Hiebert, E. H., Scott, J. A., & Wilkinson, I. A. G. (1985). *Becoming a nation of readers*. Champaign, IL: University of Illinois. *Center for the Study of Reading*.
- Anthony, J. L., & Francis, D. J. (2005). Development of phonological awareness. *Current Directions in Psychological Science*, 14(5), 255-259.
- Anthony, J. L., Williams, J. M., McDonald, R., & Francis, D. J. (2007). Phonological processing and emergent literacy in younger and older preschool children. *Annals of dyslexia*, 57(2), 113-137.
- Antoniadou, V. (2011). Using Activity Theory to understand the contradictions in an online transatlantic collaboration between student-teachers of English as a Foreign Language. *ReCALL*, 23(03), 233-251.
- Appel, R., & Muysken, P. (1987). *Language contact and Bilingualism*. London: Edward Arnold.
- Armbruster, B. B., Lehr, F., & Osborn, J. (2003). *Put reading first: The research building blocks of reading instruction* (2nd ed.). Jessup, MD: National Institute for Literacy.
- Aro, M., & Wimmer, H. (2003). Learning to read: English in comparison to six more regular orthographies. *Applied Psycholinguistics*, 24(04), 621-635.
- Arrow, A. W. (2007). *Potential precursors to the development of phonological awareness in preschool children* (Doctoral dissertation, ResearchSpace@ Auckland. University of Auckland).
- Arthur, J., & Martin, P. (2006). Accomplishing lessons in postcolonial classrooms: Comparative perspectives from Botswana and Brunei Darussalam. *Comparative education*, 42(02), 177-202.
- Arthur, S., & Nazroo, J. (2003). Designing fieldwork strategies and materials. *Qualitative research practice: a guide for social science students and researchers*, 1, 109-137.

- Auerbach, E. (1993). Re-examining English only in the ESL classroom. A teachers of English to speakers of other languages publication. *TESOL Quarterly*, 27(1), 9-32.
- August, D., & Shanahan, T. (Eds.). (2006). Developing literacy in second-language learners: Report of the National Literacy Panel on language-Minority Children and Youth. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Aycard, P. (2010). How the youth of Soweto have turned language into a transformable object in the context of a changing society. *Researching Africa*, 56.
- Balfour, R. J. (2012, April). Multi-Lingualism and Multi-Literacy: possibilities, potential and limitations of interdisciplinary research on linguistic and cognitive development (Inaugural address). North-West University, Potchefstroom Campus. South Africa.
- Ball, E. W., & Blachman, B. A. (1991). Does phoneme awareness training in kindergarten make a difference in early word recognition and developmental spelling? *Reading research quarterly*, 49-66.
- Ball, J. (2009). Addressing Challenges to Children's Rights to use their mother tongue in early education and schooling. *University of Victoria, School of Child and Youth Care*.
- Ball, J. (2010). Enhancing learning of children from diverse language backgrounds: Mother tongue-based bilingual or multilingual Education in the early years. UNESCO. Retrieved from:
<http://unesdoc.unesco.org/images/0018/001869/186961/e.pdf>
- Ball, J. (2011). Enhancing learning of children from diverse language backgrounds. *France: UNESCO*.
- Balmuth, M. (1982). *The roots of phonics: A historical introduction*. New York. McGraw-Hill.
- Banda, F. (2015). Critical perspectives on language planning and policy in Africa: Accounting for the notion of multilingualism. *Stellenbosch Papers in Linguistics PLUS*, 38, 1-11.

- Banks, J. A. (2008). Diversity, group identity, and citizenship education in a global age. *Educational researcher*, 37(3), 129-139.
- Barber, C. L. (1964). *The story of speech and language*. Crowell. New York.
- Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The qualitative report*, 13(4), 544-559.
- Bear, D. R., Invernizzi, M., Templeton, S., & Johnson, F. (2008). *Words their way: Word study for phonics, vocabulary, and spelling instruction* (4th ed.). Upper Saddle River, NJ: Pearson/Prentice Hall.
- Beatty, I. D. (2012). Seeing teacher development from an 'activity system' perspective. *Education as Change*, 17(2).
- Beatty, I. D., & Feldman, A. (2009, April). Illuminating teacher change and professional development with CHAT. In *Proceedings of the NARST Annual Meeting, April* (pp. 17-19).
- Bekebrede, J., van der Leij, A., & Share, D. L. (2009). Dutch dyslexic adolescents: Phonological-core variable-orthographic differences. *Reading and Writing*, 22(2), 133-165.
- Bell, B. (2006). Mother-tongue maintenance and maths and science achievement: a contribution towards formulation of a multilingual language-in-education policy for South African Schools. Pietersburg: University of the North.
- Benson, C., & Kosonen, K. (Eds.) (2013). Language issues in comparative education. Inclusive teaching and learning in non-dominant languages and cultures. Rotterdam: Sense Publishers.
- Bentin, S., Hammer, R., & Cahan, S. (1991). The effects of aging and first grade schooling on the development of phonological awareness. *Psychological Science*, 2(4), 271-274.
- Bertelson, P., De Gelder, B., & van Zon, M. (1997). Explicit speech segmentation and syllabic onset structure: Developmental trends. *Psychological Research*, 60(3), 183-191.

- Biersteker, L. & Dawes, A. (2008). Early Childhood Development. Chapter 9. In: A. Kraak, K. Press (Eds), *Human Resources Development Review*. (2008). Cape Town. HSRC PRESS.
- Bissex, G. L. (1980). Gnys at wrk. *Cambridge, MA: Harvard University Press*. Bussis, AM (1982). *Burn it at the casket*. *Phi Delta Kappan*, 64, 237-241.
- Blachman, B. A., Schatschneider, C., Fletcher, J. M., Francis, D. J., Clonan, S. M., Shaywitz, B. A., & Shaywitz, S. E. (2004). Effects of Intensive Reading Remediation for Second and Third Graders and a 1-Year Follow-Up. *Journal of Educational Psychology*, 96(3), 444.
- Blackler, F. (2009). Cultural-historical activity theory and organization studies. *Learning and expanding with activity theory*, 19-39.
- Bowling, A. (2005). Mode of questionnaire administration can have serious effects on data quality. *Journal of public health*, 27(3), 281-291.
- Braam, D. (2004). *Community perceptions of change in a school's language policy*. PRAESA.
- Brady, S. A. (1991). The role of working memory in reading disability. *Phonological processes in literacy: A tribute to Isabelle Y. Liberman*, 129-151.
- Brock-Utne, B. (2005). Language-in-education policies and practices in Africa with a special focus on Tanzania and South Africa - insights from research in progress. In J. Zajda (Ed.), *International Handbook on Globalisation, Education and Policy Research* (pp. 549-565). Netherlands: Springer.
- Brock-Utne, B. (2007). Learning through a familiar language versus learning through a foreign language – A look into some secondary school classrooms in Tanzania. *International Journal of Educational Development*, 27, 487-498.
- Brock-Utne, B. (2013). Language and liberation. Language of instruction for mathematics and science: A comparison and contrast of practices focusing on Tanzania. In C. Benson & K. Kosonen (Eds.). *Language issues in comparative education. Inclusive teaching and learning in non-dominant languages and cultures* (pp. 77-93). Rotterdam: Sense Publishers.

- Brock-Utne, B. (2015). *Language-in-education policies and practices in Africa with a special focus on Tanzania and South Africa* (pp. 615-631). Springer Netherlands.
- Brock-Utne, B., & Desai, Z. (2003, September). Expressing oneself through writing – a comparative study of learners' writing skills in Tanzania and South Africa. Paper presented at the Seventh Oxford International Conference on Education and Development.
- Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done?. *Qualitative research*, 6(1), 97-113.
- Butzkamm, W. (2003). We only learn language once. The role of the mother tongue in FL classrooms: death of a dogma. *Language Learning Journal*, 28(1), 29-39.
- Byrne, B., & Fielding-Barnsley, R. (1991). Evaluation of a program to teach phonemic awareness to young children. *Journal of Educational Psychology*, 83(4), 451.
- Caldwell, K., & Atwal, A. (2005). Non-participant observation: using video tapes to collect data in nursing research: *Nurse researcher*, 13(2), 42-54.
- Carless, D. (2007). Student use of the mother tongue in the task-based classroom. *ELT Journal*, 62(4), 331-338.
- Carlisle, J., & Rice, M. S. (2002). *Improving reading comprehension: Research-based principles and practices*. York Press.
- Carrell, P. L. (1991). Second language reading: Reading ability or language proficiency?. *Applied linguistics*, 12(2), 159-179.
- Carroll, J. M., Snowling, M. J., Stevenson, J., & Hulme, C. (2003). The development of phonological awareness in preschool children. *Developmental psychology*, 39(5), 913.
- Carroll, J., & Snowling, M. (2003). Language and phonological skills in children at high risk of reading difficulties. *Journal of Child Psychology and Psychiatry*, 45(3), 631-640.
- Casale, D., & Posel, D. (2010). English language proficiency and earnings in developing country: the case of South Africa. *Economic Research Southern Africa*. University of KwaNulu-Natal.

