

**A STUDY OF THE IMPACT OF PHONEMIC AWARENESS AND PHONICS
INTERVENTION ON CHILDREN'S READING ACHIEVEMENT: A CASE STUDY
OF SHADRACK KIMALEL PRIMARY SCHOOL – NAIROBI PROVINCE, KENYA**

BY

MUTAI MAUREEN CHEROTICH



**A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF
EDUCATION IN EARLY CHILDHOOD EDUCATION IN THE DEPARTMENT OF
EDUCATIONAL COMMUNICATION AND TECHNOLOGY OF UNIVERSITY OF
NAIROBI**

2011

09 24742

AFR

LB

1140.5

·R 4MS

C·4

DECLARATION

This thesis is my original work and has not been submitted for an award of a degree in a other institution.


.....

Mutai Maureen Cherotich

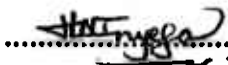
This thesis has been submitted for examination with our approval as university supervisors.


.....

Dr. Agnes Kibui

Lecturer

Department of Educational Communication and Technology, University of Nairobi.


.....

Dr. Hellen Inyega

Lecturer

Department of Educational Communication and Technology, University of Nairobi.

DEDICATION

This thesis is dedicated to my husband, Anthony Mutai, for his enduring encouragement, and to my children, Martin, Julie, and Kyra for their support and patience.

ACKNOWLEDGEMENTS

- I wish to thank the Almighty God for enabling me to go through this study.
- I am greatly indebted to my supervisors: Dr. Agnes Kibui, and Dr. Hellen Inyega for their constant advice, guidance and encouragement throughout the study.
- My sincere thanks go to the children of the school where the study was conducted for accepting to participate in the study, and the head teacher, Ms Mary Mukasa, for the support she gave me during the study.
- Special thanks go to my family members for their patience, encouragement and tolerance.

TABLE OF CONTENTS

| | |
|---|----------|
| Declaration..... | ii |
| Dedication..... | iii |
| Acknowledgements..... | iv |
| Table of Contents..... | v |
| List of Figures..... | viii |
| List of Tables..... | ix |
| Acronyms and Abbreviations..... | x |
| Abstract..... | xi |
| | |
| CHAPTER ONE:INTRODUCTION..... | 1 |
| 1.1 Background to the Study..... | 1 |
| 1.2 Statement of the Problem..... | 3 |
| 1.3 Purpose of the Study..... | 4 |
| 1.4 Research Objectives..... | 4 |
| 1.5 The Hypotheses of the Study..... | 5 |
| 1.6 Significance of the Study..... | 5 |
| 1.7 Limitations of the Study..... | 6 |
| 1.8 Delimitation..... | 6 |
| 1.9 Basic Assumptions..... | 6 |
| 1.10 Operational Definition of Terms..... | 7 |
| 1.11 Organization of the Study..... | 8 |
| | |
| CHAPTER TWO:LITERATURE REVIEW..... | 9 |
| 2.1 Introduction..... | 9 |
| 2.2 Pre-School: An Indispensable Cornerstone of Later Learning..... | 9 |
| 2.3 Phonemic Awareness and Phonics: Pre-requisites to Learning to Read..... | 10 |
| 2.4 Components of Phonemic Awareness..... | 12 |
| 2.5 Theoretical Framework..... | 13 |
| 2.6 Conceptual Framework..... | 19 |

| | |
|---|-----------|
| 2.7 Summary | 23 |
| CHAPTER THREE: RESEARCH METHODOLOGY | 25 |
| 3.1 Introduction..... | 25 |
| 3.2 Research Design | 25 |
| 3.3 Target Population..... | 26 |
| 3.4 Sampling and Sampling Procedure..... | 26 |
| 3.5 Research Instruments | 28 |
| 3.6 Validity of Research Instruments | 28 |
| 3.7 Reliability of Research Instruments..... | 29 |
| 3.8 Procedure for Data Collection | 29 |
| 3.8.1 Research Approval and Consent to Conduct Research..... | 30 |
| 3.8.2 Assessing Phonemic Awareness and Phonics Knowledge | 30 |
| 3.8.3 Phonemic Awareness and Phonics Intervention..... | 31 |
| 3.9 Data Analysis..... | 33 |
| CHAPTER FOUR: FINDINGS AND DISCUSSIONS | 34 |
| 4.1 Introduction..... | 34 |
| 4.2 Analysis and Interpretation of Findings from the Pre-Test | 34 |
| 4.3 Analysis and Interpretation of Findings from Post-Test..... | 37 |
| 4.4 Comparisons of the Scores of the Two Achievement Tests | 39 |
| 4.5 Analysis of Archival Records Secondary Data..... | 42 |
| 4.6 Summary | 44 |
| CHAPTER FIVE: SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER STUDIES..... | 45 |
| 5.1 Introduction..... | 45 |
| 5.2 Summary of the Findings..... | 45 |
| 5.3 Conclusion | 46 |
| 5.4 Recommendations from the study | 47 |
| 5.5 Suggestions for Further Study | 49 |

| | |
|--|-----------|
| References..... | 50 |
| APPENDICES | 55 |
| Appendix I:Pre-Test/Post-Test..... | 55 |
| Appendix II: Weekly Plan for Sounds Covered In Each Lesson..... | 57 |
| Appendix III: Class Work for a pupil with Pre-school Education..... | 60 |
| Appendix IV: Class Work for a Pupil without Pre-school Education | 61 |
| Appendix V: Sample of an intervention Lesson..... | 60 |
| Appendix VI:Introduction Letter from the University of Nairobi..... | 61 |
| Appendix VII:Permit from the Ministry of Education | 62 |

LIST OF FIGURES

| | |
|---|-----------|
| Figure 2.1: Bottom-up theories of reading processes | 16 |
| Figure 2.2: Relationship between phonemic awareness and phonics instructions, pre-school Education, Reading achievement and reading failure..... | 24 |

LIST OF TABLES

| | |
|--|-----------|
| Table 4.1: Pre- Test Results | 37 |
| Table 4.2: Results of ANOVA in Pre-Test | 38 |
| Table 4.3: Post-Test Results | 39 |
| Table 4.4: Post-Test Analysis of Variance (ANOVA) Results | 40 |
| Table 4.5: Pre-test and Post-test scores | 41 |
| Table 4.6: Pre-test and Post-test Analysis of Variance (ANOVA) Results..... | 41 |
| Table 4.7 Entry Examination Results | 43 |

ACRONYMS AND ABBREVIATIONS

KCSE – Kenya Certificate of Secondary School Education

KCPE – Kenya Certificate of Primary School Education

EFA – Education for All

UNESCO – United Nations Education Science and Cultural Organization

SPSS – Statistical Package for Social Sciences

ANOVA – Analysis of Variance

ABSTRACT

This study investigated the performance of pupils with pre-school education in reading activities, before and after the phonemic awareness and phonics intervention, and the performance of pupils without pre-school education in reading activities before and after the phonemic awareness and phonics intervention. Seventy five standard one pupils participated in this study. It employed a case study research design, and within it a quasi-experimental research approach was adopted. The findings indicated that pupils with pre-school education performed well in both pre- and post tests. Those who had no pre-school, and did not receive intervention, had low mean scores in both pre- and post tests. Those pupils who had no pre-school education but received the phonemic awareness and phonics intervention, performed poorly in the pre-test, but there was a substantial improvement in the post-test. Study findings affirmed that pre-school education is very important in children's reading achievement.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Shadrack Kimalal Primary School is in Dagoretti Division of Nairobi West District in Nairobi Province, Kenya. The school has a population of 1427 pupils. About three-quarters of the pupils come from Kibera slums. Before the introduction of free primary education in the year 2003, the pupils were performing fairly well in their examinations at all levels, including Kenya Certificate of Primary Education (KCPE). The teacher-pupil ratio was about 1:45 which was manageable.

Since the introduction of free primary education by the government, the enrolment of children in the school, especially in standard one, increased tremendously. In the year 2003, the teacher -learner ratio of about 1:96 was registered. Consequently, the available facilities and resources were not adequate for the large population of pupils in the school. Since primary education is free unlike pre-school education where fees is paid, the parents who can not afford the fees for pre-school education send their children to standard one before they have had experience in early grade learning in nursery school.

Stakeholders in the education sector recognize the important contribution of early experiences to a child's later success in school (Baron and Morrow, 2003). Pre-school education is recognized as an important stepping stone towards reading achievement in primary school. Emphasis is put on adequate achievement in the foundation areas of numeracy and literacy.

In late kindergarten and first grade learning, many children enter the phase of learning to read. Most prominent in this stage is learning to read words although they are also learning to understand what they read. The task of learning to make words emerge from different combinations of letters on a page is so challenging that teachers often remind children to go back and read again until the word makes sense. The teachers often include phonemic awareness instruction as an important element of a comprehensive reading programme in early grade reading. This is done in order to help the children to develop the ability to think, notice, and work with individual sound in spoken words (Reutzel and Cooter, 2005).

Phonemic awareness is an important factor in learning to read and spell words (Lyon, 1997; Vacca et al. 2003). Phonemes are basic speech sounds that are represented by the letters of the alphabet and phonemic awareness is the understanding that words are sequences of phonemes. This is demonstrated by the ability to identify and manipulate sounds within spoken words. Children can learn to assemble phonemes into words and break the words into their phonemes (Vacca et al, 2003).

Phonemic awareness and phonics (which emphasizes sound-letter relationships) are invaluable insights about oral language. The instruction of this concept starts in the pre-school and continues in grade one that is, standard one (Tompkins, 2003). The relationship between phonemic awareness and learning to read is reciprocal; phonemic awareness supports reading acquisition, and reading instruction. In addition, their experiences with print materials facilitate reading development (Tompkins, 2003).

Children who are enrolled directly in standard one without passing through pre-school do not get adequate exposure to strategies that can facilitate their learning to read. They skip an important stage in reading development – that is, acquisition of requisite reading skills such as phonemic awareness and phonics. Consequently, these children may experience difficulties in reading and may lag behind in early grade reading unless some intervention is given to them immediately they enroll in primary school. In other words, these children need opportunities to learn the relationships between the sounds of the spoken language, and the letters of the written language as soon as they enroll in standard one. This will enable them to catch up with their peers who have already had some experience in reading in the pre-school.

1.2 Statement of the Problem

In the school where this study was conducted, children who have had pre-school education are grouped together in standard one with those without any reading experience. Within a short period, differences begin to emerge between the two groups. Those with pre-school experience tend to perform better than those without. For example, many of the pupils who are taken directly to standard one without enrolling in preschool usually have difficulties in reading text and other reading-related activities including those on phonemic awareness and phonics. Therefore, it is important to introduce intervention programmes to all children in early grade learning so that they can understand what they read in all the subjects in the school curriculum. A solid foundation in learning to read is indispensable for later reading in order to gain knowledge in all areas of learning.

On the basis of the above background, there was a need to find out whether standard one pupils of Shadrack Kimalael Primary School in Nairobi province, Kenya, who do not have pre-school education would catch up and compete at the same level with those who have had pre-school education. Would they succeed in reading after receiving early intervention in phonemic awareness and phonics instruction?

1.3 Purpose of the Study

The purpose of the study was to answer the question: What is the impact of phonemic awareness and phonics intervention on standard one pupils' achievement in reading?

1.4 Research Objectives

The study sought to achieve the following objectives:

1. To find out the performance of pupils with pre-school education in reading activities before and after the phonemic awareness and phonic intervention.
2. To examine the performance of pupils without pre-school education in reading activities before and after the phonemic awareness and phonic intervention.
3. To establish the difference between the performance of pupils with pre-school education and those without pre-school education in reading activities before and after phonemic awareness and phonics intervention.

1.5 The Hypotheses of the Study

The study had the following null hypotheses:

1. There is no statistically significant difference in the performance of pupils with pre-school education in reading activities before and after phonemic awareness and phonic intervention.
2. There is no statistically significant difference in the performance of pupils without pre-school education in the reading activities before and after the phonemic awareness and phonic intervention.
3. The performance of children with pre-school education is not different from that of pupils without pre-school education in reading activities before and after phonemic awareness and phonics intervention.

1.6 Significance of the Study

The findings of the study might create awareness to parents and teachers on the importance of phonemic awareness and phonics instruction on pupils' reading achievement. Consequently, parents might appreciate the critical role that early childhood education plays to equip children with emergent literacy skills essential for learning to read and later reading to learn. This might encourage them to enroll their children in pre-school.

The findings might also be used to inform policy makers (The Ministry of Basic Education) to emphasize on compulsory pre-school education and perhaps to make it free.

The results of this study could provide standard one teachers with knowledge, skills and attitudes relevant to successful early intervention for weak and slow readers and other children at-risk of reading and academic weakness.

1.7 Limitations of the Study

The study had the following limitations. Firstly, since it was a case study, the findings could only be generalized to pupils from schools with similar characteristics. Secondly, the intervention took place on school days stipulated in the school calendar, that is, in a natural real life setting. Given that it was not easy to control human beings, the study results might have been affected by extraneous variables. Lastly, the research provided an intervention to children at-risk of reading difficulties. It did not take care of pupils with additional needs such as those with learning disabilities.

1.8 Delimitation

The research was conducted at Shadrack Kimala Primary School in Nairobi Province, Kenya. The scope of the study was delimited to Standard One pupils of this school.

1.9 Basic Assumptions

The study had the following assumptions: Firstly, pupils without pre-school education did not have the requisite phonemic awareness and phonics skills compared to those who have had preschool education. Secondly, the interaction between the pupils in the control groups and those in the experimental group did not lead to learning that could affect the results. Thirdly, any maturation and learning acquired by the pupils in the control groups did not significantly account for between-group differences. That is, the difference between the mean scores of control group one and experimental group, control group two and experimental group, and between control group one and control group two. Lastly, it was assumed that the Hawthorne effect did not affect the results of the study.

1.10 Operational Definition of Terms

In this study, the following words were used to mean the following:

- **Grapheme** – a written representation of a sound, using one or more letters.
- **Hawthorne Effect** – the tendency of some pupils to work harder and perform better in a similar task than in the first attempt.
- **Intervention** – the treatment or lesson to be given to pupils in the experimental group.
- **Learning Disabilities** – difficulty in listening, speaking, reading and writing.
- **Phoneme** – a sound; it is represented in print with slashes. For example, /s/ and /th/
- **Phonemic Awareness** - the understanding that spoken words are made up of individual speech sounds (phonemes).
- **Phonics** – was used to mean a set of relationships between the sounds in speech and the spelling patterns of written language.
- **Pre-School** – an education establishment or a centre which caters for the needs of children before admission into primary school (pre-primary).
- **Pupils** – children learning in Shadrack Kimalel Primary School, particularly the Standard One children.
- **Semantics** – the meaning system of a language.
- **Syntax** – the structural system of a language (word order).
- **Slums** –urban informal, congested and deprived settlements.

1.11 Organization of the Study

The study has five chapters. Chapter One deals with the background information of the study, statement of the problem, the purpose of the study, research objectives and research questions, hypotheses, limitation of the study, delimitation, basic assumption and operational definition of key terms. Chapter two focuses on the literature related to phonemic awareness and phonics instruction, conceptual framework and theoretical frame work. Chapter Three deals with methodology, which includes research design, target population, sampling and sampling procedure, data collection instruments, procedure for data collection and data analysis. Chapter four focuses on data analysis and discussion of findings. Finally, Chapter Five deals with summary of research findings, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section presents a review of literature under the following sub-topics: Pre-school, an indispensable cornerstone of later learning, phonemic awareness and phonics, pre-requisites to learning to read, components of phonemic awareness, theoretical framework, conceptual framework and concluding remarks.

2.2 Pre-School: An Indispensable Cornerstone of Later Learning

Everyone recognizes the important contribution of early learning experiences to a child's later success in school (Baron and Morrow, 2003). In late kindergarten and first grade learning, children enter the phase of learning to read. As children learn to read words, they are also taught to read to learn. Learning to create words from a combination of letters is a great challenge for early grade learners and they have to keep on trying until they master the skill.

For learning to take place, children must read the words and understand what the words mean (Clay, 1985). This will help them understand that print, and not pictures, carry the message. Research has found that there is a high correlation between poor early reading and failure in other subjects later in school (Juel, 1986). There is also a clear link between poor performance in early elementary years and later incarceration (Newman 1996). Stanovich (1986) argues that mild deficits in the early grade learning are compounded and grow into severe reading disabilities after three or four years. The more the children read, the more they

gain fluency in reading. Whatever mild deficit a child has makes reading difficult and the difficulty breeds aversion.

2.3 Phonemic Awareness and Phonics: Pre-requisites to Learning to Read

Phonemic awareness is children's basic understanding that speech is composed of a series of individual sounds (Yopp, 1992). In phonemic awareness, emphasis is on the sounds of spoken words and not reading letters or pronouncing letter names. Phonemic awareness typically occurs at the pre-reading stage of development while most young children master the spoken language. At this stage, children do not understand that speech is derived from discrete words (Reutzel and Cooter, 2005). Furthermore, these children have no cognitive concept that words are made up of syllables which are broken into smaller units called phonemes. Phonemes are small units of speech, related to letters of the alphabet for example, in the word 'hit', a child needs to hear and segment three phonemes. These are /h/, /i/, and /t/. If a child has difficulty in hearing or segmenting these words, s/he is likely to struggle with early reading. This awareness that speech is made up of discrete, segmented sounds is now considered a major factor in reading success (Barone and Morrow, 2003).

A ten-year study done by The National Reading Panel of the Institute of Health and Child Development in United States of America (1985-1995), found out that about 88% of reading difficulties were grounded in weak phonemic awareness. Phonemic awareness does not only make initial reading acquisition easier, but also contributes to increased reading fluency throughout life (Temple et al, 2005).

According to Temple et al (2005), phonemic awareness is a better predictor of the ease of early reading than Intelligence Quotient (IQ), vocabulary and listening comprehension. Phonemic awareness is needed not only for reading but also writing. If a child has complete phonemic awareness, s/he should be able to read words, including those that they have not seen before. The child also learns to spell words correctly without memorizing them. Writing, being a beneficiary of phonemic awareness, gives children a great satisfaction and confidence. This is because it helps them to express themselves using phonemic awareness even when they have never seen the words in print before.

Phonemic awareness is an important factor in fluency in reading and learning to spell words (Lyon, 1997). It is also viewed as an important element of a comprehensive reading programme in the early grades. The difference between phonemic awareness and phonic is that phonemic awareness is the understanding of the individual sound in a word, that is, phonemes, while phonics is the awareness that letters and letter combinations represent phonemes that can be blended to create spoken words, that is, words that are sounded out. (Reutzel and Cooter, 2005). Phonemic awareness helps children acquire phonics (Reutzel and Cooter, 2005). The introduction of phonics becomes the second logical step in learning to read. Phonics knowledge helps children reverse the process and translate written symbols back into phonemes or speech sounds.

Phonics is seen to be an improvement on the previously used method of learning the approximate sounds represented by letters 'b=buh' first then blending them with other sounds 'bl=bluh' to decode words in written form (Adams, 1990). This method attempts to

eliminate the extraneous 'uh' sound and helps children learn strategies to figure out words they don't know. Phonics is considered an "analytical" approach where children analyze the letters, letter combinations and syllables in words. Phonic awareness is important because it enables learners to decode or "sound-out" a word they have in their speaking vocabulary.

2.4 Components of Phonemic Awareness

According to Tompkins (2003), children develop phonemic awareness as they learn to segment, manipulate and blend spoken language in the following five ways:

- **Match sounds to words:** Children learn to identify a word that begins or ends with a particular sound. For example, when they are shown a pet, a car and a bell, they can identify the bell as the word that ends with /l/.
- **Isolate a sound in a word:** Children learn to isolate the sounds at the beginning, middle or end of a word. After the teacher says the word *hat* children will identify /a/ as the middle sound.
- **Blend individual sounds into a word:** Children learn to blend two, three or four individual sounds to form a word. For example, children can take the sounds /b/, /i/, /g/, and blending them to form the word 'big'.
- **Substitute sounds in a word:** Children learn to remove a sound from a word and substitute it with a different sound to form another word. Substitution can be at the beginning, middle or at the end of the word – for example, changing bit to bat, bat to cat, and bat to bad.

- **Segment a word into its constituent sound:** Children learn to break a word into its beginning, middle and ending sounds. For example, children segment the word 'fat' into /f/, /a/, /t/ and go into /g/, /o/ (Yopp, 1992).

2.5 Theoretical Framework

For some time, reading theorists have attempted to examine what our brains must do to recognize words, combine them into sentences and paragraphs, and understand meanings conveyed in written language (McCormick, 2003). These theorists have developed models to explain their conclusions about the reading process. These models are Bottom-up and Top-down approaches.

Bottom-up theory deals with reading as a linguistic process. In this theory, reading is defined as both linear and phonological and it is based on the formation of sounds. These sounds are then linked together and converted into larger "comprehensive units." Gradually, only after putting all the various sounds together, is an understanding of the terms and of the unit achieved (Reutzel and Cooter, 2005). Gough (1972), describes reading as a sequential or serial mental process. According to Gough, readers, begin by translating the parts of written language (letters) into speech sounds, and then combine the sounds to form individual words. Finally, they combine the words together to arrive at an understanding of the author's written message.

According to McCormick (2003), readers start with the smallest units: Individual sounds or phonemes which are then combined into words to form phrases, clauses and sentences. After

this, individual sentences are combined to create ideas, and concepts. The model begins with the visual perception in which the reader analyses the information from the text by detectors which notes the features such as lines, angles, intersections. They also analyze the relational features such as right, left, up and down. This leads to the discovery of letter codes, spelling pattern codes, word codes and towards group codes.