- Chabalala, J. (2016). Dropping of Afrikaans at UFS violates constitution – Afriforum. News24. 20 June 2016. Retrieved from:
<http://www.news24.com/SouthAfrica/News/dropping-of-afrikaans-at-ufs-violates-constitution-afriforum-20160620>
- Cheesman, A., McGuire, J.M. Shankweiler, D. & Coyne, M. (2009). First-year teacher knowledge of phonemic awareness and its instruction. *The Journal of the Teacher Education Division of the Council for Exceptional Children*, 2009: (32) 270.
- Chiappe, P., Siegel, L. S., & Gottardo, A. (2002). Reading-related skills of kindergartners from diverse linguistic backgrounds. *Applied Psycholinguistics*, 23(01), 95-116.
- Chomsky, C. (1971). Invented spelling in the open classroom. *Word*, 27(1-3), 499-518.
- Christie, P 2006. *The Right to Learn: The struggle of Education in South Africa*. Johannesburg: Ravan Press.
- Christie, P. (2008). *Opening the doors of learning: Changing schools in South Africa* (pp. 1-235). Johannesburg: Heinemann.
- Clark, J., & Yallop, C. (1990). *An Introduction to Phonetics and Phonology*. Basil. Blackwell.
- Cleaver, F. (1999). Paradoxes of participation: questioning participatory approaches to development. *Journal of International Development*, 11(1999), 597-612.
- Cockcroft, K., Broom, Y., Greenop, K., & Fridjohn, P. (2001). The development of phonological awareness in children at an English-medium school: a cross-sectional study. *South African Journal of Linguistics*, 17(2-3), 110-123.
- Cognition in Education Reference Group. (2000). *Cognition in curriculum 2005*. Cape Town, South Africa. Western Cape Education Department.
- Cole, M. (1988). Cross-cultural research in the sociohistorical tradition. *Human development*, 31(3), 137-157.
- Cole, M. (2008) The importance of parental involvement in language acquisition and activities and techniques to enhance the home school connection. *Independent Studies and Capstones*. Paper 347. Program in Audiology and Communication

Sciences, Washington University School of Medicine. Retrieved from:
http://digitalcommons.wustl.edu/pacs_capstones/347

Coovadia, Z. (2013). *A case study of how a school-based support team in a Muslim school addresses the challenges of language barriers*. Unpublished doctoral thesis. University of Johannesburg. South Africa.

Cresswell, J. W. (2003). Research design. *Qualitative and Quantitative approaches*.

Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications, Incorporated.

Creswell, J. W., & Garrett, A. L. (2008). The "movement" of mixed methods research and the role of educators. *South African Journal of Education*, 28(3), 321-333.

Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks. California: Sage.

Cummins, J. (1979). Cognitive/academic language proficiency, linguistic interdependence, the optimum age question and some other matters. *Working Papers on Bilingualism Toronto*, (19), 197-202.

Cummins, J. (1991). Language Development and Academic Learning. In L. Malave & G. Duquette (Eds.), *Language, Culture and Cognition* (pp. 145-166). Clevedon: Multilingual Matters.

Cummins, J. (2000). *Language, Power and Pedagogy: Bilingual Children in the Crossfire*. Clevedon: Multilingual Matters.

Cummins, J. (2005). A proposal for action: Strategies for recognizing heritage language competence as a learning resource within the mainstream classroom. *Modern Language Journal*, 585-592.

Cummins, J. (2008). BICS and CALP: Empirical and theoretical status of the distinction. In B. Street & N. H. Hornberger (Eds.), *Encyclopedia of language and education: Literacy* (Vol. 2, pp. 487-499). New York: Springer Science.

Cunningham, A. E. (1990). Explicit versus implicit instruction in phonemic awareness. *Journal of experimental child psychology*, 50(3), 429-444.

- Cunningham, A. E., Perry, K. E., Stanovich, K. E., & Stanovich, P. J. (2004). Disciplinary knowledge of K-3 teachers and their knowledge calibration in the domain of early literacy. *Annals of Dyslexia*, 54(1), 139-167.
- Darling-Hammond, L. (2000). Reforming Teacher Preparation and Licensing: Debating the Evidence. *Teachers College Record*, 102(1), 28-56.
- Davids, A. (1987). Arabic-Afrikaans. A View of the Written Afrikaans of the Cape Muslims During the Nineteenth and Early Twentieth Centuries. *South African Journal of Linguistics*, 5(1), 24-40.
- Davids, N. (2015). On the Un-becoming of Measurement in Education. *Educational Philosophy and Theory*, 1-12.
- De Beer, J. & Henning, E. (2011). Retreating to a Vygotskian stage, where pre-service teachers play out social, 'dramatical collisions'. *Acta Academica*, 43(3), 203-228.
- De Klerk, G. (2002a). Mother tongue education in South Africa: the weight of history. *International Journal of the Sociology of Language*, 154, 29-46.
- De Klerk, V. (2002b). Language issues in our schools: Whose voice counts? Part 1: The parents speak. *Perspectives in education*, 20(1), 1-14.
- De Saussure, F. (1916). *Course in General Linguistics*. New York, NY: Columbia University Press.
- De Vos, M., Van der Merwe, K., & Van der Mescht, C. (2014). A Research Programme for Reading in African Languages to underpin CAPS. *Journal for Language Teaching*, 48(2), 148-177.
- Dehaene, S. (2009). *Reading in the brain: The new science of how we read*. Penguin.
- Dehaene, S., & Cohen, L. (2011). The unique role of the visual word form area in reading. *Trends in cognitive sciences*, 15(6), 254-262.
- Denzin, N. K. (1978). *Sociological methods: A sourcebook*. McGraw-Hill Companies.
- Denzin, N. K., & Lincoln, Y. S. (2000). Paradigms and perspectives in transition. *Handbook of qualitative research*, 2, 157-162.

- Denzin, N.K. & Lincoln, Y.S. (2005). *The Sage handbook of qualitative research*. Sage.
- Dewitz, P., & Dewitz, P. K. (2003). They can read the words, but they can't understand: Refining comprehension assessment. *The reading teacher*, 56(5), 422-435.
- DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical education*, 40(4), 314-321.
- Dichabe, S. B. (1997). *Advanced Tongue Root harmony in Setswana*. Unpublished masters dissertation. University of Ottawa. Canada.
- Dickinson, D. K., & McCabe, A. (2001). Bringing it all together: The multiple origins, skills, and environmental supports of early literacy. *Learning Disabilities Research and Practice*, 16(4), 186-202.
- Dickinson, D. K., McCabe, A., Essex, M. J., Dickinson, D. K., & Neuman, S. B. (2006). A window of opportunity we must open to all: The case for preschool with high-quality support for language and literacy. *Handbook of early literacy research*, 2, 11-28.
- Diemer, M., van der Merwe, K., & de Vos, M. (2015). The development of phonological awareness literacy measures for isiXhosa. *Southern African Linguistics and Applied Language Studies*, 33(3), 325-341.
- Donald, D. R., Lazarus, S., & Lolwana, P. (1997). *Educational Psychology in Social Context: Challenges of Development, Social Issues & Special Need in Southern Africa: a Teacher's Resource*. Oxford University Press.
- Dufon, M. A. (2002). Video recording in ethnographic SLA research: Some issues of validity in data collection. *Language Learning & Technology*, 6(1), 40-59.
Retrieved from: <http://llt.msu.edu/vol6num1/dufon/default.html>
- Duke, N. K., Pressley, M., & Hilden, K. (2004). Handbook of language and literacy; Development and disorders. *Difficulties in reading comprehension*, 501-520.
- Duncan, L. G., Seymour, P. H., & Hill, S. (1997). How important are rhyme and analogy in beginning reading? *Cognition*, 63(2), 171-208.

- Edwards, S. (2007). From developmental-constructivism to socio-cultural theory and practice an expansive analysis of teachers' professional learning in early childhood education. *Journal of Early Childhood Research*, 5(1), 83-106.
- Ehri, L. C. (1989). The development of spelling knowledge and its role in reading acquisition and reading disability. *Journal of learning disabilities*, 22(6), 356-365.
- Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading research quarterly*, 36(3), 250-287.
- Ellis, N. C., & Hooper, A. M. (2001). Why learning to read is easier in Welsh than in English: Orthographic transparency effects evinced with frequency-matched tests. *Applied Psycholinguistics*, 22(04), 571-599.
- Ellis, N. C., Natsume, M., Stavropoulou K., Hoxhallari, L., Van Daal, V. H. P., Polyxoe, N., Tsipa, M., & Petalas, M. (2004). The effect of orthographic depth on learning to read alphabetic, syllabic and logographic scripts. *Reading Research Quarterly*, 39, 438-468.
- Ellis, N., & Large, B. (1988). The early stages of reading: A longitudinal study. *Applied Cognitive Psychology*, 2(1), 47-76.
- Ellis, R., & Shintani, N. (2013). *Explaining Language Pedagogy through Second Language Acquisition Research*. New York: Routledge.
- Engestrom, Y. (1987). *Learning by expanding*. Helsinki: Orienta-Konsultit Oy.
- Engeström, Y. (1991). Developmental work research: Reconstructing expertise through expansive learning. *Human jobs and computer interfaces*, 265-290.
- Engeström, Y. (1999). Expansive visibilization of work: An activity-theoretical perspective. *Computer Supported Cooperative Work (CSCW)*, 8(1-2), 63-93.
- Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of education and work*, 14(1), 133-156.