The next stage of bottom-up model deals with the phonological system where automaticity is achieved through practice in reading the syllabic component of the word. Sometimes, the readers pronounce the words silently to themselves as they read in order to understand their meaning from the sound. The third stage of the model is the semantic system. After the reader has seen and heard the word, it is assumed that the meaning of the word can be elicited by means of a direct association between the sound of the word and its meaning.

LaBerge and Samuels (1976) view the reading process as translating, decoding or encoding process. The reader starts with letters and as s/he attends to them, s/he begins to anticipate the words s/he spells. As words are identified, they are decoded into inner speech from which the reader derives meaning in the same way they do in listening.

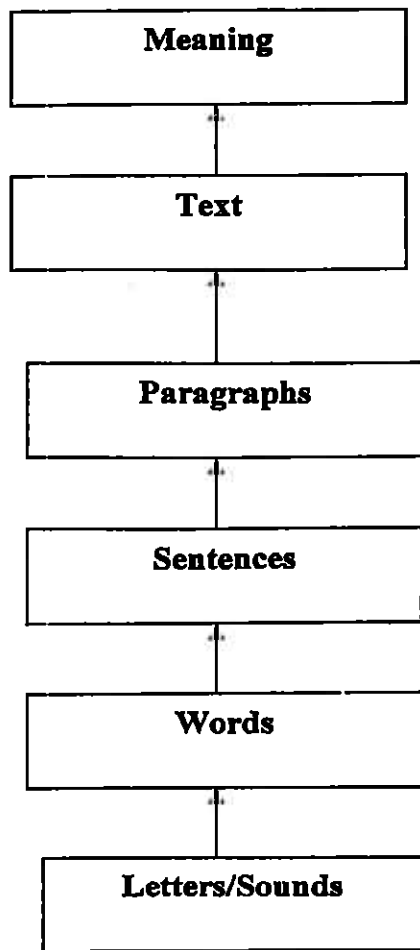
Reading involves learning facts about distribution of letter patterns in the language and correspondence between spellings and pronunciation. This knowledge can be presented in terms of weights on connections in a distributed memory network that consist of simple processing units. According to LaBerge and Samuel (1976), experience modifies the weights in reading and pronunciation of words, the accuracy and speed of written word recognition depend mainly on the reader's familiarity with the word print. The more frequently a spelling

pattern has been processed, the stronger, the more focused and faster will be its connection to and from the phonological processor.

A reader who is a poor decoder focuses much of his/her attention on phonics and other sounding out strategies so that s/he has little brain power left for comprehending (LaBerge and Samuel, 1974). Fluent readers can rapidly focus on the author's message because decoding no longer demands a lot of attention. This theory is suitable for beginners and transitional readers. At this stage, all the reading is literal and after putting sound to different signs, these readers eventually advance to larger units and complexes of sounds.

LaBerge and Samuels (1974) model predicts that if reading can occur automatically without too much focus on the decoding process, fluency in reading comprehension would improve. Bottom-Up theory of reading processes can be summarized in Figure 2.1.

Figure 2.1: Bottom-up theories of reading processes



When using Bottom-Up theories, teachers start by teaching the basic skills first. They begin by introducing letter names and letter sounds. After this, they pronounce whole words, and then show the learners ways of connecting word meanings in order to comprehend the text.

The second theory of reading is the top-down approach. This model views the interpretation process as a continuum of changing hypothesis about the incoming information. The proponents of this approach, Smith (1988 and 1992); and Goodman (1968 and 1976), emphasize on the use of previous knowledge in processing a text rather than relying upon

individual sounds (phonemes) and words. They believe that readers who are unable to identify segmented sounds in isolation from the words they form a part of, are quite able to identify segmented words if presented with the surrounding context (Kitui, 2006; 42).

Top-down theorists consider reading as a “visual semantic process.” Everything, whether pictures, phrases or whole sentences is taken in at the same time, so that there is no act of deconstructing words into syllables or smaller units. The model emphasizes that readers bring meaning to text based on their previous experiences and they interpret the text based on their prior knowledge (Goodman, 1976; Smith, 1967). The readers sample the text for information and contrast it with their word knowledge and this helps them to interpret what is written in the text. The focus here is on the readers as they interact with the text. This model starts with the hypotheses and predictions then attempts to verify them by working down to the printed stimuli.

Top-down theorists tend to emphasize higher level skills, as the prediction of meaning by means of context clues or background knowledge at the expense of lower skills like the rapid and accurate identification of lexical and grammatical forms. In making the perfectly valid point that fluent reading is primarily a cognitive process, top-down theorists emphasize on the perceptual and decoding dimensions of reading process. This model is good for the skillful and fluent reader for whom perception and decoding have become automatic, and not for the less proficient and developing reader because it does not account for all the needs of learners who are acquiring reading skills.

For those reading theorists who recognized the importance of both the text and the reader in the reading process, an amalgamation of the two emerged: the interactive approach. In this approach, reading is the process of combining textual information with the information the reader brings to a text.

Rumelhart (1976) proposed an interactive model of the reading process. This model is one of those that have a wide acceptance in the literacy profession as it is believed to be a logical explanation of the reading processes. The interactive model hypothesizes that various processes work simultaneously when a person reads. This is called parallel processing. According to Rumelhart, interactive model proposes that readers begin word identification and predict meaning simultaneously. That is, the lower level processes (word identification) and higher level processes (meaning) help each other at the same time.

According to Rumelhart (1976), this model implies that instructional programs should emphasize both word identification and meaning since lower-level processes and higher-level processes aid each other. Moreover, since some decisions are based on prior knowledge of print structures, learners must have abundant opportunities to read. That means that, the more they read, the more efficient their predictions of print and meaning will be.

Stanovich (1980) proposed an interactive-compensatory model of reading. This conception of reading processes may have particular significance for teachers of delayed readers. While agreeing with Rumelhart (1976), that reading involves immediate interactions of several knowledge sources, the added term 'compensatory' indicates an extension to the interactive

model. Stanovich advanced the notion that when there is a deficit in any of these knowledge sources, the reader compensates by using other knowledge sources. He gave an example of a poor reader, who being deficient in automatic word recognition turns to context clues to identify words. That is, the reader guesses unknown words based on what would seem correct in terms of sentence patterns, and in terms of meaning, suggested by known words in the text.

The implication of the interactive- compensatory model according to Stanovich (1980) is that if beginning readers and poor readers are eventually to become good readers, they must learn properly the identities of words so that these may be recognized automatically, and rapidly without resorting to the assistance of the context. In addition, during reading stages in which many words are still unknown, having knowledge of phonics and structural analysis strategies, and being able to use these adeptly, is an aid to fluent reading. Since the purpose of reading is comprehension, teachers should help learners gain mastery of these strategies, so that undue attention to word recognition tasks does not deflect from gaining meaning (McCormick, 2003).

The present study adopted a bottom-up approach in designing the phonemic awareness and phonics intervention. This is because this theory can be applied to emergent, beginning and transitional readers. In these cases, all the reading is literal and after putting sound to different signs, these readers eventually advance to larger units and complex sounds. The model also increases the knowledge of phonetic sounds, builds sight vocabulary and increases the ability to use word attack skills (Vacca, et al 2003). This means that pupils will

benefit from direct and systematic instruction on sounds of spoken words as well as letter-and-sound correspondences in written language.

2.6 Conceptual Framework

In his research on individual difference in response to early interventions in reading, Torgesen (2000) noted that although the ultimate goal of reading instruction is to help children acquire skills necessary to comprehend a text, an important sub-goal for early reading instruction is to teach children to identify words accurately on a printed page. Torgesen recognized the importance of acquisition of adequate word reading skills by each child during early elementary school. He observed that children require special support in the growth of early word reading skills if they are to make adequate progress in learning to read. He also noted that if children lag behind in the development of critical early reading skill they will not be able to compete at the same level with those who are competent in reading activities.

For any learning to take place, children have to understand the message that is in the text. This can be supported by a study done by Kibui (2006) on the relationship between proficiency in the English Language comprehension and vocabulary among learners in selected Kenyan secondary schools. The study focused on Form IV students. The study hoped to establish whether the learners were proficient in comprehension and vocabulary of written English which would enable them to understand passages, sets of directions, instructions, and other messages which they are likely to encounter inside and outside the classroom. Kibui found out that many learners failed to understand common messages

written in English as revealed in the passages read. The learners found it difficult to understand general statements used in particular context, to comprehend statements with unfamiliar words or words with specialized usage and spellings of some words among others. The findings of the study indicated that while learners are at school, they should be exposed to a variety of reading skills which are necessary in enabling them to cope with reading demands. This brings in the importance of early intervention in phonemic awareness and phonics to standard one pupils. This will equip them with reading skills required for future reading and learning.

Reading is a language-based activity. The three major aspects of oral language are phonemes (sounds), syntax (sentence structure), and semantics (meaning). In written language, a fourth grammatical element is added, namely, graphemes (letters). Deficits in syntax and semantic aspects of language processing have at times been associated with reading disability (McCormick, 2003). For example, in some studies, poor readers fail to distinguish between syntactically appropriate and inappropriate sentence structures (Vellutino, and Scanlon, 1987). A lack of knowledge of word meanings (semantic knowledge) has been found to cause reading comprehension difficulties (Vellutino, and Denckla, 1991).

A lack of phonemic knowledge usually causes problems in reading especially in early years of learning. Phonemic awareness helps learners in letter-sound relationships which assists them to identify unknown words. Failure to master this skill brings about problems in word recognition and comprehension in future years of learning.

The English language writing system is based on alphabetic principle. Written words are made up of letters that have approximate matches in the sounds heard in these words when spoken (McCormick, 2003). One important aspect of learning to read is to understand how written language and oral language correspond. In order to understand the alphabetic principle, one must recognize that spoken words consist of a sequence of sounds; this understanding is called phonemic awareness (Ball, and Blackman, 1991). The concept that words are made up of sounds is not necessarily an easy one for young learners to grasp because when one speaks, s/he rarely pays conscious attention to the sounds s/he makes but is simply concerned with getting the message across. While phonemic awareness may not be important in spoken language, it is critical in learning to read (McCormick, 2003).

Lack of phonemic awareness is a major cause of word identification difficulties (Ehri, et al., 2001; Vellutino, and Denckla, 1991). Phonemic awareness permits learners to use letter-sound correspondence, employ phonic strategies, and identify unknown words more quickly (Griffith, and Olson, 1992). Phonemic awareness also may have a bearing on whole-word learning. In addition, phonemic awareness is a prerequisite to spelling and writing, which also require hearing and matching sounds. Phonemic awareness is now viewed as a critical variable in emergent literacy (Sulzby, and Teale, 1991) and beginning reading acquisition (Juel, 1991).

Recognizing that words can be broken into phonemes and syllables, manipulating these elements, has a high correlation with reading achievement (Lundberg, Frost, and Petersen, 1988). Research has shown that phonemic awareness is a more powerful determinant in

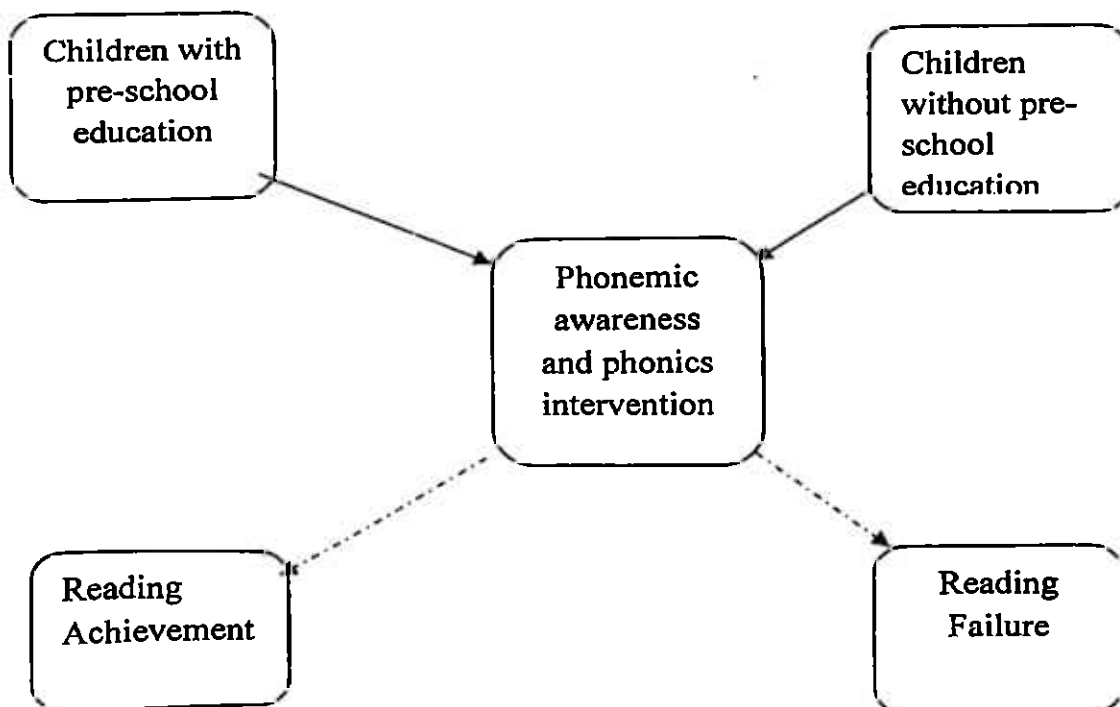
predicting whether learners will succeed in reading. It is also a stronger predictor than “general” language proficiency (Lomax and McGee, 1987). The importance of phonemic awareness is crucial regardless of the type of instructional methodology employed by the teachers. McCormick (2003) identified two levels of phonemic awareness: Simple phonemic awareness and compound phonemic awareness. The knowledge that words can be broken into phonemes and syllables is evident when learners can perform these simple phonemic awareness tasks – isolation of sounds, blending, and segmentation. This is very important in reading and writing.

Compound phonemic awareness involves two operations: Phoneme deletion, isolating a sound in a word and blending the remaining sounds. For example, responding correctly when asked, “What word would be left if /r/ was taken away from the middle of the word brake?” Word-to-word matching entails isolating a sound in a certain position in two words and comparing the sounds. For example, responding correctly when asked, Do ‘dog’ and ‘dime’ begin with the same sound? Compound phonemic awareness seems to result from reading experiences but may be important for further advancement in reading and writing. Although phonemic awareness is considered a linguistic skill, it also requires cognitive skills (McCormick, 2003). However, phonemic awareness does not simply occur with maturation or age but results from certain experiences. Children are also taught Phonemic awareness.

Torgesen (2000) recommended that school based preventive efforts should be engineered to maintain growth in critical word reading skills at normal level throughout elementary school period. This is necessary in order to prevent children from falling behind. Failure to apply

these preventive efforts will require very intensive intervention to bring the children back to adequate levels of reading accuracy (Torgesen, 2000). For the learner who finds himself/herself in standard one without pre-school education, reading achievement can be made possible if given an intervention in phonemic awareness and phonics. If they don't receive an intervention in phonemic awareness and phonics, they might experience a reading failure.

Figure 2.2: The relationship between phonemic awareness and phonics instructions, pre-school education, reading achievement and reading failure



2.7 Summary

Teaching every child to read is the most important mission in pre- school and lower primary classes in primary school. Reading prepares children to learn their other school subjects and to educate themselves for the rest of their lives. Teaching children to read not only gives them the access to knowledge from print but also makes them able to use that knowledge. Therefore, if children at-risk of academic failure are helped through intervention programmes, they are likely to benefit from educational experiences in primary school and beyond.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section focuses on research design, target population, sampling and sampling procedure, and research instruments. It also deals with validity and reliability of the instruments, procedure for data collection and data analysis.

3.2 Research Design

The focus of the study was to determine the impact of phonemic awareness and phonics intervention on Standard One pupils' reading achievement. The study employed a case-study research design. This design was useful in providing an in-depth understanding of the intervention on reading achievement. Within the case study research design, a quasi-experimental research approach was adopted. This design is suitable to naturalistic field settings (Borg, and Gall, 1989). It also allows one to have more than one control group in a study.

In this study, there were three groups. The first group had pupils with pre-school education. This group formed Control Group 1. The second group had pupils without pre-school education. This second group was subdivided to form two groups: Control Group 2 and the Experimental Group. The study thus had two control groups and one experimental group. All three groups were subjected to a pre- and post-test. The experimental group (pupils without pre-school education) participated in a phonemic awareness and phonics intervention. The dependent variable was children's achievement in reading while the independent variables

were: Learners' pre-school experiences – that is whether or not a pupil attended pre-school and Phonemic awareness and phonics instruction

3.3 Target Population

The target population for the study was Standard One pupils of Shadrack Kimalel Primary School, Nairobi. Standard One has two streams with 47 pupils in each. The choice of Standard One pupils was based on the fact that it is the entry point to primary school learning. The choice was also based on the principle of early intervention. Early screening and intervention should be provided to children before they begin experiencing failure in academic tasks especially those in reading.

3.4 Sampling and Sampling Procedure

Purposive sampling was used to select the school where the study was done, that is, Shadrack Kimalel Primary School. The school was suitable for the study because in this school, some children have gone through pre-school education while others have joined standard one without any experience in pre-school education. This therefore enabled the researcher to get the required information since purposive sampling is used to select a sample that conforms to some criterion, and also meets specific needs of the study (Cooper and Emory 1995). The study population was identified using purposive sampling, that is, Standard One pupils, because they are likely to benefit most from an early intervention before they begin experiencing failure in academic tasks.

Purposive sampling was also used to get pupils with- and without pre-school education. Simple random sampling was used to get 25 pupils with pre-school education and 50 without pre-school education to participate in the research. Simple random sampling ensured that every sample of a given size as well as every individual in the target population had an equal chance of being selected. It also guaranteed that every individual in the defined population had an independent chance of being selected to participate.

Simple random sampling was used to divide the 50 pupils without pre-school education into two equal groups (that is, 25 pupils in the experimental group and 25 in the control group). This gave each pupil an equal chance to be selected for intervention. Specifically, the balloting method, also known as the lottery method, was used. The researcher assigned numbers to the 50 pupils without pre-school education. Each number was written on a piece of paper. The papers were folded separately and put into a bag. The folded papers were shuffled very well. The researcher closed her eyes and picked up a number. The number on the piece of paper was recorded as one of the units to be included in the experimental group. The piece of paper was not returned into the bag before picking the second unit (that is, sampling without replacement was done). Shuffling and picking continued until the sample size of 25 was obtained. The numbers of pupils still remaining in the bag formed the control group.

In total, 75 pupils were identified from the target population to participate in the study. The researcher's choice of 25 pupils in every group was to have a manageable number to work

with. The sample was considered adequate for any effect or difference to be noted for there is no single rule that can be used to determine sample size (Fraenkel and Wallen, 1996).

3.5 Research Instruments

There were two instruments used to solicit information for the study. These were:

1. **Phonemic Awareness and Phonics Pre- and Post-Tests:** The 75 pupils participating in the study were tested before and after the phonemic awareness and phonics intervention. The use of pre- and post-test in the study was to help eliminate initial group differences that could bring any bias to the study. The researcher worked together with the class teachers to develop the test which had 15 items for reading and 15 items for dictation.
2. **Analysis of archival or secondary data of pupils participating in the study:** The documents included pre-school and Standard One curricula to determine aspects of phonemic awareness and phonics to be included in the phonemic awareness and phonics intervention. Another document was pupils' admission forms which were used to identify children with- and without pre-school education. The entry examination was used together with the pre-test to determine the pupils' threshold level of performance in reading. Pupils' exercise books were checked to examine if there was any difference in the work of children with pre-school education and those without. The exercise books were analyzed weekly for the entire research period.

3.6 Validity of Research Instruments

Validity refers to whether a measure is really measuring what it was intended to measure (Coolican, 1994). Internal validity is a basic requirement without which an experiment can not be interpreted. Validity of any research instrument is very important (Campbell and Stanley 1963), cited in Mason and Bramble (1997)) in that it explains whether the experimental treatments make a difference in the specific experimental situation. In this respect, the research instruments were validated by undertaking a pilot study in a selected primary school in Nairobi where pupils had the same characteristics as those of Shadrack Kimalel Primary School.

During the pilot study, the instruments were administered to the subjects. The results of the pilot study helped in modifying the instruments. Piloting enabled the researcher to adjust the pre-test time from three to five days to enable the pupils to go through the test items at a comfortable pace.

3.7 Reliability of Research Instruments

Reliability refers to consistency of a measure to produce similar results in different but comparable occasions (Coolican, 1994). In order to ascertain reliability, the researcher involved the pre-school and standard one teachers to go through the program content, the pre-and post-test items, and the intervention lessons content. Their responses on the various items of the instrument were considered in designing the final instruments that were used for the study. A common marking scheme was also used for both pre- and post-tests since they had the same items to allow consistency in marking.

3.8 Procedure for Data Collection

Data collection procedure started with research approval by the university and consent to conduct research from the ministry of Education, followed by assessment of phonemic awareness and phonics knowledge, and finally, phonemic awareness and phonics intervention.

3.8.1 Research Approval and Consent to Conduct Research

After the research proposal had been approved by the School of Education, the researcher got a letter of introduction from the University of Nairobi (Appendix VI), and consent from the ministry of Education to conduct research (Appendix VII). The researcher informed the head teacher of Shadrack Kimalal Primary School about her research and sought permission to conduct research. Through the help of the head teacher, the researcher sought parental consent for pupils to participate in the research through writing. The parents were assured of confidentiality of the information about their children and that the research was not going to harm them in any way. Therefore, the pupils were asked not to write their names in the test paper. They used numbers instead of names.