- Engle, P., Black, M.M., Behrman, J.R., Cabral de Mello, M., Gertler, P.J., Kapiriri, L. et al. (2007). Strategies to avoid the loss of developmental potential in more than 200 million children in the developing world. *The Lancet* 369(2007), 229-42.
Retrieved from:
http://www.who.int/maternal_child_adolescent/documents/pdfs/lancet_child_dev_series_paper3.pdf
- Evans, R., & Cleghorn, A. (2014). Parental perceptions: a case study of school choice amidst language waves. *South African Journal of Education*, 34(2), 01-19.
- Farmer, J., & Anthonissen, C. (2010). Transitions and translations from Afrikaans to English in schools of the Helderberg area. *Stellenbosch Papers in Linguistics*, 39(1), 1-23.
- Ferguson, G. (2009). What next? Toward an agenda for classroom code switching research. *International Journal of Bilingual Education and Bilingualism*, 12(2) 231-241. doi: 10.1080/13670050802153236.
- Ferrolì, L., & Shanahan, T. (1987). Kindergarten spelling: Explaining its relationship to first-grade reading. In *Research in literacy: Merging perspectives (36th Yearbook of the National Reading Conference)*. Rochester, NY: NRC.
- Fisher, D. & McDonald, N. (2001). The intersection between music and early literacy instruction: Listening to literacy. *Reading Improvement*, 38(3), 106.
- Fitzgerald, J. (1995). English-as-a-second-language reading instruction in the United States: A research review. *Journal of literacy research*, 27(2), 115-152.
- Fleisch, B. (2008). Primary education in crisis: why South African school children underachieve in reading and mathematics. Cape Town: Juta.
- Foley, A. (2004). Language policy for higher education in South Africa; implications and complications. *South African Journal of Higher Education*, 18(1), 570-571.
- Foorman, B. R., & Torgesen, J. (2001). Critical elements of classroom and small-group instruction to promote reading success in all children. *Learning Disabilities Research and Practice*, 16(4), 203-212.

- Foy, J. G., & Mann, V. (2003). Home literacy environment and phonological awareness in preschool children: Differential effects for rhyme and phoneme awareness. *Applied Psycholinguistics*, 24(01), 59-88.
- Frith, U. (1978). Spelling difficulties. *Journal of Child Psychology and Psychiatry*, 19(3), 279-286.
- Katz, L. & Frost, R. (1992). The reading process is different for different orthographies: The orthographic depth hypothesis. *Orthography, phonology, morphology and meaning*, 94, 67.
- Fuchs, L. S., & Deno, S. L. (1994). Must instructionally useful performance assessment be based in the curriculum?. *Exceptional Children*, 61(1), 15-24.
- Funk & Wagnalls New Practical Standard Dictionary of the English Language (1949). Funk. C. E. (ed). New York: Funk and Wagnalls.
- Galletta, A. (2013). *Mastering the semi-structured interview and beyond: From research design to analysis and publication*. NYU Press.
- Gentry, J. R. (2005). Instructional techniques for emerging writers and special needs students at kindergarten and grade 1 levels. *Reading & Writing Quarterly*, 21(2), 113-134.
- Geudens, A. (2003). "Breaking through the rime /ram/". An inquiry into the relevance of the onset-rime structure in children's phonological awareness and early reading development. Unpublished doctoral thesis. University of Antwerp, Centre for Psycholinguistics, Belgium.
- Geudens, A. (2006). Phonological awareness and learning to read a first language: Controversies and new perspectives. *LOT Occasional Series*, 6, 25-43.
- Geudens, A. (2010). Phonological Awareness and Learning to Read a First Language: Controversies and New Perspectives. University of Antwerp, Centre for Psycholinguistics and Lessius Hogeschool, K.U. Leuven.
- Geudens, A., Sandra, D., & Martensen, D. (2005). Rhyming words and onset-rime constituents: An inquiry into structural breaking points and emergent boundaries in the syllable. *Journal of Experimental Child Psychology*, 92, p. 366-387.

- Geva, E., & Siegel, L. S. (2000). Orthographic and cognitive factors in the concurrent development of basic reading skills in two languages. *Reading and Writing*, 12(1-2), 1-30.
- Gillon, G. (2004). Phonological awareness: From research to practice. New York: Guilford Press.
- Good, R. H., & Kaminski, R. A. (2011). DIBELS next assessment manual. Eugene, OR: Dynamic Measurement Group.
- Good, R.H., Kaminski, R.A., Cummings, K., Dufor-Martel, C.M., Petersen, K., Powell-Smith, K.A., Stollar, S. & Wallin, J. (2012) *DIBLES Next Assessment Manual*. Eugene, OR: Dynamic Measurement Group.
- Good III, R. H., Kaminski, R. A., Dewey, E. N., Wallin, J., Powell-Smith, K. A., & Latimer, R. J. (2011). DIBELS Next Technical Manual DRAFT. Dynamic Measurement Group.
- Good III, R. H., Kaminski, R. A., Dewey, E. N., Wallin, J., Powell-Smith, K. A., & Latimer, R. J. (2013). DIBELS Next Technical Manual. Eugene, OR: Dynamic Measurement Group.
- Good, III, R.H., Powell-Smith, K. A. & Kaminski, R.A. (2011). *Developing bench mark goals and cut points for risk: Odds of achieving subsequent reading goals*. Presentation at the nineteenth annual Pacific Coast Research Conference (PCRC). Coronado, California.
- Good III, R. H., Simmons, D. C., & Smith, S. B. (1998). Effective academic interventions in the United States: Evaluating and enhancing the acquisition of early reading skills. *School psychology review*.
- Gooskens, C., & Van Bezooijen, R. (2006). Mutual comprehensibility of written Afrikaans and Dutch: symmetrical or asymmetrical?. *Literary and Linguistic Computing*, 21(4), 543-557.
- Goswami, U. (1999a). Causal connections in beginning reading: The importance of rhyme. *Journal of Research in Reading*, 22(3), 217-240.

- Goswami, U. (1999b). The relationship between phonological awareness and orthographic representation in different orthographies. *Learning to read and write: A cross-linguistic perspective*, 134-156.
- Goswami, U., Porpodas, C., & Wheelwright, S. (1997). Children's orthographic representations in English and Greek. *European Journal of Psychology of Education*, 12(3), 273-292.
- Goswami, U., & Bryant, P. (1990). *Phonological skills and learning to read* (p. 1). Hove: Lawrence Erlbaum.
- Goswami, U., & East, M. (2000). Rhyme and analogy in beginning reading: Conceptual and methodological issues. *Applied Psycholinguistics*, 21(01), 63-93.
- Goswami, U., Ziegler, J. C., Dalton, L., & Schneider, W. (2003). Nonword reading across orthographies: How flexible is the choice of reading units?. *Applied Psycholinguistics*, 24(02), 235-247.
- Gouskova, M., Zsiga, E., & Boyer, O. T. (2011). Grounded constraints and the consonants of Setswana. *Lingua*, 121(15), 2120-2152.
- Grainger, J., Jacobs, A. M., & Jacobs, A. (Eds.). (2013). *Localist Connectionist Approaches To Human Cognition*. Psychology Press. New Jersey.
- Granville, S., Janks, H., Mphahlele, M., Reed, Y., Watson, P., Joseph, M., & Ramani, E. (1998). English with or without g (u) ilt: A position paper on language in education policy for South Africa. *Language and Education*, 12(4), 254-272.
- Griffith, P. L., & Olson, M. W. (1992). Phonemic awareness helps beginning readers break the code. *The Reading Teacher*, 45(7), 516-523.
- Hall, G. E., & George, A. A. (2000). The Use of Innovation Configuration Maps in Assessing Implementation: The Bridge between Development and Student Outcomes. Paper presented at the Annual meeting of the American Educational Research Association. New Orleans, LA. 24 – 28 April. Retrieved from: <http://files.eric.ed.gov/fulltext/ED445099.pdf>
- Hall, G. E., & Hord, S. M. (1987). *Change in schools: Facilitating the process*. Suny Press.

- Hammersley, M. (1987). Some notes on the terms 'validity' and 'reliability'. *British Educational Research Journal*, 13(1), 73-81.
- Hammill, D. D. (2004). What we know about correlates of reading. *Exceptional Children*, 70(4), 453-469.
- Hanley, R., Masterson, J., Spencer, L., & Evans, D. (2004). How long do the advantages of learning to read a transparent orthography last? An investigation of the reading skills and reading impairment of Welsh children at 10 years of age. *The Quarterly Journal of Experimental Psychology: Section A*, 57(8), 1393-1410.
- Hart, B., & Risley, T. R. (1992). American parenting of language-learning children: Persisting differences in family-child interactions observed in natural home environments. *Developmental Psychology*, 28(6), 1096.
- Hattie, J. (1999) influences on student learning. Inaugural professorial address. University of Auckland. 2 August, 1999.
- Hauerwas, L.B. & Stone, C.A. (2000). Are parents of school-age children with specific language impairments accurate estimators of their child's language skills? *Child Language Teaching and Therapy*, 16(1), 73–86.
- Hay, I., & Fielding-Barnsley, R. (2009). Competencies that underpin children's transition into early literacy. *Australian Journal of Language and Literacy*, 32(2), 148.
- Heeringa, W., Swarte, F., Schüppert, A., & Gooskens, C. (2014). Modeling intelligibility of written Germanic languages: do we need to distinguish between orthographic stem and affix variation?. *Journal of Germanic Linguistics*, 26(04), 361-394.
- Henning, E. (2012). Learning concepts, language, and literacy in hybrid linguistic codes: The multilingual maze of urban grade 1 classrooms in South Africa. *Perspectives in Education*, 30(3), 69-77.
- Henning, E. (2012). Learning concepts, language, and literacy in hybrid linguistic codes: The multilingual maze of urban grade 1 classrooms in South Africa. *Perspectives in Education*, 30(3), 69.