3.8.2 Assessing Phonemic Awareness and Phonics Knowledge

Pre-and post-tests were developed, pilot tested and revised before being administered to the 75 participants who were sampled for the study. Yopp-Singer's (1992) phenomena segmentation test was administered orally to the participants. The test took about five to seven minutes per child. A set of target words was presented one at a time and each child was asked to respond by segmenting each target word into separate sounds. For example, the

administrator of the test would say 'pet' and the child would respond /p/, /e/, /t/, say the word 'fish' and the child would say /f/, /i/, /sh/ and so on. Three examples were given before asking the pupils to identify the sounds. As they progressed through the 15 test items, their responses were scored as follows: The item answered correctly was circled and incorrect response recorded in blank lines next to each item. In this test, learners were asked to give sounds heard in the word and not the letter names.

After the oral test, 15 words were dictated for the pupils to write. The words were written after considering the content and language of phonics, which are consonants, vowels, consonant blends and diphthongs among others (Vacca et al. 2003). In order to avoid any inconsistencies in pronunciation, the class teacher did the dictation. The pupils were expected to identify the sounds in each word and then write them down. The written work was marked and recorded. The pre-test took five days, after which a phonemic awareness and phonics intervention commenced. The pre-test offered insight into each learner's unique needs that were incorporated into the intervention. The post-test took a further four days following the intervention.

3.8.3 Phonemic Awareness and Phonics Intervention

The phonemic awareness and phonics intervention was a well thought out plan by the researcher after extensive review of the pre-school and Class One syllabi and other official documents including textbooks. The intervention package was subjected to scrutiny by pre-school teachers before being pilot tested, revised, and implemented. Phonemic awareness and phonics intervention was conducted three times a week. Each session lasted between 15 and

20 minutes for a period of six weeks. This period was deemed enough for the intervention to have a substantial effect on the experimental group. The time frame was flexible enough to enable the researcher carry out other professional and personal duties.

Twenty-five pupils participated in the phonemic awareness and phonics intervention. A weekly plan (Appendix II) was prepared and followed. In each lesson, several activities were done. These activities included learning letter names and sounds, decoding, blending, sound isolation, sound addition and substitution activities and sound segmentation activities. When learning letter names, the researcher displayed each letter and said their names and sounds. For example, m /m/ then asked the pupils to repeat the letter names and their sounds. Pupils were also involved in several activities of matching sounds to words. For example, sound /m/ is found in the word 'matching.' After the children had learned the letter names and sounds, more practice was done using flash cards.

After matching sounds to words, students were guided through blending activities. This was done in order to help them blend a series of orally presented sounds to form a word. For example, given the separate sounds /s/, /a/, /t/, the pupils would say *sat*. This continued as pupils changed the sounds at the beginning, the middle, and the end to form different words (sound addition and sound substitution). For example:

| | | |
|----------------|---------------|---------------|
| /b/, /a/, /t/, | /b/, /a/, /t/ | /b/, /a/, /t/ |
| /c/, /a/, /t/ | /b/, /e/, /t/ | /b/, /a/, /g/ |
| /f/, /a/, /t/ | /b/, /i/, /t/ | /b/, /a/, /d/ |

Segmenting spoken words sound by sound was the next and most abstract level of phonemic awareness. This was necessary in preparing for letter-by-letter sounding out or phonics. The difference here is that the segment, the blend, and individual sounds are spoken words. This final stage of phonemic awareness development helped the pupils to use phonemic segmentation and blending in a more advanced way (phonemic manipulation). The pupils were guided to segment words into constituent sounds by writing words on the chalkboard and asking them to break the words into their beginning, middle and ending sound. For example, pupils segmented the word 'pen' and broke it to /p/, /e/, /n/. A sample of an intervention lesson plan is shown in Appendix V.

3.9 Data Analysis

The data collected was screened and cleaned for any inconsistencies. Specifically, a physical inspection of the preliminary data analysis (frequencies) was done to determine whether or not there were any outliers that could have skewed study findings. Upon completion of data collection and cleaning, data were analyzed using the Statistical Package for Social Sciences (SPSS) programme version 17.0.

The data obtained from pre- and post-tests were analyzed using Analysis of Variance (ANOVA), a parametric statistic that helped to determine group differences. The choice of Analysis of Variance was because more than two means were being compared. Within-groups analyses were performed for pupils with- and without pre-school education. Their scores on pre- and post-tests was compared separately within each group. Between-groups analyses were performed for both pupils with- and without pre-school education for all the

scores before and after the phonemic awareness intervention. Data from archival documents (such as entry tests, exercise books and progress records) were analyzed and their results used to corroborate the findings of the pre- and post-tests. Results were reported based on whether or not they were statistically significant.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents analysis and interpretation of the findings of the study of the impact of phonemic awareness and phonics intervention on children's reading achievement. It includes results of the pre-and post-tests on phonemic awareness and phonics items as well as other findings from archival data such as entry examination results in reading, class assignments done in exercise books and pupils' progress records. The research used mixed-method approach to analyze quantitative and qualitative data. The difference in performance of pupils with- and without pre-school education in reading activities before and after phonemic awareness and phonics intervention was measured by pre-and post-tests and were analyzed quantitatively. ANOVA test of significance was used to measure the difference in the achievement of the treatment group. Documentary analysis of secondary data provided information that corroborated the findings from the primary data.

4.2 Analysis and Interpretation of Findings from the Pre-Test

The purpose of the pre-test (Appendix I) was to gauge the participants' knowledge in phonemic awareness and phonics and to eliminate initial group differences before the intervention. The pre-test was administered by the researcher with the help of a standard one teacher, to the 75 pupils selected from the study population. The first list of items of the pre-test focused on the participants' ability to break a word into unit sounds (phonemes), while the second list of items tested the ability of the participants to hear and identify specific sounds in words and write them down correctly. The results of the pre-test showed that the

pupils with pre-school education (Control Group 1) had a high score in phonemic awareness and phonics compared to the ones who had no preschool experience as shown by the mean scores in Table 4.1 below.

Table 4.1: Pre- Test Results

| | N | Mean | Std Deviation | Std Error | 95% Confidence Interval for Mean | | Minimum | Maximum | Between-Component Variance |
|--------------------|----|---------|---------------|-----------|----------------------------------|-------------|---------|---------|----------------------------|
| | | | | | Lower Bound | Upper Bound | | | |
| Control Group 1 | 25 | 27.5200 | 5.43998 | 1.0880 | 25.2745 | 29.7655 | 17.00 | 36.00 | |
| Control Group 2 | 25 | 1.9200 | 2.03961 | .40792 | 1.0781 | 2.7619 | .00 | 8.00 | |
| Experimental Group | 25 | 1.8800 | 1.50886 | .30177 | 1.2572 | 2.5028 | .00 | 5.00 | |
| Total | 75 | 10.4400 | 12.63012 | 1.4584 | 7.5341 | 13.3459 | .00 | 36.00 | 218.3148 |

KEY

- Control Group 1 – pupils with pre-school education
- Control Group 2 – pupils without pre-school education who did not receive the intervention
- Experimental Group – pupils without pre-school education who received the intervention.

From Table 4.1, out of 37 marks, pupils with pre-school education performed better on phonemic awareness and phonics items-with a mean score of 27.52 compared to the other two groups without pre-school education (that is, Control Group 2, which had mean scores of 1.92 and Experimental Group, which had a mean score of 1.88 respectively).

Analysis of Variance (ANOVA) was used to determine whether or not the pre-test mean scores recorded in Table 4.1 were statistically significant. The results are shown in Table 4.2 below.

Table 4.2: Results of ANOVA in Pre-Test

| Variations | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|---------|-------|
| Between Groups | 10939.760 | 2 | 5469.880 | 455.444 | 0.000 |
| Within Groups | 864.720 | 72 | 12.010 | | |
| Total | 11804.480 | 74 | | | |

From Table 4.2 above, between groups difference was statistically significant at the 0.05 alpha level ($df = 2, F = 455.4, p = 0.000$). The pre-test results indicate therefore that before the intervention, pupils with preschool education performed much better than those without pre-school education. The two groups consisting of pupils without pre-school education were nearly at the same level on the pre-test (i.e., the difference was very little – $m = 0.04$).

Those with preschool education were able to break words into their constituent sounds (phonemes). They were also able to write most of the words correctly after listening to them and identifying specific sounds. On the other hand, pupils without pre-school education exhibited very little or no knowledge at all in phonemic awareness and phonics skills.

From the pre-test mean scores and subsequent Analysis of Variance (ANOVA), pupils with pre-school education performed better in phonemic awareness and phonics skills. They appeared to have a head-start in these skills which is a predictor of future reading achievement and success compared to those without pre-school education.

4.3 Analysis and Interpretation of Findings from Post-Test

The post-test was administered to all the participants in the control and experimental groups. The purpose of the post-test was to gauge the impact of the phonemic awareness and phonics intervention on children’s reading achievement. Specifically, the post-test sought to determine whether pupils without pre-school education who were exposed to the six-week treatment would improve their scores in reading. The results of the post-test are shown in the Table 4.3.

Table 4.3: Post-Test Results

| | N | Mean | Std Deviation | Std Error | 95% Confidence Interval for Mean | | Min | Max | Between – Component Variance |
|--------------------|----|---------|---------------|-----------|----------------------------------|-------------|-------|-------|------------------------------|
| | | | | | Lower Bound | Upper Bound | | | |
| Control Group 1 | 25 | 29.8400 | 4.63393 | .92679 | 27.9227 | 31.7528 | 17.00 | 35.00 | 209.96453 |
| Control Group 2 | 25 | 2.5600 | 2.43379 | .48676 | 1.5554 | 3.5646 | .00 | 8.00 | |
| Experimental Group | 25 | 7.6400 | 3.28988 | .65798 | 6.2820 | 8.9980 | 3.00 | 3.00 | |
| Total | 75 | 13.3467 | 12.43414 | 1.43577 | 10.4858 | 16.2075 | .00 | 35.00 | |

KEY

- Control Group 1 – pupils with pre-school education
- Control Group 2 – pupils without pre-school education who did not receive the intervention.
- Experimental Group – pupils without pre-school education who received the intervention

From Table 4.3, pupils with pre-school education had a mean score of 29.84, followed by pupils without pre-school education who received phonemic awareness and phonics intervention with a mean score of 7.64, and pupils without pre-school education and who did not receive the intervention got a low mean score of 2.56. Analysis of Variance (ANOVA) was performed to determine whether or not the post-test mean difference between the groups was statistically significant. The results are summarized in Table 4.4.

Table 4.4: Post-Test Analysis of Variance (ANOVA) Results

| | Sum of Squares | df | Mean Squares | F | Sig. |
|----------------|----------------|----|--------------|---------|-------|
| Between Groups | 10523.707 | 2 | 5261.853 | 413.018 | 0.000 |
| Within Groups | 917.280 | 72 | 12.740 | | |
| Total | 11440.987 | 74 | | | |

From Table 4.4 above, post-test results show that between group mean difference was statistically significant ($df = 2$; $F = 413.008$, $p = 0.000$). Results of the post-test showed that pupils with pre-school education were still in the lead followed by those pupils without pre-school experience who had received the intervention. The group at the bottom was that of pupils without pre-school education and who had not received any intervention.