Henning, E. (2014). Lecture. University of Johannesburg winter school. 23 – 26 June, 2014.

Henning, E. & Dampier, G. (2012). Linguistic liminality in the early years of school: Urban South African children 'betwixt and between'1 languages of learning. *South African Journal of Childhood Education*, 2(1), 20.

Henning, E., Van Rensburg, W., & Smit, B. (2004). *Finding your way in qualitative research* (pp. 19-22). Pretoria: Van Schaik.

Henning, E., & Ragpot, L. (2015). Pre-school children's bridge to symbolic knowledge: first literature framework for a learning and cognition lab at a South African university. *South African Journal of Psychology*, 45(1), 71-80.

Herold, J. (2011). Beginning and struggling readers: Engaging parents in the learning process. *Literacy Learning: The Middle Years*, 19(3), 40.

Heugh, K. (1995). Disabling and enabling: Implications of language policy trends in South Africa. *Language and social history: Studies in South African sociolinguistics*, 329-350.

Heugh, K. (1999). Languages, development and reconstructing education in South Africa. *International journal of educational development*, 19(4), 301-313.

Heugh, K. (2000). *The case against bilingual and multilingual education in South Africa* (Vol. 3). Cape Town: PRAESA.

Heugh, K. (2007). Language and literacy issues in South Africa. In N. Rassool (Ed.), *Global issues in language, education and development* (pp. 187-217). Clevedon, England: Multilingual Matters.

Heugh, K. (2011). Theory and practice - language education models in Africa: Research, design, decision-making and outcomes. In A. Ouane & C. Glanz (Eds.), *Optimizing Learning, Education and Publishing in Africa: The Language Factor* (pp. 105-157). Hambur: UIL/ADEA.

- Heugh, K., & Prinsloo, C. H. (2013). The role of language and literacy in preparing South African learners for educational success: lessons learnt from a classroom study in Limpopo Province. Pretoria: HSRC Press.
- Hintze, J. M., Ryan, A. L., & Stoner, G. (2003). Concurrent validity and diagnostic accuracy of the dynamic indicators of basic early literacy skills and the comprehensive test of phonological processing. *School Psychology Review*, 32(4), 541-556.
- Holm, A., & Dodd, B. (1999). A longitudinal study of the phonological development of two Cantonese–English bilingual children. *Applied Psycholinguistics*, 20(03), 349-376.
- Howie, S., Venter, E., & Van Staden, S. (2008). The effect of multilingual policies on performance and progression in reading literacy in South African primary schools. *Educational Research and Evaluation*, 14(6), 551-560.
- Hruby, G. G., & Goswami, U. (2011). Neuroscience and reading: A review for reading education researchers. *Reading Research Quarterly*, 46(2), 156-172.
- Hulme, C., Hatcher, P. J., Nation, K., Brown, A., Adams, J., & Stuart, G. (2002). Phoneme awareness is a better predictor of early reading skill than onset-rime awareness. *Journal of experimental child psychology*, 82(1), 2-28.
- IQMS Whole School Evaluation Report (2014). Department of Education Quality Assurance Directorate. Gauteng West. (14 – 17 April, 2014).
- Iyamu, E. O. S., & Ogiegbaen, S. A. E. (2007). Parents and educators' perceptions of mother tongue medium of instruction policy in Nigerian primary schools. *Language, Culture and Curriculum*, 20(2), 97-108.
- Janks, H. (2010). *Literacy and Power*. New York: Routledge.
- Jarvis, P. (1999). *The practitioner-researcher: Developing theory from practice*. San Francisco, CA: Jossey-Bass.
- Johnson, C.E., & Lancaster, P. (1998). The development of more than one phonology: A case study of a Norwegian-English bilingual child. *International Journal of Bilingualism*, 2(3), 265-300.

- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, 33(7), 14-26.
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of mixed methods research*, 1(2), 112-133.
- Johnson, K.L., & Roseman, B.A. (2003). *The source for phonological awareness*. East Moline, IL: Lingui Systems.
- Jordaan, H. (2015). Chapter 1. In C. Nel, M. Nel, A. Adam, R.H. Good, & R. Kaminski (Eds.), *How to Support English Second Language Learners. Foundation and Intermediate Phase* (pp.1-13). Van Schaik: Pretoria.
- Kaminski, R., Cummings, K. D., Powell-Smith, K. A., & Good, R. H. (2008). Best practices in using dynamic indicators of basic early literacy skills for formative assessment and evaluation. *Best practices in school psychology V, 4*, 1181-1204.
- Kanze, A. (2009). Enhancing teacher assessment practices in South African Schools: Evaluation of the assessment resource banks. *Education and Change*, 13(1), 67-83.
- Keeves, J., & Darmawan, I. (2007). Issues in Language Learning. *International Education Journal*, 8(2), 16-26.
- Knafl, K. A., & Breitmayer, B. J. (1989). Triangulation in qualitative research: Issues of conceptual clarity and purpose. *Qualitative nursing research: A contemporary dialogue*, 193-203.
- Koch, E., Landon, J., Jackson, M. J., & Foli, C. (2009). First brushstrokes: initial comparative results on the Additive Bilingual Education Project (ABLE). *Southern African Linguistics and Applied Language Studies*, 27(1), 93-111.
- Konza, D. (2011). Research into practice: Understanding the reading process. *South Australia: Department of Education and Children's Service*.
- Kosanovich, M. L., Reed, D. K., & Miller, D. H. (2010). Bringing Literacy Strategies into Content Instruction: Professional Learning for Secondary-Level Teachers. *Center on Instruction*. Florida State University.

- Kozulin, A. (1999). *Vygotsky's psychology: A biography of ideas*. Harvard University Press.
- Kurtz, R. (2010). Phonemic awareness affects speech and literacy. *Speech-Language Development*. Retrieved from:
<http://www.speechlanguagedevelopment.com/phonemic-awareness.html>
- LaBerge, D., & Samuels, S. J. (1974). Toward a theory of automatic information processing in reading. *Cognitive psychology*, 6(2), 293-323.
- Lafrance, A., & Gottardo, A. (2005). A longitudinal study of phonological processing skills and reading in bilingual children. *Applied Psycholinguistics*, 26(4), 559.
- Languages of South Africa. (2016, June 8). In *Wikipedia, The Free Encyclopedia*. Retrieved from:
https://en.wikipedia.org/w/index.php?title=Languages_of_South_Africa&oldid=724320316
- Lane, H. B., & First, G. R. (2007, September). Phonological Awareness: A Sound Beginning. Georgia Reading First. *2nd Annual Struggling Reader Conference, Athens, Georgia*. September 6-7.
- Le Roux, J.C. (1993). Tswana study guide 1 for STW100-H. Department of African languages. University of South Africa. Pretoria.
- Leander, K. M., Phillips, N. C., & Taylor, K. H. (2010). The changing social spaces of learning: Mapping new mobilities. *Review of research in education*, 34(1), 329-394.
- Lee, J. J. (2004). The native speaker: An achievable model? *Asian EFL Journal*, 7(2), 152-163.
- Lee, C. D., & Smagorinsky, P. (2000). *Vygotskian perspectives on literacy research: Constructing meaning through collaborative inquiry*. Cambridge University Press. Cambridge.
- Lekgoko, O., & Winskel, H. (2008). Learning to read Setswana and English: Cross-language transference of letter knowledge, phonological awareness and word reading skills. *Perspectives in Education*, 26(4) 57-73.

- Lemmer, E. M., Meier, C., & Van Wyk, N. (2006). *Multicultural Education: An educator's manual*. Van Schaik Publishers.
- Lems, K., Miller, L. D., & Soro, T. M. (2009). *Teaching reading to English language learners: Insights from linguistics*. Guilford Press.
- Leontie'v, A. (1978). *Activity, consciousness and personality*. Englewood Cliffs: Prentice-Hall.
- Lerkkanen, M. K., Rasku-Puttonen, H., Aunola, K., & Nurmi, J. E. (2004). Developmental dynamics of phonemic awareness and reading performance during the first year of primary school. *Journal of Early Childhood Research*, 2(2), 139-156.
- Lesufi, P. (2015). Gauteng DoE to convert 124 Afrikaans schools to parallel medium. Politics Web. Retrieved from: <http://politicsweb.co.za/politics/gauteng-doe-to-convert-124-afrikaans-schools-to-pa>
- Lieberman, I. Y. (1971). Basic research in speech and lateralization of language: Some implications for reading disability. *Bulletin of the Orton Society*, 21(1), 71-87.
- Lieberman, I. Y., & Liberman, A. M. (1990). Whole language vs. code emphasis: Underlying assumptions and their implications for reading instruction. *Annals of Dyslexia*, 40(1), 51-76.
- Linnakyla, P., Malin, A., & Taube, K. (2004). Factors behind low reading literacy achievement. *Scandinavian Journal of Educational Research*, 48(3), 231-249.
- Littlewood, W., & Yu, B. (2009). First language and target language in the foreign classroom. *Language Teaching*, 44(1), 64-77.
- Lonigan, C. J., Burgess, S. R., Anthony, J. L., & Barker, T. A. (1998). Development of phonological sensitivity in 2-to 5-year-old children. *Journal of Educational Psychology*, 90(2), 294.
- Lundberg, I., Frost, J., & Petersen, O. P. (1988). Effects of an extensive program for stimulating phonological awareness in preschool children. *Reading research quarterly*, 263-284.
- Lyon, G. R., Shaywitz, S. E., & Shaywitz, B. A. (2003). A definition of dyslexia. *Annals of Dyslexia*, 53, 1-14.

- Mackenzie, N. (2011). From drawing to writing: What happens when you shift teaching priorities in the first six months of school?. *The Australian Journal of Language and Literacy*, 34(3), 322.
- Madiba, M. (2013). Multilingual education in South African universities: Policies, pedagogy and practicality. *Linguistics and Education*, 24(4), 385-395.
- Maile, S. (2004). School choice in South Africa. *Education and urban society*, 37(1), 94-116.
- Maimane, M. (2015). Afrikaans is no longer the language of the oppressor. Daily Maverick. 24 November 2015. Retrieved from <http://www.dailymaverick.co.za/opinionista/2015-11-24-afrikaans-is-no-longer-the-language-of-the-oppressor/#.V4Nr86KPwS0>
- Makgamatha, M. M., Heugh, K., Prinsloo, C. H., & Winnaar, L. (2013). Equitable language practices in large-scale assessment: Possibilities and limitations in South Africa. *Southern African Linguistics and Applied Language Studies*, 31(2), 251-269.
- Malone, D. L. (2003). Developing curriculum materials for endangered language education: lessons from the field. *International Journal of Bilingual Education and Bilingualism*, 6(5), 332-348.
- Manning, M., & Kato, T. (2006). Teaching Strategies: Phonemic Awareness: A Natural Step toward Reading and Writing. *Childhood Education*, 82(4), 241-243.
- Marian, V., & Shook, A. (2012, September). The cognitive benefits of being bilingual. In *Cerebrum: the Dana forum on brain science* (Vol. 2012). Dana Foundation.
- Maringe, F., & Prew, M. (2014). Twenty years of education: transformation in Gauteng 1994-2014: an independent review. African Minds. Somerset West.
- Marthinusen, P.J. (2008). Die belangrikheid van fonologiese en fonemiese bewustheid in aanvangslees by graad 1-leerders in 'n taalarm omgewing. Unpublished master's Thesis. Kaapse Skiereiland Universiteit van Tegnologie. Kaapstad.

- Martins, M. A., & Silva, C. (2006). The impact of invented spelling on phonemic awareness. *Learning and Instruction*, 16(1), 41-56.
- Mashiya, N. (2011). IsiZulu and English in KwaZulu-Natal rural schools: How teachers fear failure and opt for English. *South African Journal of Childhood Education*, 1(1), 19-31.
- Matentjie, T. (2010) Mother tongue instruction. The Journal of the Helen Suzman Foundation. Issue 56. February 2010. Retrieved from: <http://hsf.org.za/resource-centre/focus/focus-56-february-2010-on-learning-and-teaching/focus-56-february-2010>
- Mather, N., Bos, C., & Babur, N. (2001). Perceptions and knowledge of preservice and inservice teachers about early literacy instruction. *Journal of learning disabilities*, 34(5), 472-482.
- Mattson E. & Harley K. 2001. Teacher identities and strategic mimicry in the policy/practice gap. In: Lewin, K., Samuel, M. & Sayed, Y. (Eds.): *Policy, Practice and Prospects*. Cape Town: Heinemann, pp. 284-305 .
- Mattson, E., & Harley, K. (2003). Teacher identities and strategic mimicry in the policy/practice gap. *Changing patterns of teacher education in South Africa: Policy, practice and prospects*, 284-305.
- Mayer, K. (2007). Emerging knowledge about emergent writing. *YC Young Children*, 62(1), 34.
- McCartney, K. & Phillips, D. (2006). *Blackwell handbook of early childhood development*. Oxford: Blackwell Publishing.
- McCutchen, D., Abbott, R. D., Green, L. B., Beretvas, S. N., Cox, S., Potter, N. S., & Gray, A. L. (2002). Beginning literacy: Links between teacher knowledge, teacher practice and student learning. *Journal of Learning Disabilities*, 35(1), 69-86.
- McKinney, C., & Soudien, C. (2010). IALEI country report: Multicultural education in South Africa. *University of Cape Town*. Recuperado de http://www.intlalliance.org/fileadmin/user_upload/documents/Conference_2010/NP-SA.pdf.
- McLoyd, V.C. (1998). Socioeconomic disadvantage and child development. *American Psychological Association Inc.*, 53(2), 185-204.

- McMillan, J.H. & Schumacher, S. (2006). *Research in education*. Boston: Pearson.
- Merriam, S. (1995). What Can You Tell From An N of 1?: Issues of validity and reliability in qualitative research. *PAACE Journal of Lifelong Learning*, 4, 50-60.
- Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded*. Jossey-Bass Publishers, 350 Sansome St, San Francisco, CA 94104.
- Miettinen, R. (1999). The riddle of things: Activity theory and actor-network theory as approaches to studying innovations. *Mind, Culture, and Activity*, 6(3), 170-195.
- Moats, L. C. (1994). The missing foundation in teacher education: Knowledge of the structure of spoken and written language. *Annals of dyslexia*, 44(1), 81-102.
- Moats, L. C. (2000). *Whole language lives on: The illusion of "balanced" reading instruction*. DIANE Publishing.
- Moats, L. C. (2000). *Speech to print: Language essentials for teachers*. Paul H. Brookes Publishing Co. Baltimore.
- Moats, L. C., & Foorman, B. R. (2003). Measuring teachers' content knowledge of language and reading. *Annals of Dyslexia*, 53(1), 23-45.
- Moller, J. (2013). The State of Multilingual Publishing in South Africa. Publishing Diversity in South Africa and the United Kingdom. Retrieved from: <http://erea.revues.org/3507>
- Morais, J. (2003). Levels of phonological representation in skilled reading and in learning to read. *Reading and Writing*, 16(1-2), 123-151.
- Morais, J., Cary, L., Alegria, J., & Bertelson, P. (1979). Does awareness of speech as a sequence of phones arise spontaneously? *Cognition*, 7(4), 323-331.
- Moran-Ellis, J., Alexander, V. D., Cronin, A., Dickinson, M., Fielding, J., Sleney, J., & Thomas, H. (2006). Triangulation and integration: Processes, claims and implications. *Qualitative Research*, 6(1), 45-59.
- Morris, D., & Perney, J. (1984). Developmental spelling as a predictor of first-grade reading achievement. *The Elementary School Journal*.

- Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, 1(2), 13-22.
- Morton, A. (1999). Ethics in action research. *Systemic Practice and Action Research*, 12(2), 219-222.
- Msila, V. (2009). School choice and intra-township migration: Black parents scrambling for quality education in South Africa. *Journal of Education*, 46, 81-98.
- Muysken, P. (1997). Code-switching processes: Alternation, insertion, congruent lexicalization. *Language choices: Conditions, constraints, and consequences*, 361-380.
- Muysken, P. (2001). The origin of creole languages. *Creolization and contact*, 23, 157.
- Naidoo, D. G., & Muthukrishna, N. (2014). Teachers' 'small stories' about curriculum reform in South Africa: 'Square Peg in a Round Hole'. *Journal of Social Sciences*, 38(3), 271-282.
- National Institute of Child Health and Human Development. (2000). Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- National Reading Panel (NRP). (2000). Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction. Retrieved from <http://www.nifl.gov>
- Nel, C. (2011). Linking reading literacy assessment and teaching: Rethinking preservice teacher training programmes in the Foundation Phase. *Journal for Language Teaching* 45(2), 9-30.
- Nel, M., & Theron, L. (2008). Critique of a language enrichment programme for Grade 4 ESL learners with limited English proficiency: a pilot study. *South Africa Journal of Education*, 28, 203-219.

- Nel, C., Adam, A., Good, R.H., & Kaminski, R. 2015. Assessment for prevention and early intervention. In Nel, M. *How to support English Second Language Learners – Foundation and intermediate phase*. Pretoria: Van Schaik.
- Nel, N., & Müller, H. (2010). The impact of teachers' limited english proficiency on english second language learners in South African schools. *South African Journal of Education*, 30(4), 635-650.
- Nel, N., & Nel, M. (2012). *English language. Learner support in a diverse classroom: A guide for foundation, intermediate and senior phase teachers of language and mathematics*. Pretoria: Van Schaik.
- Nel, N., Nel, M., & Hugo, A. (2013). *Learner support in a diverse classroom: A guide for foundation, intermediate and senior phase teachers of language and mathematics*. Pretoria: Van Schaik.
- Nfila, B. I. (2002). Standard in Setswana in Botswana. Unpublished master's thesis. University of Pretoria. Pretoria. South Africa.
- Ngcobo, S. (2013). Educator's attitudes towards the role of isiZulu in education: Additive rather than exclusive. *Southern African Linguistics and Applied Language Studies*, 31(2), 185-205. doi: 10.2989/16073614.2013.815838
- Ngobese, Z.X. (2006). *Exploring the problems of teachers and their teaching in farm schools*. Unpublished master's thesis. University of Johannesburg. Johannesburg. South Africa.
- Ngorosho, D. (2011). Reading and writing ability in relation to home environment: A study in primary education in rural Tanzania. *Child Indicators Research*, 4(3), 369-388.
- Nikolopoulos, D., & Goulondris, N. (2000). The cognitive determinants of literacy skills in a regular orthography. In *New directions in language development and disorders* (pp. 261-269). Springer US.
- Nong, N. B. (1995). *Some Syntactical Patterns of Tswana Riddles*. Unpublished doctoral thesis. Randse Afrikaanse Universiteit. Johannesburg. South Africa.