4.4 Comparisons of the Scores of the Two Achievement Tests

A comparison of the two achievement tests indicates that there was progress in the performance from pre- and post-test. Compared to the pre-test results, there was an improvement in the post-test results as shown in Table 4.5.

Table 4.5: Pre-test and Post-test scores

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Min | Max | |
|-------------------------|-----------|------|----------------|------------|----------------------------------|-------------|---------|-------|-------|
| | | | | | Lower Bound | Upper Bound | | | |
| Control Group1 Score | Pre-test | 25 | 27.5200 | 5.43998 | 1.08800 | 25.2745 | 29.7655 | 17.00 | 36.00 |
| | Post-test | 25 | 29.8400 | 4.63393 | 0.92679 | 27.9272 | 31.7528 | 17.00 | 35.00 |
| | Total | | 28.6800 | 5.13666 | 0.72643 | 27.2202 | 30.1398 | 17.00 | 36.00 |
| Control Group2 Score | Pre-test | 25 | 1.9200 | 2.03961 | 0.40792 | 1.0781 | 2.7619 | 0.00 | 8.00 |
| | Post-test | 25 | 2.5600 | 2.43379 | 0.48676 | 1.5554 | 3.5646 | 0.00 | 8.00 |
| | Total | | 2.2400 | 2.24572 | 0.31759 | 1.6018 | 2.8782 | 0.00 | 8.00 |
| Experimental Group | Pre-test | 25 | 1.8800 | 1.50886 | 0.30177 | 1.2572 | 2.5028 | 0.00 | 5.00 |
| | Post-test | 25 | 7.6400 | 3.28988 | 0.65798 | 6.2820 | 8.9980 | 3.00 | 14.00 |
| | Total | | 4.7600 | 3.85746 | 0.54553 | 3.6637 | 5.8563 | 0.00 | 14.00 |

KEY

- Control Group 1 – pupils with pre-school education
- Control Group 2 – pupils without pre-school education who did not receive the intervention.
- Experimental Group - pupils without pre-school education who received the intervention.

From Table 4.5, pupils with pre-school education had a mean score of 27.52 in the pre-test and 29.84 in the post-test. There was an improvement of 2.32 in their mean scores. The pupils without pre-school education who did not receive the intervention moved from a mean score of 1.92 in the pre-test to 2.56 in the post-test. This was a difference of 0.64. The pupils without pre-school education who received the intervention had a mean score of 1.88 in the pre-test and 7.64 in the post-test. This was a mean difference of 5.76. The total mean score for the three groups was 10.44 in the pre-test and 13.35 in the post-test. The mean difference between the pre- and post-test for all the groups was 2.91. Analysis of Variance (ANOVA) was performed to determine whether or not the mean difference between pre-test and post-test of each group was statistically significant. The results are summarized in Table 4.6.

Table 4.6: Pre-test and Post-test Analysis of Variance (ANOVA) Results

| | Sum of Squares | df | Mean Square | F | Sig |
|---------------------------|----------------|-----|-------------|--------|-------|
| Control Group 1 Score | | | | | |
| Between Groups | 67.2800 | 1 | 67.280 | 2.635 | 0.111 |
| Within Groups | 1225.600 | 48 | 25.533 | | |
| Total | 1292.880 | 49 | | | |
| Control Group 2 Score | | | | | |
| Between Groups | 5.120 | 1 | 5.120 | 1.016 | 0.319 |
| Within Groups | 242.000 | 48 | 5.042 | | |
| Total | 247.120 | 49 | | | |
| Experimental Group Scores | | | | | |
| Between Groups | 414.720 | 1 | 414.720 | 63.316 | 0.000 |
| Within Groups | 314.00 | 48 | 6.550 | | |
| Total | 729.120 | 49 | | | |
| Combined Group Scores | | | | | |
| Between Group | 316.827 | 1 | 316.827 | 2.017 | 0.158 |
| Within Group | 23245.467 | 148 | 157.064 | | |
| Total | 2356.293 | 149 | | | |

KEY

- Control Group 1 – pupils with pre-school education
- Control Group 2 – pupils without pre-school education who did not receive the intervention.
- Experimental Group – pupils without pre-school education who received the intervention.

From Table 4.6, the mean difference between the pre- and post-tests of pupils with pre-school education (that is, Control Group 1) was not statistically significant ($df=48$; $F=2.635$; $p=0.111$). The mean difference between the pre- and post-tests of pupils without pre-school

education and who did not receive intervention (that is, Control Group 2) was also not statistically significant ($df=48$; $F=1.016$; $p=0.319$). However, the mean difference between the pre- and post-tests of pupils without pre-school education who received intervention (that is, Experimental Group) was statistically significant ($df=48$; $F=63.316$; $p=0.000$). The mean difference between the pre- and post-tests of all the groups combined (that is, Control Group 1, Control Group 2 and Experimental Group) was not statistically significant ($df=148$; $F=2.017$; $p=0.158$).

It is understandable why pupils with pre-school education were in the lead in mean scores on the pre- and post-tests because they may have spent a year or more in pre-school. The higher mean score of pupils with pre-school education could be attributed to the knowledge of phonemes and phonics (an integral part of the pre-school syllabi) by the time of admission to standard one. The improvement in their mean scores, though not statistically significant, could be attributed to maturation. The low performance of the control group consisting of pupils without pre-school education was due to lack of phonemic awareness and phonics by the time they got to standard one and a lack of intervention on these skills. The improvement in their performance, though statistically not significant, could be attributed to maturation.

4.5 Analysis of Archival Records Secondary Data

Secondary data on the 75 pupils participating in the study were also analyzed. The pre-school and standard one syllabi were used to determine the aspects of phonemic awareness and phonics which were included in the intervention. The results of the entry examination of the

pupils were used together with the pre-test to determine the pupils' threshold level of performance in reading. The results of the entry examination are shown in Table 4.7.

Table 4.7 Entry Examination Results

| | N | Mean | Std. Deviation | Std. Error Mean |
|--------------------|----|--------|----------------|-----------------|
| Control Group 1 | 25 | 8.1200 | 1.23558 | 0.24712 |
| Control Group 2 | 25 | 1.3600 | 1.11355 | 0.22271 |
| Experimental Group | 25 | 1.2400 | 1.09087 | 0.21817 |

KEY

- Control Group 1 – pupils with pre-school education
- Control Group 2 – pupils without pre-school education who did not receive intervention.
- Experimental Group – pupils without pre-school education who received the intervention.

From Table 4.7, out of 10 items, the pupils with pre-school education were leading with a mean score of 8.12. The other two groups consisting of children without pre-school scored 1.36 and 1.24. This showed that those with pre-school education were better equipped with reading materials, which are phonemic awareness and phonics.

Upon examination of pupils' class work in their English language exercise books, it was noted that pupils with pre-school education performed better at the beginning of the intervention period than those without pre-school education in exercises that involved filling in blank spaces, spellings and dictation respectively (Appendices III and IV) for samples of

pupils' work. However, towards the end of the study, an improvement was noted in the class work of the pupils without pre-school education and who had received the intervention.

4.6 Summary

After receiving the intervention for only six weeks, the pupils in the experimental group had the best improvement in their mean scores. This indicates that phonemic awareness and phonics intervention worked for the pupils in the experimental group. Maturity may have played a part, but it is held away by the mean scores of a comparable group of pupils without pre-school education and who did not receive intervention. This conclusion is made because the mean difference in their pre-and post-tests was not statistically significant. In other words, one can confidently say that the intervention had a positive impact on beneficiaries' reading scores based on the substantial improvement in their mean scores.

An improvement was also noted in the class work of the pupils without pre-school education who had received the intervention. This is a clear indication that if more time and attention is given to children without pre-school education they can improve on their reading and compete at the same level with those with pre-school education.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER STUDIES

5.1 Introduction

This section provides a summary of the findings of the study on the impact of phonemic awareness and phonics intervention on children's reading achievement. It also deals with conclusions from the study, recommendations on what should be done by various groups and suggestions for further studies.

5.2 Summary of the Findings

The aim of this study was to determine whether phonemic awareness and phonics intervention would boost the performance of pupils without pre-school education in reading activities. Results indicated that there was no statistically significant difference in performance of the pupils with pre-school education in reading activities before and after phonemic awareness and phonics intervention. Hence the first hypothesis which stated that there is no statistically significant difference in the performance of pupils with pre-school education in reading activities before and after phonemic awareness and phonic intervention was accepted.

For the second hypothesis, which stated that there is no statistically significant difference in the performance of pupils without pre-school education in the reading activities before and after the phonemic awareness and phonic intervention, the results indicate that there was no statistically significant difference in performance of the pupils without pre-school education

who did not receive the intervention in reading activities. So the hypothesis was accepted. On the other hand, results showed a statistically significant difference in their mean scores on the pre- and post- tests for the pupils who had no pre-school education but received the intervention. In this case, the hypothesis was rejected.

The third hypothesis, which stated that the performance of pupils with pre-school education is not different from that of pupils without pre-school education in reading activities before and after phonemic awareness and phonics intervention was rejected because the results showed that the performance of pupils with pre-school education was higher than that of pupils without pre-school education in reading activities, in both pre- and post tests. Phonemic awareness and phonics intervention was done only for six weeks. There is a possibility that if it had been done for a longer period of time, results would have been better for all the groups.

5.3 Conclusion

From this study, pre-school education is very important in children's reading achievement. This is because at pre-school, a proper foundation of phonemic awareness and phonics is laid, and at standard one level, children do not have to strain or struggle with reading. For the pupils without pre-school education, phonemic awareness and phonics intervention are important starting stages for accelerating their acquisition of reading skills which are needed in reading.

5.4 Recommendations from the study

The following are the recommendation from the study based on the findings:

- Parents should be sensitized on the importance of pre-school education and the role it plays in equipping children with literacy skills which are essentials for learning to read. This might encourage them to enroll them in pre-school.
- Policy makers, in this case the Ministry of Basic Education, should put emphasis on compulsory pre-school education.
- The Government of Kenya should also consider making pre-school education free just like the primary school education, so as to ensure that many parents enroll their children.
- Standard one teachers should recognize the importance of phonemic awareness and phonics instruction in pupils' reading achievement and create time to help those who are weak in these skills. This will help pupils to make improvements and compete with those who had experience in reading before they joined standard one.

5.5 Suggestions for Further Study

This study sought to find out the impact of phonemic awareness and phonics intervention on children's reading achievement in only one standard one in one primary school in Kenya. Therefore, the results can not be generalized. Other researchers may replicate this research study by considering several factors such as length of the intervention (that is, have a longer period for the intervention) and sample sizes (that is, have larger samples) to ascertain whether or not results similar to those of the present study can be yielded.