- Norton, B. (1997). Language, identity, and the ownership of English. *TESOL Quarterly*, 409-429.
- Ntuli, D., & Pretorius, E. J. (2005). Laying foundations for academic language competence: the effects of storybook reading on Zulu language, literacy and discourse development. *Southern African Linguistics and Applied Language Studies*, 23(1), 91-109.
- O'Connor, J., & Geiger, M. (2009). Challenges facing primary school educators of English second (or other) language learners in the Western Cape. *South African Journal of Education*, 29, 253-269.
- Obanya, P. (1999). Popular fallacies on the use of African languages in education. *Social dynamics*, 25(1), 81-100.
- Omego, C. U. (2014). Influence of Environment on a Child's Acquisition of English as a Second Language and the Gradual Extinction of Nigerian Languages: A Study of Children of selected schools in Choba, Nigeria. *AFRREV IJAH: An International Journal of Arts and Humanities*, 3(3), 146-161.
- Onwuegbuzie, A. J., & Johnson, R. B. (2006). The validity issue in mixed research. *Research in the Schools*, 13(1), 48-63.
- Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International journal of social research methodology*, 8(5), 375-387.
- Otlogetswe, T. (2001). The BNC design as a Model for a Setswana language corpus. *extraction*, 1.
- Ouane, A., & Glanz, C. (2011). Executive Summary. In optimizing learning, Education and Publishing in Africa: The Language Factor. A Review and Analysis of Theory and Practice in Mother-Tongue and Bilingual Education in sub-Saharan Africa. UNESCO, 23-48.
- Ouane, A., & Glanz, C. (2011). *Optimising Learning, Education and Publishing in Africa: The Language Factor--A Review and Analysis of Theory and Practice in Mother-Tongue and Bilingual Education in Sub-Saharan Africa*. UNESCO Institute for Lifelong Learning. Feldbrunnenstrasse 58, 20148 Hamburg, Germany.

- Owen-Smith, M. (2016, 15 April). Language can be a powerful cohesive tool. *Mail and Guardian*. <http://mg.co.za/article/2016-04-13-language-can-be-a-powerful-cohesive-tool>
- Palai, E. B., & O'Hanlon, L. (2004). Word and phoneme frequency of occurrence in conversational Setswana: a clinical linguistic application. *Southern African Linguistics and Applied Language Studies*, 22(3-4), 125-142.
- Patel, T. K., Snowling, M. J., & de Jong, P. F. (2004). A cross-linguistic comparison of children learning to read in English and Dutch. *Journal of Educational Psychology*, 96(4), 785.
- Patterson, M. B. (2008). Learning disability prevalence and adult education program characteristics. *Learning Disabilities Research & Practice*, 23(1), 50-59.
- Pence, A.R. & Marfo, K. (2008). Early childhood development in Africa: Interrogating constraints of prevailing knowledge bases. *International Journal of Psychology* 2008(i)1-10.
- Pendley, C. (1983). Language policy and social transformation in contemporary Singapore. *Southeast Asian Journal of Social Science*, 46-58.
- Perfetti, C. A. (1985). Reading skills. *Psychiatry*, 50, 1125-1129.
- Perfetti, C. A., Beck, I., Bell, L. C., & Hughes, C. (1987). Phonemic knowledge and learning to read are reciprocal: A longitudinal study of first grade children. *Merrill-Palmer Quarterly* (1982), 283-319.
- Petrill, S. A., Deater-Deckard, K., Thompson, L. A., De Thorne, L. S., & Schatschneider, C. (2006). Reading Skills in Early Readers Genetic and Shared Environmental Influences. *Journal of Learning Disabilities*, 39(1), 48-55.
- Pflepson, A. (2011). Improving learning outcomes through mother-tongue-based education. RTI International. USA. MTB-MLE network. Retrieved from: www.mlenetwork.org
- Phillips, B. M., & Torgesen, J. K. (2006). Phonemic awareness and reading: Beyond the growth of initial reading accuracy. *Handbook of early literacy research*, 2, 101-112.

- Phillipson, R. (1992). *Linguistic imperialism*. Oxford: Oxford University Press.
- Phillipson, R. (1997). Realities and myths of linguistic imperialism. *Journal of multilingual and multicultural development*, 18(3), 238-248.
- Pirie, S. (1996). What are data? An exploration of the use of video recording as a data gathering tool in the mathematics classroom. In *Sixteenth Annual Meeting of the International Group for the Psychology of Mathematics Education, North America, Florida State University, Panama City*.
- Plüddemann, P. (2004). Dual and parallel medium schooling in the Western Cape. *Praesa Occasional Paper*, 17.
- Porpodas, C. D. (1999). Patterns of phonological and memory processing in beginning readers and spellers of Greek. *Journal of Learning Disabilities*, 32(5), 406-416.
- Posel, D., & Casale, D. (2011a). Language proficiency and language policy in South Africa: Findings from new data. *Journal of Educational Development*, 31, 449-457.
- Posel, D. R., & Casale, D. M. (2011b). Relative standing and subjective well-being in South Africa: The role of perceptions, expectations and income mobility. *Social Indicators Research*, 104(2), 195-223.
- Posel, D., & Zeller, J. (2015). Language shift or increased bilingualism in South Africa: evidence from census data. *Journal of Multilingual and Multicultural Development*, 1-14.
- Poskiparta, E., Niemi, P., & Vauras, M. (1999). Who benefits from training in linguistic awareness in the first grade, and what components show training effects? *Journal of Learning Disabilities*, 32(5), 437-446.
- Powell-Smith, K. A., Good, R. H., Latimer, R. J., Dewey, E. N., & Kaminski, R. A. (2011). *DIBELS Next benchmark goals study* (No. 11). Tech. Report.
- Prah, K. K. (2003). Going native: Language of instruction for education, development and African emancipation. *Language of instruction in Tanzania and South Africa (LOITASA)*, 14-34.

- Pretorius, E. J. (2014). Supporting transition or playing catch-up in Grade 4? Implications for standards in education and training. *Perspectives in Education*, 32(1), 47.
- Pretorius, E. J., & Machet, M. P. (2004). The socio-educational context of literacy accomplishment in disadvantaged schools: Lessons for reading in the early primary school years. *Journal of Language Teaching*, 38, 45-62.
- Pretorius, E. J., & Mampuru, D. M. (2007). Playing football without a ball: language, reading and academic performance in a high-poverty school. *Journal of Research in Reading*, 30(1), 38-58.
- Probyn, M. (2009). Smuggling the vernacular into the classroom: conflicts and tensions in classroom code-switching in township/rural schools in South Africa. *International Journal of Bilingual Education and Bilingualism* 12(2), 123 - 136.
- Probyn, M., Murray, S., Botha, L., Botya, P., Brooks, M., & Westphal, V. (2002). Minding the gaps—an investigation into language policy and practice in four Eastern Cape districts. *Perspectives in Education*, 20(1), 29-46.
- Ragpot, L. (2013). *Student learning in a course on cognitive development in childhood*. Unpublished doctoral thesis. University of Johannesburg. Johannesburg. South Africa.
- Rathvon, N. (2004). Early reading assessment: A handbook for practitioners. *New York, NY: Guilford*.
- Ramatlapana, K., & Makonye, J. P. (2012). From too much freedom to too much restriction: The case of teacher autonomy from National Curriculum Statement (NCS) to Curriculum and Assessment Statement (CAPS). *Africa Education Review*, 9(sup1), S7-S25.
- Rasinski, T. V. (2003). *The fluent reader: Oral reading strategies for building word recognition, fluency, and comprehension*. Scholastic Inc.
- Ray, A., Ziegler, J. C., & Grainger, J. MROM-p: An Interactive Activation, Multiple Readout Model of Orthographic and Phonological Processes in Visual Word Recognition. In Grainger, J., & Jacobs, A. M. (2013). *Localist connectionist approaches to human cognition*. Psychology Press.

- Rayner, K., Foorman, B. R., Perfetti, C. A., Pesetsky, D., & Seidenberg, M. S. (2001). How psychological science informs the teaching of reading. *Psychological science in the public interest*, 2(2), 31-74.
- Read, C. (1971). Pre-school children's knowledge of English phonology. *Harvard educational review*, 41(1), 1-34.
- Read, C. (1975). *Children's categorization of speech sounds in English* (No. 17). National Council of Teachers of English.
- Reid, J., Schultze, B., & Petersen, U. (2012). *What's Next for this Beginning Writer? Revision*. Pembroke Publishers Limited.
- Richgels, D. J. (1987). Experimental reading with invented spelling (ERIS): A preschool and kindergarten method. *The reading teacher*, 40(6), 522-529.
- Ríos, J. A., & Campos, J. L. E. (2013). Code-Switching in the EFL Classroom: Friend or Foe? *Revista de Lenguas Modernas*, (19).
- Roy, P., & Hord, S. M. (2004). Chart a measured course toward change. *Journal of Staff Development*, 25(2), 54-58.
- Rubagumya, C. (2003). English medium primary schools in Tanzania: A new “linguistic market” in education? In Brock- Utne, Birgit, Desai, Zubeida and Qorro, Martha (eds.). *Language of Instruction in Tanzania and South Africa*. (LOITASA) Dar es Salaam: E & D Limited. 149–170.
- Rvachew, S., Nowak, M., & Cloutier, G. (2004). Effect of phonemic perception training on the speech production and phonological awareness skills of children with expressive phonological delay. *American Journal of Speech-Language Pathology*, 13(3), 250-263.
- Sannino, A., Daniels, H., & Gutiérrez, K. D. (2009). *Learning and expanding with activity theory*. Cambridge University Press.
- Scarborough, H. S. (1998). Predicting the future achievement of second graders with reading disabilities: Contributions of phonemic awareness, verbal memory, rapid naming, and IQ. *Annals of Dyslexia*, 48(1), 115-136.

- Schatschneider, C., Fletcher, J. M., Francis, D. J., Carlson, C. D., & Foorman, B. R. (2004). Kindergarten prediction of reading skills: A longitudinal comparative analysis. *Journal of Educational Psychology*, 96(2), 265.
- Schnitzer, M. L., & Krasinski, E. (1996). The development of segmental phonological production in a bilingual child: A contrasting second case. *Journal of child language*, 23(03), 547-571.
- Schuele, C. M., & Boudreau, D. (2008). Phonological awareness intervention: Beyond the basics. *Language, Speech and Hearing Services in Schools*, 39, 3-20.
- Sen, A. (1990). Development as capability expansion. In K. Griffin, & J. Knight (Eds.), *Human development and the international development strategy for the 1990s*. London: Macmillan.
- Sensenbaugh, R. (1996). Phonemic Awareness: An Important Early Step in Learning To Read. ERIC Digest.
- Setati, M., (2007, February). Towards pedagogy for teaching mathematics in multilingual classrooms in South Africa. Paper presented at the second Marang symposium on teaching and learning mathematics in multilingual classrooms. University of the Witwatersrand, Johannesburg.
- Setati, M., Adler, J., Reed, Y., & Bapoo, A. (2002). Incomplete journeys: Code-switching and other language practices in mathematics, science and English language classrooms in South Africa. *Language and education*, 16(2), 128-149.
- Seymour, P. H., & Evans, H. M. (1994). Levels of phonological awareness and learning to read. *Reading and Writing*, 6(3), 221-250.
- Seymour, P. H., Aro, M., & Erskine, J. M. (2003). Foundation literacy acquisition in European orthographies. *British Journal of psychology*, 94(2), 143-174.
- Seymour, P. H., Duncan, L. G., & Bolik, F. M. (1999). Rhymes and phonemes in the common unit task: Replications and implications for beginning reading. *Journal of Research in Reading*, 22(2), 113-130.
- Shahhoseiny, H. (2013). Differences between Language and Linguistics in the ELT Classroom. *Theory and Practice in Language Studies*, 3(12), 2234.

- Shamoo, A. E., & Resnik, D. B. (2009). *Responsible conduct of research*. Oxford University Press.
- Shaywitz, S. (2005). Overcoming Dyslexia: A New and Complete Science-Based Program for Reading Problems at Any Level. *Education Review//Reseñas Educativas*.
- Sherer, G. (2000). Intergroup economic inequality in South Africa: the post-apartheid era. *The American Economic Review*, 90(2), 317-321.
- Skogen, K. & Krange, O. (2003). A wolf at the gate: the anti-carnivore alliance and the symbolic construction of community. *Sociologia Ruralis*, 43(3) 309-325.
- Smagorinsky, P. (2007). Vygotsky and the social dynamics of classrooms. *English Journal*, 61-66.
- Smagorinsky, P. H. (2009). The culture of Vygotsky. *Reading Research Quarterly*, 44(1), 85-95.
- Smagorinsky, P. (2012). *Vygotsky and Literacy Research* (Vol. 2). Springer Science & Business Media.
- Smagorinsky, P., & Fly, P. K. (1993). The social environment of the classroom: A Vygotskian perspective on small group process. *Communication education*, 42(2), 159-171.
- Snail, M. L. (2011). Revisiting aspects of language in South Africa during the Apartheid era. *Historia Actual Online*, (24), 65-91.
- Snow, C. E., Burns, M. S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. National Academies Press.
- Snow, C. E., & Uccelli, P. (2009). The challenge of academic language. *The Cambridge handbook of literacy*, 112-133. Cambridge University Press. Cambridge.
- Snow, C. E., Griffin, P. & Burns, M. S. (2005). *Knowledge to support the teaching of reading: Preparing teachers for a changing world*. San Francisco: Jossey-Bass.

- Soudien, C. (2004). Constituting the class: An analysis of the process of 'integration' in South African schools. *Changing class: Education and social change in post-apartheid South Africa*, 89-114.
- South Africa. (1996). Constitution of the Republic of South Africa. Cape Town: Constitutional Assembly.
- South Africa. (2010). Pan South African Language Board. Retrieved from www.southafrica.info/about/democracy/pansalb.htm
- South Africa. Department of Basic Education (2010). Report on the 2009/2010 Annual Surveys for Ordinary Schools. Retrieved from <http://www.education.gov.za/Portals/0/Documents/Reports/Report%20on%20the%202009%20%202010%20Annual%20Surveys%20for%20Ordinary%20Schools.pdf?ver=2014-09-17-214008-000>
- South Africa. Department of Basic Education (2012). Report on the annual national assessments 2012 (ANA). Grades 1 to 6 & 9. Retrieved from <http://www.education.gov.za/LinkClick.aspx?fileticket=tcz0a0RHVhs%3D>
- South Africa, Department of Basic Education (2015). Action Plan to 2019: Towards the realisation of schooling 2030. Retrieved from <http://www.education.gov.za/Portals/0/Documents/Publications/Action%20Plan%202019.pdf?ver=2015-11-11-162424-417>
- South Africa. Department of Basic Education (2013). Incremental Introduction of African Languages: Draft Policy: September 2013. Retrieved from <http://www.education.gov.za/LinkClick.aspx?fileticket=FBjA%2FBWYCTw%3D&tabid=93&mid=2602>
- South Africa. Department of Basic Education (2014). Incremental Introduction of African Languages Policy. Retrieved from <http://www.education.gov.za/IncrementalIntroductionofAfricanLanguages/tabid/1068/Default.aspx>
- South Africa. Department of Education (1997). National multi-year implementation plan for adult education and training.
- South Africa. Department of Basic Education. (2011). Curriculum and assessment policy statement (CAPS) Grades 1-3: Afrikaans home language. Pretoria. Government Printers.

- South Africa. Department of Basic Education (2015). Education Statistics in South Africa, 2013. Retrieved from:
<http://www.education.gov.za/Portals/0/Documents/Publications/Education%20Statistic%202013.pdf?ver=2015-03-30-144732-767>
- South Africa. Department of Education. (1997). Language in Education Policy. Pretoria: Government Printers.
- Southern, N. (2012). The Political Future of Afrikaans: The Viewpoints of an Ethnic Party. *Politikon*, 39(3), 353-369.
- Spaull, N. (2011). A preliminary analysis of SACMEQ III South Africa. *Stellenbosch Economic Working*.
- Spear-Swerling, L., & Brucker, P. O. (2004). Preparing novice teachers to develop basic reading and spelling skills in children. *Annals of Dyslexia*, 54(2), 332-364.
- Spencer, L. H., & Hanley, J. R. (2003). Effects of orthographic transparency on reading and phoneme awareness in children learning to read in Wales. *British Journal of Psychology*, 94(1), 1-28.
- Spencer, E. J., Schuele, C. M., Guillot, K. M. & Lee, M. W. (2008). Phonemic awareness skill of speech-language pathologists and other educators. *Language, Speech and Hearing Services in Schools*, 39, 512-520.
- Stahl, S. A., & Kuhn, M. R. (2002). Making it sound like language: Developing fluency. *The Reading Teacher*, 55(6), 582.
- Stahl, S. A., & Murray, B. A. (1994). Defining phonological awareness and its relationship to early reading. *Journal of educational Psychology*, 86(2), 221.
- Stake, R. (1988). *Case study methods in educational research*. In R. M. Jaeger, (Ed) *Complementary methods for research in education*. Washington DC: American Educational Research Association.
- Stake, R. (2005). *Qualitative case studies*. In N. K. Denzin & Y. S. Lincoln (eds.), *The Sage handbook of qualitative research* (3rd ed.), 433-466. Thousand Oaks, CA: Sage.

- Stanovich, K. E. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading research quarterly*, 32-71.
- Stanovich, K. E. (1988). Explaining the differences between the dyslexic and the garden-variety poor reader: The phonological-core variable-difference model. *Journal of learning disabilities*, 21(10), 590-604.
- Stanovich, K. E. (2000). *Progress in understanding reading: Scientific foundations and new frontiers*. Guilford Press.
- Stanovich, K. E., & Siegel, L. S. (1994). Phenotypic performance profile of children with reading disabilities: A regression-based test of the phonological-core variable-difference model. *Journal of Educational Psychology*, 86(1), 24.
- Statistics South Africa (2012). Census 2011: highlights of key results. Retrieved from http://www.statssa.gov.za/Census2011/Products/Census_2011_Methodology_and_Highlights_of_key_results.pdf
- Strauss, A. & Corbin, J. (1999). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. (2nd Ed.). Thousand Oaks, CA: Sage Publications.
- Stuart, M. (1999). Getting ready for reading: early phoneme awareness and phonics teaching improves reading and spelling in inner-city second language learners. *British Journal of Educational Psychology*, 69(4), 587-605.
- Stuart, M. (2005). Phonemic analysis and reading development: Some current issues. *Journal of Research in Reading*, 28(1), 39-49.
- Stuart, M., & Masterson, J. (1992). Patterns of reading and spelling in 10-year-old children related to prereading phonological abilities. *Journal of Experimental Child Psychology*, 54(2), 168-187.
- Tangel, D. M., & Blachman, B. A. (1992). Effect of phoneme awareness instruction on kindergarten children's invented spelling. *Journal of Literacy Research*, 24(2), 233-261.

- Tashakkori, A., & Teddlie, C. (2003). Handbook of mixed methods in the social and behavioral sciences.
- Taylor, (2006) in Christie, P. 2006. *The Right to Learn: The struggle of Education in South Africa*. Johannesburg: Ravan Press.
- Teddlie, C., & Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioral sciences. *Handbook of mixed methods in social & behavioral research*, 3-50.
- Theron, L. C., & Nel, M. (2005). The needs and perceptions of South African Grade 4 educators, teaching English second-language (ESL) learners.
- Thiétart, R.A. (2007). *Doing management research – a comprehensive guide*. London. Sage Publications.
- Tiwari, M., & Tiwari, M. (2012). Voice - How humans communicate? *Journal of Natural Science, Biology and Medicine*, 3(1), 3.
- Torgesen, J. K. (1998). Catch them before they fall. *American educator*, 22, 32-41.
- Trafford, V., & Leshem, S. (2008). *Stepping Stones to Achieving Your Doctorate: By Focusing On Your Viva From The Start: Focusing on your viva from the start*. McGraw-Hill Education (UK).
- Treiman, R., Mullennix, J., Bijeljac-Babic, R., & Richmond-Welty, E. D. (1995). The special role of rimes in the description, use, and acquisition of English orthography. *Journal of Experimental Psychology: General*, 124(2), 107.
- Trennepohl, B. G. (1972). *Some phonological problems in teaching English to speakers of Tswana* (Doctoral dissertation, Kansas State University).
- Troia, G. A. (2004). Phonological processing and its influence on literacy learning. *Handbook of language and literacy: Development and disorders*, 271-301.
- Troyer, S. J., & Yopp, H. K. (1990). Kindergarten teachers' knowledge of emergent literacy concepts. *Reading Improvement*, 27(1), 34.

- Ukrainetz, T. A., Cooney, M. H., Dyer, S. K., Kysar, A. J., & Harris, T. J. (2000). An investigation into teaching phonemic awareness through shared reading and writing. *Early Childhood Research Quarterly*, 15(3), 331-355.
- UNESCO World Language Report Survey Questionnaire (2000) Afrikaans. Retrieved from: <http://salanguages.com/unesco/afrikaans.htm>
- UNESCO World Language Report Survey Questionnaire (2000) Setswana. Retrieved from: <http://www.salanguages.com/unesco/setswana.htm>
- Van Bezooijen, R., & Gooskens, C. (2005). How easy is it for speakers of Dutch to understand Frisian and Afrikaans, and why? *Linguistics in the Netherlands*, 22(1), 13-24.
- Van den Heuvel, R. (2005). Phonological Awareness and Phonics: Linking Assessment with Instruction in Emergent and Early Literacy. Unpublished masters dissertation. Athabasca University. Athabasca, Alberta, Canada.
- Van der Berg, S., & Spaull, N. (2012). Improved Annual National Assessments impossible say academics. 2012. *Mail & Guardian*, 7 December, 2012.
- Van der Veer, R., & Valsiner, J. (1991). *Understanding Vygotsky: A quest for synthesis*. Blackwell Publishing. Malden.
- Van der Vyver, S. (2012a). *An early childhood development programme in a rural settlement community*. Unpublished masters dissertation. University of Johannesburg. Johannesburg. South Africa.
- Van der Vyver, S. (2012b). Methodology and theory in a rural ECD research project: Capturing Mogwase in 'becoming'. *South African Journal of Childhood Education*, 2(1), 141-159.
- Van der Waal, C. S. (2012). Creolisation and purity: Afrikaans language politics in post-apartheid times. *African Studies*, 71(3), 446-463.
- Van Rensburg, C. (2013). A perspective on a period of contact between Khoi and Afrikaans. *Literator*, 34(2), Article 413. 11-pages. Retrieved from <http://dx.doi.org/10.4102/lit.v34i2.413>

- Van Rensburg, C & A Jordaan. The growth of Afrikaans in South Africa. In Webb, V.N. 1995. The LiCCA (S.A.) Report. Pretoria: JL van Schaik.
- Vegas, E., & Santibáñez, L. World Bank. (2010). *The promise of early childhood development in Latin America and the Caribbean. Washington DC: World Bank.*
- Vygotsky (1929) Pedagogija Podroška. Moscow. In Van der Veer, R., & Valsiner, J. (1991). *Understanding Vygotsky: A quest for synthesis*. Blackwell Publishing.
- Vygotsky, L. (1978/1934). *Mind in society. The development of higher psychological processes*. In M. Cole, V. John Steiner, S. Scribner, & E. Souberman (eds. and translators), Cambridge, MA: Harvard University Press.
- Vygotsky, L. S. (1987). *Collected works (vol. 1)*. New York: Plenum.
- Wade-Woolley, L., & Geva, E. (2000). Processing novel phonemic contrasts in the acquisition of L2 word reading. *Scientific Studies of Reading*, 4(4), 295-311.
- Wagner, R. K., & Torgesen, J. K. (1987). The nature of phonological processing and its causal role in the acquisition of reading skills. *Psychological bulletin*, 101(2), 192.
- Wagner, R. K., Torgesen, J. K., & Rashotte, C. A. (1994). Development of reading-related phonological processing abilities: New evidence of bidirectional causality from a latent variable longitudinal study. *Developmental psychology*, 30(1), 73.
- Wang, M., & Geva, E. (2003). Spelling performance of Chinese children using English as a second language: Lexical and visual-orthographic processes. *Applied Psycholinguistics*, 24(01), 1-25.
- Web Center for Social Research Methods. (2010). Research Methods Knowledge Base. Available at: <http://www.socialresearchmethods.net/kb/fallacy.php>. Accessed on: 01 January 2015.
- Webb, E. J., Campbell, D. T., Schwartz, R. D., & Sechrest, L. (1966). *Unobtrusive measures: Nonreactive research in the social sciences* (Vol. 111). Chicago: Rand McNally.

- Wessels, E. (2011). *Teacher knowledge and implementation of phonological awareness in Grade R*. Unpublished doctoral dissertation, North-West University. Potchefstroom. South Africa.
- West, C. (1992). A matter of life and death. *October*, 61, 20-23. Retrieved from: <http://academiccommons.columbia.edu/catalog/ac:157361>
- Whitehurst, G. J., & Lonigan, C. J. (1998). Child development and emergent literacy. *Child development*, 69(3), 848-872.
- Wimmer, H., & Goswami, U. (1994). The influence of orthographic consistency on reading development: Word recognition in English and German children. *Cognition*, 51(1), 91-103.
- Wimmer, H., & Hummer, P. (1990). How German-speaking first graders read and spell: Doubts on the importance of the logographic stage. *Applied psycholinguistics*, 11(04), 349-368.
- Wimmer, H., Landerl, K., Linortner, R., & Hummer, P. (1991). The relationship of phonemic awareness to reading acquisition: More consequence than precondition but still important. *Cognition*, 40(3), 219-249.
- Winsor, P. J., & Pearson, P. D. (1992). Children at risk: their phonemic awareness development in holistic instruction. *Center for the Study of Reading Technical Report; no. 556*.
- Winter, G. (2000). A comparative discussion of the notion of 'validity' in qualitative and quantitative research. *The Qualitative Report*, 4(3), 1-14.
- Wolff, H. E. (2006). Background and history—language politics and planning in Africa. *ADEA Optimizing learning and education in Africa—the language factor: a stock-taking research on mother tongue and bilingual education in sub-Saharan Africa*. Paris: Association for the Development of Education in Africa (ADEA), 26-55.
- Wolff, H.E. (2011) in Ouane, A., & Glanz, C. (2011). *Optimising Learning, Education and Publishing in Africa: The Language Factor--A Review and Analysis of Theory and Practice in Mother-Tongue and Bilingual Education in Sub-Saharan Africa*. UNESCO Institute for Lifelong Learning. Feldbrunnenstrasse 58, 20148 Hamburg, Germany.

- Wolmarans, A. R. (2008). *Die verband tussen fonemiese bewustheid en spelling van graad 3-leerders*. Unpublished doctoral dissertation, North-West University. Potchefstroom. South Afrika.
- Wrench, J. (2016). *Diversity management and discrimination: Immigrants and ethnic minorities in the EU*. Routledge.
- Yeh, S. S., & Connell, D. B. (2008). Effects of rhyming, vocabulary and phonemic awareness instruction on phoneme awareness. *Journal of Research in Reading*, 31(2), 243-256.
- Yopp, H. K. (1992). Developing phonemic awareness in young children. *The Reading Teacher*, 45(9), 696-703.
- Yopp, H. K., & Yopp, R. H. (2000). Supporting phonemic awareness development in the classroom. *The Reading Teacher*, 54(2), 130-143.
- Youn, C., & Baptiste, I. (2007). Learning: A Processural Outcome of Human Activity. *Learning in Community*, 661.
- Zhang, J., & McBride-Chang, C. (2010). Auditory sensitivity, speech perception, and reading development and impairment. *Educational Psychology Review*, 22(3), 323-338.
- Ziegler, J. C., & Goswami, U. (2005). Reading acquisition, developmental dyslexia, and skilled reading across languages: a psycholinguistic grain size theory. *Psychological bulletin*, 131(1), 3.