REFERENCES

- Adams, M. J. (1990). *Beginning to read: thinking and learning about print*. Cambridge M.A: MIT Press
- Ball, E.W., and Blanchman, B. A. (1991). Does phonemic awareness training in kindergarten make a difference in early word recognition and developmental spellings? *Reading Research Quarterly*, 26, 49-60.
- Baron, M. & Morrow, M. I. (2003). *All children read*. USA: Allyn and Bacon.
- Begi, N. (2009). *Research, monitoring and evaluation*. Nairobi: Blesmo research and publication.
- Borg, W. R. and Gall, M. D. (1989). *Educational research: An introduction* (5th ed.). New York: Longman.
- Campbell, D. T., and Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Chicago: Rand MC. Nally.
- Clay, M. M. (1985). *The early detection of reading difficulties* (3rd ed.). Portsmouth, NH: Heinemann.
- Coolican, H. (1994). *Research methods and statistics in psychology*. London: Hodder and Stroughton.
- Cooper, R. D. and Emory W. C. (1995). *Business research methods*. Irwin: McGraw-Hill.
- Dechant, E. V. (1970). *Improving the teaching of reading* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
- Ehri, L. C. et al (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Panels' Meta-analysis. *Reading Research Quarterly*, 36, 250-287.
- Elbro, C., Borstrom, I. and Petersen, D. K. (1998). Predicting dyslexia from kindergarten: The importance of distinctness of phonological representation of lexical items. *Reading Research Quarterly*, 33, 36-60.

- Fraenkel, J. R., and Wallen, N. E. (1996). *How to design research in education*. (3rd ed.). New York: McGraw-Hill.
- Goodman, K. S. (1986). *What's whole in whole language?* Portsmouth NH: Heinemann.
- Goodman, K. S. (1968). *Study of children's behavior when reading orally (Final Report, Project No. 5425)*. Washington DC, U.S: Department of health, education and welfare.
- Goodman, K. S. (1976). *Behind the eye: What happens in reading*. In H. Singer and R. Ruddell (eds.). *Theoretical models and processes of reading*. (2nd ed. pp. 470-496). Newark, DE: International reading association.
- Gough, P. B. (1972). *One second of reading*. In J. F. Kavanagh and I. G. Mattingly (eds.). *Language by ear and by eye*. Cambridge, MA: MIT Press.
- Griffith, F., and Olson, M. (1992). *Phonemic awareness helps beginning readers break the code*. *The Reading Teacher*, 45, 516-523.
- Juel, C. (1988). *Learning to read and write. A longitudinal study of 54 children from first through fourth grades*. *Journal of Educational Psychology*, 80, 437-442.
- Kibui, A. W. (2006). *The Relationship between Proficiency in the English language comprehension and vocabulary among learners in Kenyan secondary schools*. *Unpublished Doctoral Thesis*. Nelson Mandela Metropolitan University. South Africa: Port Elizabeth.
- LaBerge, D., & Samwels, S. J. (1974). *Towards a theory of automatic information processing in reading*. *Cognitive Psychology*, 6, 293-323.
- LaBerge, D., and Samuel, S. J. (1976). *Towards a theory of automatic information processing in reading*. In H. Singer and R. Ruddell (eds.). *Theoretical models and processes of reading* (pp. 548-579). Newark, DE: International reading association.
- Lomax, R. G. and McGee, (1987). *Young children's concepts about print and meanings; Towards a model of word reading acquisition*. *Reading Research Quarterly*, 22, 237-256.

- Lundberg, I., Frost, J., and Petersen, O. P. (1988). Effects of an extensive program for stimulating phonological awareness in pre-school children. *Reading Research Quarterly*, 23, 264, 284.
- Lyon, C. R. (1997). Statement of Reid G. Lyon to the committee on education and workforce. Washington. DC: US House of representative (July 19, 1997).
- Mason, E. J., and Bramble, W. J. (1978). Understanding and conducting research. New York: Mcgraw-Hill.
- McCormick, S. (2003). Instructing students who have literacy problems (4th ed.). USA: Merrill Prentice Hall.
- Ministry Of Education, science and technology, (2002). Primary education syllabus (Vol. One) Nairobi: Kenya Institute of Education.
- Newman, J. M. (ed.). (19855). Whole language: Theory in use. Portsmouth NH: Heinemann.
- Pray, R. T. (1983). A comparison of good and poor readers in an adult, incarcerated population: *Unpublished Doctoral Dissertation*. Harvard University: Cambridge.
- Republic Of Kenya, Ministry Of Education, (2008). Early childhood development and education syllabus. Nairobi: Kenya Institute of Education.
- Reutzel, R., & Cooter, R. (2005). The Essentials of teaching children to read: What every teacher needs to know. Upper Sandel River: Merill/Prentice Hall.
- Rosenblatt, N. M. (1995). Literature as exploration. New York: Modern Language Association.
- Rumelhart, D. E. (1980). Schemata: The building blocks In cognition. In R. J. Spiro(ed.). Theoretical issues in reading comprehension. (pp 33-58). Hillsdale, NJ: Erlbaum.
- Rumelhart, D. E. (1976). Towards an interactive model of reading. In S. Dornic (ed.). Attention and performance (Vol.vi, Pp.573-603). Hillsdale, NJ: Erlbaum.
- Smith, F. (1988). Understanding reading (4th ed.). Hillsdale, NJ: Erlbaum.
- Smith, F. (1992). Learning to read. The never ending debates, Phi Delta, Kappan 74', 432- 441

- Smith, D. E. P. (1967). *Learning to learn*. New York: Harcourt Brace.
- Stanovich, K. E. (1986). Mathew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21, 360-407.
- Stanovich, K. E. (1980). Towards an interactive compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly*, 16, 36-71.
- Sulzby, E. and Teale, W. (1991). Emergent literacy. In R. Barr, M. L. Kamil, P. Mosenthal and P. D. Pearson (Eds.), *Handbook of Reading Research* (Vol. II pp. 727-758). New York: Longman.
- Temple, C., Ogle D., Crawford, A., & Freppon, P. (2005). *All children read*. USA: Allyn & Bacon.
- Tompkins, G. E. (2003). *Teaching reading and writing in pre kindergarten through grade 4*. USA: Merrill Prentice Hall.
- Torgesen, J. K. (2000). Individual difference response to early interventions in reading: The lingering problem of treatment resisters. *Learning Disabilities Research and Practice*, 15, 55-64.
- Vacca, L., Vacca, T., Gove, K., Burkey, L., Lenhart, A. & Mckeown, C. (2003). *Reading and learning to read* (5thed.). USA.
- Vellutino, F. R. And Denckla, M. B. (1991). Cognitive and neuropsychological foundations of word identification in poor and normally developing readers. In R. Barr, M. L. Kamil, P. Mosenthal and P. D. Pearson (eds.), *Handbook of Reading Research* (Vol. ii pp. 571- 608). New York: Longman.
- Vellutino, F. R. and Scanlon, D. B (1987). Phonological coding, phonological awareness, and reading ability: Evidence from longitudinal and experimental study. *Merrill Palmer Quarterly*, 33, 321-363.
- Weaver, C. A. (1988). *Reading process and Practice: From social psycholinguist, to whole language*. Portsmouth, NH: Heinemann.

Yopp, H. K. (1992). Developing phonemic awareness in young children. *The Reading Teacher*. Boston: Allyn & Bacon.

APPENDICES

Appendix I

Pre-Test/Post-Test

Test for assessing phonemic awareness in young children

Number Date

Score (number correct)

Directions: Today we are going to play a word game. I am going to say a word and I want you to break the word apart. You are going to tell me each sound in the word in order. For example, if I say “old” you should say “/o/-/l/-/d/.” let’s try a few together.

Practice items: (assist the child in segmenting these items as necessary) test, log, go, man.

Tests Items

(Circle those items that the pupil segments correctly; incorrect response may be recorded in blank line following the item).

1. dog
2. duck.....
3. last.....
4. no.....
5. bed.....
6. fog.....
7. bus.....
8. hat.....
9. red.....
10. man.....
11. sat.....
12. top.....
13. jug.....
14. bat.....
15. box.....

Dictation list

Number date

Score (number correct)

Identify the sounds in each word, and then write them down. I will collect and mark the written work will.

1. Clap
2. Dance
3. Slip
4. Zigzag
5. Talk
6. Police
7. Wait
8. Open
9. Box
10. Kitten
11. Boy
12. Pink
13. Fond
14. Soft
15. Pet

Appendix II

Weekly plan for sounds covered in each lesson

Week 1

| | |
|-----------------------|------------------------------|
| Lesson 1 | Sounds Covered a, d, m, s |
| Lesson 2 Day /time | a, d, m, s, t |
| Lesson 3 Day /time | a, d, n, s, t |
| | |

Week 2

| | |
|----------|------------------------------|
| Lesson 1 | Sounds Covered a, i, s, t |
| Lesson 2 | a, d, h, i, s, t |
| Lesson 3 | a, d, h, l, m, t |

Week 3

| | |
|----------|------------------------------------|
| Lesson 1 | Sounds Covered a, c, h, n, o, t |
| Lesson 2 | a, d, h, i, o, t |
| Lesson 3 | a, d, h, i, m, o |

Week 4

| | |
|-----------------------|------------------------------------|
| Lesson 1 Day/time | Sounds Covered a, t, h, i, f, o |
| Lesson 2 Day /time | a, d, f, i, m, o |
| Lesson 3 Day /time | a, f, h, i, n, o |

Week 5

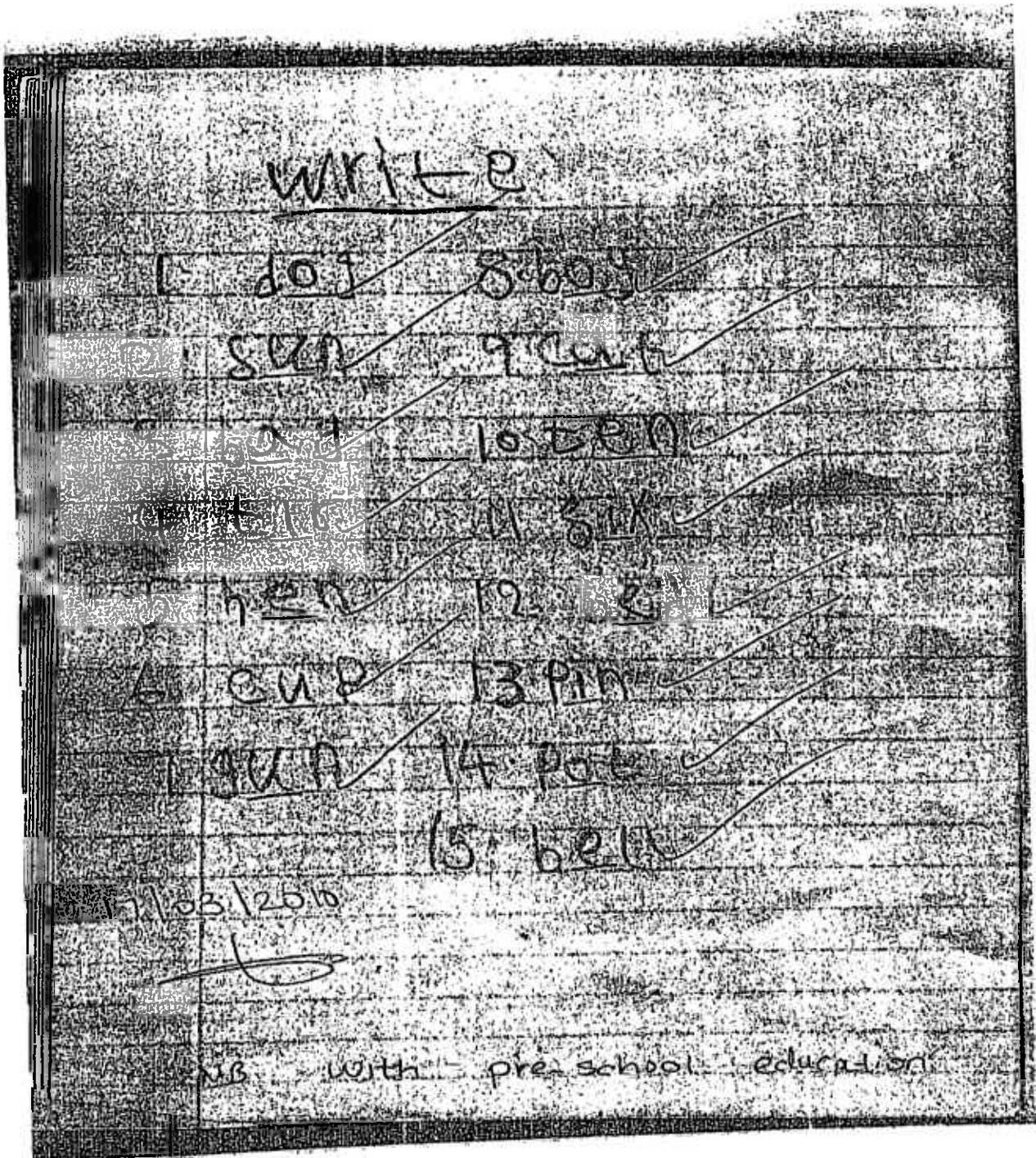
| | |
|-----------|------------------|
| Lesson 1 | Sounds Covered |
| Day/time | a, f, e, n, o, t |
| Lesson 2 | a, c, h, e, m, t |
| Day /time | |
| Lesson 3 | a, e, h, n, o, g |
| Day /time | |

Week 6

| | |
|-----------|------------------|
| Lesson 1 | Sounds Covered |
| Day/time | a, p, h, n, o, g |
| Lesson 2 | a, e, p, n, o, m |
| Day /time | |
| Lesson 3 | a, e, h, p, o, f |
| Day /time | |

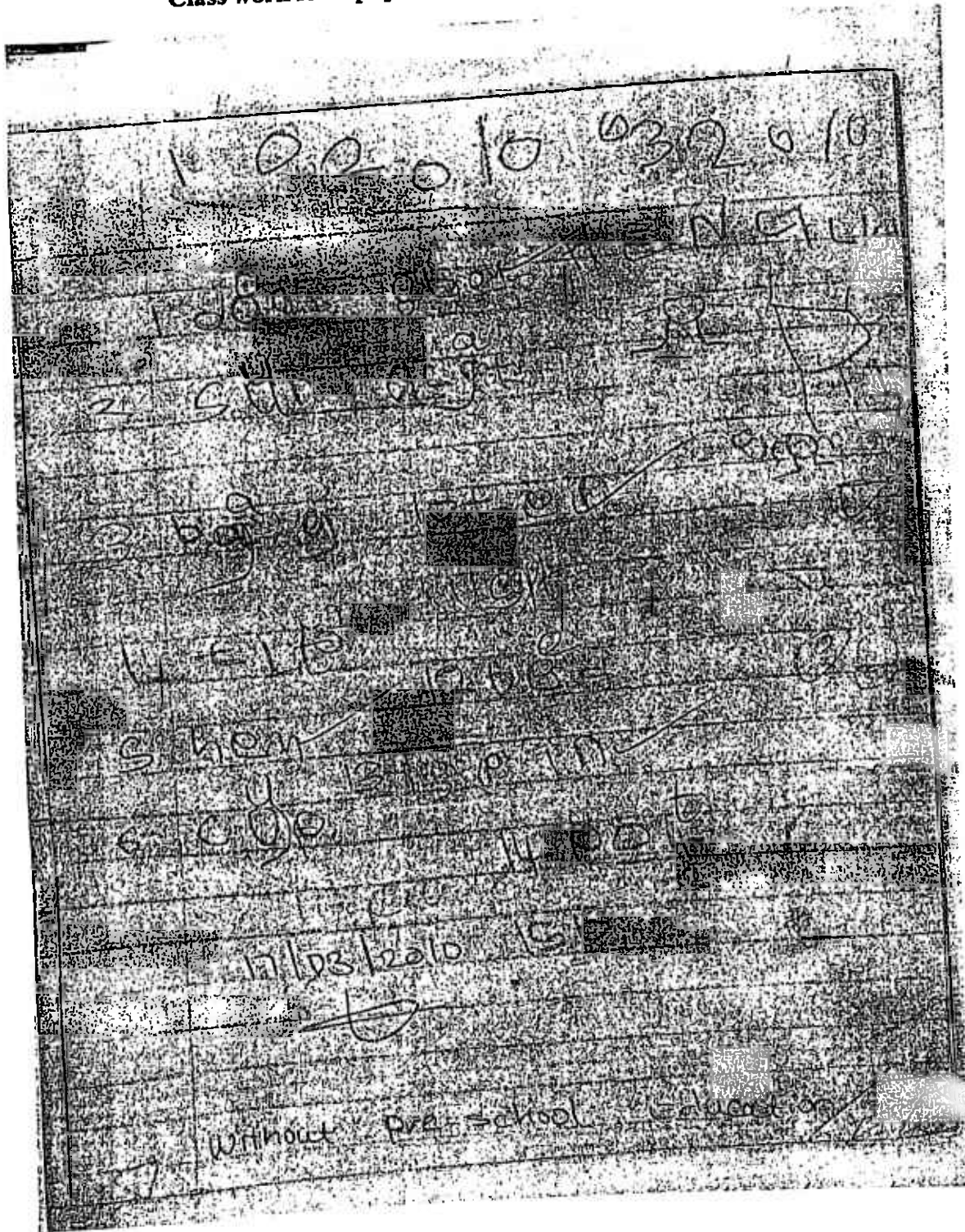
Appendix III

Class work for a pupil with pre-school education



Appendix IV

Class work for a pupil without pre-school education



Appendix V

Sample of an intervention lesson

Unit 1 Lesson 2 a, d, m, s, t

Letter Cards:
A, d, m, s, t

Letter Names and Sounds* (5-10 minutes)

1. Tell the class that they will learn the names and sounds of some letters.
2. Display each letter and say its name and sound. "t /t/"
3. Have the class repeat the letter name and its sound.
4. Practice or teach one multisensory option from the table below for each letter

| Letter | Action | Mouth | Write |
|--------|--------|--|-------------------------|
| a | --- | Mouth opens, chin drops | in air/on desk or floor |
| d | Dance | Tongue taps top of the mouth and vocal cords vibrate | in air/on desk or floor |
| m | march | Lips touch and stay shut (two lips, two bumps in the letter m) | in air/on desk or floor |
| s | sit | Thin stream of air | |
| t | talk | Tongue taps top of the mouth | |

Write

5. Practice the names and their sounds. Show the letter and ask random students to name it. If they don't answer immediately, give them clues such as doing the Action or exaggerating the mouth movement.
6. Have the class repeat the letter name and the letter sound.

Letter Cards:
A, d, m, s, t

Blending

Words:
Am, at, dad,

Mad, mat, sad,
Sat, tad

Decoding: Blending ** (5-10 minutes)

1. Display the letters of a word listed in Materials
 m a point to one letter at a time and say /m/.../a/. Tell the class to point to their letters and say the sounds with you as you repeat
 ma moves the /a/ closer to the /m/. Run your finger under the /ma/ and say: "/ma/"
 m a separate the a from the m again
 ma tell the students to put the a closer to the m and to put their fingers under the ma
 And say /ma/ as you do the same.
 ma t slide your finger under the ma. Say /ma/, holding the sound until you point to the t and say /t/. Have the students do the same with their letters
 mat move the t next to the ma. Slide your finger under mat and say, "mat. This word is mat." Have students move their t closer to the ma and read mat.
2. Repeat this procedure with five of the words listed in materials in any order.

Chalk
Chalkboard
Student letters:
a, d, d, m, s, t
word list:
mat mad sad
dad sad sat

make a word * Reading (sound substitution) (5-10 minutes)**

1. Write the word mat on the chalkboard or display letter cards. Read the word
2. Have the class read it and tell them that one letter will be changed to make a new word.
3. Change the t in mat to a d and have the class read the new word. (Mad).
4. Tell the students its their turn and that you will tell them which letter to use.
say, "change the d to s. what is the word?" (Sad)
5. Continue with the rest of the words in the order that they appear on the word list. The students should make each word with their own letters.
6. As each word is made, write in a column on the board.
7. When all words are completed have the class read the entire column.

Materials:
Chalk
Chalkboard

connected Text & Comprehension (2-3 minutes)

1. tell the students that they will read a sentence with new words.
2. Write the sentence I sat on the mat on the chalkboard
3. Point to each word as you read it
4. Have the class repeat the sentence

Appendix VI

Introduction letter from the University of Nairobi



UNIVERSITY OF NAIROBI
COLLEGE OF EDUCATION AND EXTERNAL STUDIES
SCHOOL OF EDUCATION

Telegram: "CEES"
Telephone: 020-2701902

P.O. BOX 30197, NAIROBI
OR P.O. BOX 92
KIKUYU

TO WHOM IT MAY CONCERN

Dear Sir,

RE: MITAI MAUREEN CHEROTICH- E57/72314/2008

This is to certify that the bearer of this letter has successfully completed the course work leading to Master of Education degree in Early Childhood Education of the University of Nairobi. She is undertaking her research from March 2010 to September 2010. Her thesis titled "Impact of Phonemic Awareness and Phonics Intervention on Children's Reading Achievement - A case Study of Shadrack Kimalel Primary School."

Any assistance accorded to her will be highly appreciated.

Yours faithfully,



Prof. P.O.O. Digolo
CHAIRMAN,
DEPARTMENT OF EDUCATIONAL COMMUNICATION & TECHNOLOGY.

Appendix VII

Permit from the ministry of education

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123.
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Date: 28th May 2010

Our Ref: NCST/RR1/12/1/SS/456/3

Ms. Maureen Cherotich Mutai
University of Nairobi
P. O. Box 30197
NAIROBI

Dear Sir,

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Impact of phonemic awareness and phonics intervention on children's reading achievement: A case study of Shadrack Kimalel Primary School Nairobi*" I am pleased to inform you that you have been authorized to undertake research in Dagoretti in Nairobi Province for a period ending 31st August 2010.

You are advised to report the Provincial Director of Education, Nairobi Province and the Director of City Education, Nairobi City Council and the Headteacher of Shadrack Kimalel Primary School before embarking on the research project.

On completion of the research, you are expected to submit two copies of the research report/thesis to our office.


P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to: