DIFFERENCES IN THE NUMBER OF MISPRONUNCIATIONS IN ENGLISH BY LUO CHILDREN

A THESIS

Presented to the Faculty of Education of Kenyatta University in partial fulfillment of the Requirements of the Degree of

MASTER OF EDUCATION

BY

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July, 1991

DECLARATION

This thesis is my original work and has not been submitted for a degree in any other University.

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

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ACKNOWLEDGEMENTS

It is with sincere gratitude that I acknowledge my indebtness to several people who substantially assisted in the successful completion of this Thesis. I gratefully acknowledge the guidance, advice, encouragement, constructive criticism of my thesis Supervisor Dr. B. G. Koech. If it were not for the confidence she created in me, the end of this thesis would not have been achieved. Dr. Koech's understanding, exemplary encouragement, sincere motherly help will never leave my memory.

I wish to thank Dr. S. K. Bali sincerely for the tremendous advice she constantly gave me in the statistical analysis of this work.

I am grateful also to other members of staff in the Educational Psychology Department who gave me encouragement. Of special mention here are Mr. H. N. Gatumu, Mrs. R. W. Kang'ethe and Dr. Ndambuki.

Special thanks to Mr. J. Osiako of Kenya Institute of Mass Communication for allowing me to use the "UHER" machine for data collection; Mr. Ely Rop, Manager of Ushindi wa Msalaba Studio for allowing me to use the studio for transferring the tapes from "UHER" machine to normal tapes; the Headmistress of Koru Primary School, Mrs. Songo; the Headmaster of Achego Primary School, Mr. Boniface Omolo for accepting my request to use the pupils in their schools for the research; and the Headmaster of Achego Girls' Secondary School, Mr. Paul Opuk for giving me a secluded, quiet room for data collection.

I owe very special thanks to Mr. Onditi, Miss Patricia and Miss D. Ooko, of Linguistics Department for their help in linguistic problems.

I must register my appreciation to my two classmates, Miss Mary Mwangi and Mr. Macharia Mwangi for their tireless encouragement. To be mentioned also are special members of Masters Programme who also continually gave moral support. These were R. Kiungu, R. Mosoti, J. Akoleit, K. Wanjau and J. Kibuga.

I must sincerely thank Miss Janet Muhoro for typing this work in such a short time. May God help her in her future endeavours.

Finally, I must thank all those who constantly remembered me in prayer and the Kenya Government for offering me the Scholarship.

DEDICATION

This thesis is dedicated to the following people:-

First, to my parents, father the late Mr. Wellingtone Odengo, mother Mrs. Norah Auma Odengo and brother Moses Owino Odengo who eked a meagre living from the soil but ensured an education for me.

Secondly, to my beloved husband, Michael Fredrick Olaly, who has ever since our marriage, lived upto his promise of allowing me to study with a word "the sky is the limit, Nyako". His continuous encouragement, ceaseless financial support and high understanding in times of depression have been exemplary.

Last but not least, to my children, Lornah, Elizabeth, Norah, Charles, Wellingtone, Alfred and late Mark Francis, this is a challenge.

ABSTRACT

The purpose of the study was to investigate differences in the number of mispronunciations of English words on a list by Luo students. The study further attempted to establish some of the factors which may be related to the differences like grade level, ability level and mother tongue influence.

The sample consisted of 120 children from standards Two, Four and Six. The children were from two primary schools in Muhoroni Division of Kisumu District.

The Luo Pronunciation of English Words (LPEW) Test composed of 40 words was individually administered to each child under specific instructions. The (LPEW) list consisted of three categories; easy words for easy recognition by most children; difficult words as a challenge for the brighter children, and words with mother tongue influence.

The analysis of the data revealed that there were significant differences in mispronunciation between children of Standard Two and Standard Four and Standards Two and Six. There was no significant difference in mispronunciation between children of Standards Four and Six.

Significant differences in mispronunciation were obtained between children of different abilities in Standards Two only. There was, however, no significant difference in mispronunciation by children of different abilities in Standards Four and Six.

There were significant differences in the number of mother tongue related mispronunciation between children of Standards Two and Four, Standards Two and Six and Standards Four and Six. When it came to ability levels, there were significant differences among the children of Standards Two and Four but not Six.

The recommendations from this study include the following:

1) it would be necessary to incorporate reading tasks and teaching of reading methods that favour pronunciation, and

2) the teachers should be prepared to devote some of the lesson time to pronunciation and by his whole attitude to the subject should get the student to feel that there is a matter worthy of reviewing his close attention.

These recommendations imply that there should be occasions when other aspects of English, such as grammar or spelling should be allowed for the moment to take second place.

The Luo Pronunciation of English Words (LPEW) Test which was developed for this study was found to be reliable and valid but needs to be validated for use with larger samples. It can also be used for further research with other ethnic groups but might need refinement.

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CHAPTER ONE: BACKGROUND OF THE STUDY

In a multi-lingual society like Kenya, different mother tongues can influence the way in which a second or even a third language is spoken and pronounced during reading. Garvie (1976) noted that children for whom English is a second language will naturally transfer the sounds from their mother tongue to their new form of speech, and often the familiar sounds replace the usual English phonemes. Gouala (1981) also found out that when learning another language, students encounter certain pronunciation and structural difficulties because of their native language. This has an effect on their ability to acquire English since the student may attempt to transfer structure to vocabulary from their native language and may consequently make errors in English.

Many teachers of English as a mother tongue, tend to regard fluency and the ability to manipulate the spoken and written language as higher in priority than a slavish adherence to rules of spelling. This attitude may be useful to the teacher of foreign or second languages as well, but what is probably more important is helping the student to avoid making errors in the first place (Norrish, 1983).

In Kenyan Schools, for the primary age children, the 8-4-4 Syllabus took a broad based perspective of teaching basic literacy skills within two or more languages. More specifically, within the 8-4-4 system, in the urban areas literacy skills are taught in English and Kiswahili at the same time. In rural areas, mother tongue is taught and subsequently dropped at the end of Standard Three, since it is believed that by that time, the student will have acquired the necessary basic skills of communicating in English or Kiswahili, which have been taught as subjects. Nevertheless, if a teacher feels like explaining a point to the students which they cannot comprehend in either English or Kiswahili, the teacher can explain it in mother tongue (Merrit, 1987). With this mixture of mother tongue, Kiswahili, which are both phonics oriented, and English, which is not phonics oriented, there is a problem.

Within the three languages (English, Kiswahili and mother tongue) in Syllabus for Kenya Primary Schools Volume I (1986), the

emphasis is placed on the need to develop all the four language areas in each language taught: listening, speaking, reading and writing. Specifically, the child should acquire: -

(a) Listening skills to enable him to listen, understand and respond appropriately.

(b) Speaking skills to enable him to use correct pronunciation, stress and intonation so that his speech is understood.

(c) Reading skills to enable him read and understand instructions, to read for information and for pleasure.

(d) Writing skills to enable him to express his ideas legibly and meaningfully in written English.

In reading, there are obvious benefits that accrue when children learn how to be good oral readers. Some of these are "improved pronunciation, phrasing interpretation, rhythm, flexibility and overall appreciation of literature" (Dechant, 1964, p.22).

Munkres (1972) also noted that pronouncing words clearly and correctly plays an important part in effective communication. Mitchell and Green (1978) also postulated that the ability to pronounce new words is probably one of the most important skills that has to be acquired by a child in the process of learning how to read.

Oral reading is a most important tool in diagnostic values. Vellutino (1979, p.8) has stated that "Oral reading is one of the significant indicators of specific or primarily reading disability". He therefore recommends the use of oral reading tests, administered individually for greater reliability in identifying reading disability. Consequently, oral reading helps to test for fluency, accuracy, enunciation, pronunciation, among others.

Standard pronunciation plays a definite role in learning a "living" language. Since in modern language learning or teaching methodology, the oral-aural aspect is at least as important as reading,

comprehension and written expression, importance must be put to the mastery of the sound system of the target language (Gouala, 1981).

Standard pronunciation in a second or third language is difficult for multi-lingual learners. Specifically, Muthiani (1984) pointed out a problem multi-lingual children have in learning English. He stated that it is never easy for a learner of English as a second language to pronounce all the words correctly.

> "The sounds of a foreign language may be difficult for a learner either because they are unfamiliar to those of his first language or they happen to be of slightly different quality."

However, this problem of mispronunciation should not be ignored as there is a need for some minimal level of accuracy in pronunciation as Muthiani (1984) noted. He further added that there is a need to provide an adequate distinction or contrast between individual sounds in a language for at least two reasons: -

(a) "to avoid misunderstanding or even comedy. A speaker telling his audience in rainstorm to keep the "huts" instead of "hats" on their heads, or a housemaid reporting that she had given the children their "lice" rather than "rice".

(b) to avoid misspelling. If pupils do not distinguish between "huts" and "hats" in their speech, they may well write one when they mean the other". (Cited in Ayot et al, 1984, p. 56).

1.0. STATEMENT OF THE PROBLEM

The importance of reading as a literacy skill cannot be underscored. We take much of our reading for granted, reading information on the side of a fertilizer bag, glancing at newspapers, reading letters, street names, immunization messages and many others.

Correct oral pronunciation in reading is very crucial but difficult as already mentioned in the introductory part especially in a multi-lingual society like Kenya. The problem is more confounded by the

fact that in a rural Kenyan school setting, three languages: English, Kiswahili and mother tongue are taught simultaneously in Standard One, Two up to the end of Standard Three, after which mother tongue is dropped at the end of Standard Three.

To achieve the goal of standard pronunciation in reading, insight into possible factors underlying the accuracy is required. Several researchers have identified different factors which contribute to standard reading. It is hoped that these factors would also affect pronunciation. Some of these include physical factors, ability factors, personality factors, language factors and educational factors.

Developmental studies have shown that physical factors like visual deficiencies, auditory deficiencies, general health and maturational factors are possible causes of reading problems, and may be related to pronunciation problems (Bond, Tinker, Wasson, 1984; Bryan and Bryan, 1978; Durrel and Murphy, 1953; Dechant and Smith, 1977; and Black, 1973). Regarding maturation as a factor, there were inconsistencies in that some researchers looked at children of different ages while others used children of the same age (Monroe, 1932; Madden and Pratt, 1974).

Similarly, studies have shown that there is a positive correlation between intellectual ability and the ability to decode standard pronunciation of English words (Reid and Hreska, 1981; and Smith, 1978). There are, however, in research, examples of children with low intellectual ability who succeed without any great difficulties in attaining elementary reading fluency: while some children with normal or superior intelligence, fail in this respect (Kaufman, 1979).

Studies have also shown that personality factors which include motivation, risk taking and emotions can also contribute to the way a child pronounces words (Butkowsky and Willows, 1980; Ostrove, 1978; Valie and Frioeze, 1976; Weiner, Nierenberg and Goldstein, 1976). It was found out that sometimes it is necessary for a child to continually take a risk in trying to pronounce new words instead of giving up too soon.

Language factors have also been found to contribute to standard or non-standard pronunciation (Seigler and Gynther, 1960; Crane, 1950; Thayer, 1970; Klein, Altman, Dreizen, Friedman and Powers, 1981; Austien, Bush and Huebner, 1961). Examples of quotations below are common problems of mispronunciation which are usually caused by mother tongue influence: -

> "Bling that book here", said Jane.
>
> "Help me with a siling", asked John.
>
> "Cut the glass behind my house", requested the Lecturer.
>
> "I gave the child some lice when he was hungry", said the maid.

Education factors may also contribute to mispronunciation. Some of these include school administrative policies, methods of teaching, lack of readiness for beginning reading instructions, lack of adjustment of teaching to individual differences, role of the teacher and role of the Library Media Centre (Cole, 1938; and Spache, 1965).

In the Kenyan Schools, students are taught using the "Look and Say Method", and this makes it difficult for them to pronounce easily. Furthermore, both English and Kiswahili are taught simultaneously and this confounds the problem because Kiswahili is phonics oriented while English is not. Sounds learnt from one language can easily affect the way one tries to pronounce English words in the standard form because in this study, the Luo sounds are different from English sounds and Kiswahili sounds.

Because of their theoritical orientations, most studies that have focussed on oral reading have looked at comprehension in context and not mispronunciation in list of words (Spache, 1981; and Monroe, 1932). Furthermore, these studies on comprehension of context did not focus on Mother Tongue influence. These variations in methodology might have led to conflicting results in studying fluency in oral reading or mispronunciation, various methods of testing could be employed. In this instance, the list of words was used to test

children's ability in Standard Pronunciation as it was deemed appropriate since it did not require the use of complicated skills.

The degree to which mispronunciation may depend upon mother tongue influence has not been extensively investigated in Kenya. Available evidence is quite scanty. As we have seen, the maturation factor of the children is also not consistent. Also the intellectual ability factor as a contributor to word decoding is contradictory.

The purpose of this study is to investigate the preceding issues in the Kenyan context. Generally, the study addresses itself to the following research questions: -

1. To what extent are there mispronunciations among the primary school children?

2. Does extent of schooling influence pronunciation in oral reading?

3. Does intellectual ability influence pronunciation?

4. Does mother tongue influence pronunciation among children exposed to different years of schooling?

5. Does mother tongue influence pronunciation among children of different intellectual ability?

1.1. SIGNIFICANCE OF THE STUDY

Since a teacher needs to know the extent and possible causes of mispronunciation and mispronunciation differences amongst the students in his/her class, this basic exploratory study will identify areas of further research. Studies concerning pronunciation and mother tongue influence in Kenya still need a lot of investigation. Only a small Luo community was investigated and this leaves a lot of room for further research in future.

An awareness of some of the factors which may account for the children's mispronunciation differences, like mother tongue influence, will be of much help to educational planners because they will know that there are some ethnic groups which have difficulty in pronouncing some words properly due to their mother tongue influence and therefore need a lot of practice in pronunciation in the early stages. For instance, the Luos will call "sh" as "s" in shilling, not because of carelessness, but because the Luos have some sounds which do not appear in English. For example [ʃ] is not present in the Luo mother tongue. Nevertheless, the teacher will need to give more practice to such students to help them overcome the problem.

Students who move with their parents to different districts on transfer will encounter problems too when they meet other ethnic groups, whose pronunciation differs with their own. It is therefore necessary that a lot of stress should be put in standard pronunciation in our schools. The issue is not "standard English or not standard English" but there are deviations from the norm which impair communication. For example, if a child tells another not to say "rice" instead of "lies", the child will be confused.

CHAPTER TWO

A REVIEW OF RELATED LITERATURE

2.0. INTRODUCTION.

This study is an exploratory investigation which was designed to find out the effect of mother tongue on mispronunciation in English words in formal schooling. The study therefore calls for a diversified review of literature which is organized in four sections.

The first section addresses itself to the definition of reading as a language process, the theoretical perspectives of reading, with particular attention to the one related to this study. One aspect of reading, which is pronunciation, and its importance and finally the types of mispronunciations are then discussed. The second section covers the factors which influence pronunciation. These are physical, intellectual ability, personality, language and educational factors. The third section is a summary of the first two sections. The fourth section is to cover methodological issues which are related to studying pronunciation and the research hypotheses.

SECTION 1

2.1.1. READING DEFINITION

Reading being as complex as it is, many authors have different definitions of it. As such, literature is full of many descriptions and definitions of reading as there are "reading experts". According to Gibson (1965), reading is "receiving communication making discriminative responses to graphic symbols, decoding graphic symbols to speech and obtaining meaning from the printed page". Tinker and McCullough (1962) considers reading to involve "the recognition of printed or written symbols which serve as stimuli for the recall of meanings built up through past experience, and the construction of new meanings through manipulation of concepts already possessed by the reader". (p.30).

Strang (1968) and Kirk (1962) viewed reading as a communication process which involves the abilities to decode, decipher the author's printed words, to invest them with meaning acquired through the reader's first hand experience and previous reading and to express the ideas thus acquired through speaking, drawing, writing or other motor responses. These above definitions convey the same meaning but in different words. That is, for a child learning to read, he begins with the smallest item in the process and builds from there until he ultimately reaches meaning. This points to the accumulated evidence on complex human learning, which strongly suggests that prior to mastering a complex higher-order skills, numerous sub-skills must be acquired (Gagne,1962; Hilgard and Marquis, 1961, p. 127). In reading, the sub-skills refer to the left-right visual processing of letters, letter-sound knowledge and sound blending. Consequently, this study assumes that knowledge of phonemes and words is paramount to pronunciation. This then leads to a more in-depth look at the view points of reading with special attention to the perspective of reading for this study.

2.1.2. THEORETICAL PERSPECTIVES OF READING

There are two theoretical perspectives of reading - "top-down" and "bottom-up". The "top-down" centres on comprehension. Reading is viewed largely as a verification process in which accuracy of expectations based upon the earlier wording in a message is checked against subsequent words (Allan and Perfetti, 1977).

In "bottom-up" however, which this study is based on, the child learning to read begins with the smallest item in the process and builds from there until he ultimately reaches meaning (Gibson et al, 1962 and Venezky and Calfree, 1970). Underlying their view is the assumption that familiarity with the form and names of letters will help children to recognize and pronounce words. Agreeing with this view are Gagne (1962), Hilgard and Marquis (1961, p. 127), who said that reading starts with the lowest levels of analysis of word and subword recognition and attempts to build meaning out of the products of recognition and parsing processes.

The rationale of taking "bottom-up" perspective is because the method of teaching reading in Kenyan Schools stresses the use of "look and say" method. Children first learn how to pronounce the letters of the alphabet, then recognize them in print. Eventually, they learn how to identify the phonemes by pronouncing the sounds of the letters in it. This still is called phonic identification. Pronouncing a word will convey its meaning if the word is in the reader's oral vocabulary and he/she establishes an association between the oral symbols and the written symbols. The problem investigated is best done using this perspective.

2.1.3. PRONUNCIATION AND ITS IMPORTANCE

Reading has two prominent aspects, oral and silent reading. Children need to become good oral readers. In order to be good oral readers, accurate pronunciation is necessary when proper communication is to be achieved. Pronunciation is defined as the act or manner of uttering words with reference to the pattern of accent, choice of phonemes, vowel quality and syllable length employed (Dictionary of Pronunciation, 1976).

The different skills which are necessary for proper pronunciation are stress, intonation , sounds, sound linking and speech flow. These skills are further explained below for clear understanding.

Stress is the length of sound placed on a particular syllable in a word as in "partner" or on a certain word or words in a sentence - "**W**ater is **h**eavier than **air**". Another example could be "**C**ome **h**ere **qu**ickly".

Intonation is the tune of a sentence comparable with the rise and fall of tune in a piece of music. It is the movement of the voice between high and low pitch. These tunes are used by all speakers to convey friendliness, interest, indifference and emotion.

Sound linking is teaching students to link together clusters of sounds which they may think are difficult or impossible. Just as an English person may think it difficult to say a word beginning with "mb" - though he says "number" without difficulty, so a foreigner learning

English may have unnecessary difficulties with "str" - as in "strike" or "thr" - as in "through".

Speech flow is saying a sentence as a meaningful unit, not as a series of disconnected and separate sounds or words. This entails a combination of correct stress, intonation and sound linking.

In communicating an idea to another person, it can be done through face to face interaction or through reading. In both cases, clear understanding of the message is necessary. One of the tools necessary for clear understanding is accurate pronunciation as one reads or communicates with the other. It needs to be realized that the act of communication itself is interfered with or made more difficult to an extent not appreciated when the manner of communicating is at fault. It is therefore imperative that when communicating, the pronunciation of words be properly done.

Different researchers have voiced the importance of standard pronunciation. Munkres (1972) suggested that pronouncing words clearly and correctly plays an important role in effective communication. This means paying attention to sounds and syllables in order to avoid running them together into an unintelligible jumble which no-one can understand. It means, further watching a variety of common errors such as failure to speak consonants distinctly and vowels correctly, omission of endings and slighting part of a blend so that the word cannot be easily recognized. There is therefore a need of proper pronunciation as one speaks, for it enhances effective communication.

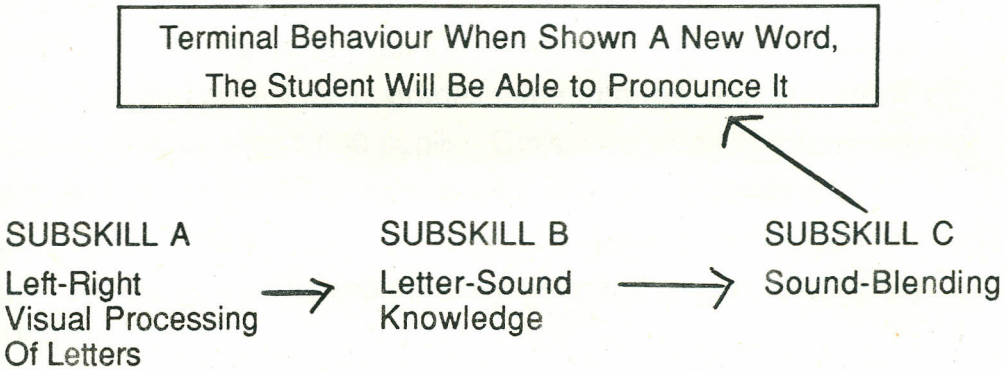
On reading, Mitchell and Green (1978) said that the ability to pronounce words is probably one of the most important skills that has to be acquired by a child in the process of learning to read. Given the importance of correct pronunciation, we need to consider the process involved in pronunciation. Reasonable pronunciation of a word can be produced in a number of different ways and so it is probably best to regard pronunciation as a set of different skills that might be applied in various circumstances. They suggested that there are two main strategies that tend to be used in pronouncing words. The first one involves synthesizing the pronunciation directly from the string of

letters or short strings of letters into appropriate strings of phonemes. These are the grapheme to phoneme correspondence (GPC) rules.

The second more sophisticated strategy consists of deriving the sound of the word by referring to the pronunciation of other familiar words that are spelt in a similar way. For example, a learner might work out a pronunciation for the word "tread" by using the information he has about the sound of the word "bread". Baron (1977) has referred to these two strategies as the "Correspondence" and "Analogy" strategies.

In summary of the pronunciation skills, Guthrie's (1974) model of explaining how a child is finally able to pronounce a word is shown below.

Figure 2.1. Subskills That Must Be Mastered In Order To Achieve The Terminal Behaviour



Guthrie (1974)

In performing the terminal behaviour, it is imperative that the subskills be performed in the order of A, B and C. First, the reader must scan the letters from left to right. Second, the letters must be sounded. Third, the letter sound must be blended to form the word.

2.1.4. ORAL READING ERRORS OR "MISCUES" AND TYPES OF MISPRONUNCIATION

Oral reading error or "miscue" is an unexpected response to language that causes the reader's pronunciation to be at variance

with the writer's words. For example, the writer might write, "Please give me a glass of water to drink", while the one pronouncing it might say, "Please give me a grass of water to drink". In miscue analysis of oral reading in inaccuracies are analyzed according to the reader's use of syntactic and semantic information (Goodman and Watson, 1977).

In a review of the developmental trends in analyzing oral reading errors, Spache (1981) categorised oral reading errors to include the following: substitutions, omissions, additions, mispronunciation, insertions, repetitions, reversals, wrong syllabication, self correction, graphic similarity, semantic substitution and visual similarity.

The majority of studies of oral reading report much higher frequency of omission of words or letters, e.g., "bred" instead of "bread", and in fact, these increase with age. For example, the classic study of Monroe (1932) showed that an average of 15% of oral errors in grades one through six were in omissions and a similar amount for additions. Madden and Pratt (1974) showed a gradual increase in additions and omissions in grades three through nine in a study of oral reading of over 1,000 pupils. Omissions and insertions indicate whether or not a child is reading with meaning and with the grammatical constraints of his language. Less proficient readers tend not to make insertions and omission errors (D'angelo and Wilson, 1979).

According to many authors (Spache and Spache, 1977; Gilmore, 1968; Ekwall, 1970) omissions of words are often attributed to carelessness, poor word attack skills, excessive speed, lack of attention, poor comprehension or to oral language development beyond the pupil's reading level. Madden and Pratt (1974) reported a small increase in these error extending from the third to ninth grade, while Monroe (1932) did not detect such a trend in the first six grades. However, the occurrence of errors of omissions would depend heavily on the nature of words employed on the test.

Ekwall (1970) and Spache (1981) state that the error of substitution may be due to inadequate word recognition skills. Substitutions are valuable because they allow a direct graphic

comparison to be made between the expected response and the substitution. Information on graphic similarity may have a very important influence on the analysis to be made (Lamb, 1979). Lastly, in text reading substitutions are by far the most common type of errors (Goodman, 1971; Weber, 1970; D'angelo and Wilson, 1979). Those who have made comparative studies appear to agree that this type of error is greater than all the other types, particularly when mispronunciations are included in this category.

Goodman (1969) also noted that studying children's oral reading errors can show the type of cues being used by the young reader and the strategies the child is using in order to be able to help the child. These strategies include "correction" (the miscue or error corrected) "habitual association" (strong associations which influence the reading e.g., a "happy occasion" read as a "happy birthday), a dialect and syntactic differences "we were" read as "we was"; and graphic proximity "quietly" for "quickly" or distinguished by intonations "two" for "too".

Christenson (1969) looked at errors in relation to the type of reading matter and concluded that certain kinds of errors tended to be in the middle of words because the reader, finding the material difficult, used words which began or ended correctly but failed to use context or vowel sounds to check his efforts.

On mispronunciation, Hood (1978) cites three examples. In the first example, a reader may try to use sound to pronounce a word, resulting in a real or nonsense word which does not fit the sentence, or may make no attempt to pronounce the word. As a result, the meaning of the sentence is impaired, e.g., "Bring it hare", instead of "here". In the second example, a reader may say a different word that makes sense, though it may not look much like the text word. In this instance, the meaning of the sentence is not impaired, e.g., "The army is **matching** to war", instead of "**marching**". In the third example, a reader might glance at the entire sentence and even at more of the paragraph in order to determine an unknown word. In this example, the reader may use a word that fits in so well, that the meaning of the sentence is retained. When these errors are analyzed for semantic acceptability, errors of the first type are considered more serious than

errors of the second type and errors of the third types are considered the least serious.

We have discussed in this section, some of the errors which pupils make in trying to read and/or speak. It is also necessary to know some of the sources of errors. The following section therefore directs itself to the different factors which might influence accurate pronunciation.

2.2.0. SECTION TWO

FACTORS WHICH INFLUENCE PRONUNCIATION

Pronunciation is a complex process. Proficient pronunciation therefore depends upon the acquisition and versatile application of many intricately coordinated skills. These skills are acquired only through long, motivated practice under good guidance. Because the pronunciation process is so complex, there are many opportunities for unfortunate complications to retard its growth. Various factors operating singly or more often together, can block further progress in pronunciation until they are discovered and eliminated, or until corrective instructional procedures can be devised to adjust to, or to circumvent, their effects (Bond, et al, 1984). Some of these factors include physical deficiencies, intellectual ability, personality, language and educational factors.

PHYSICAL FACTORS

2.2.1. INTRODUCTION

This section covers and evaluates the roles of various physical deficiencies or conditions as contributing causes of pronunciation problems. Some of these will include visual, auditory, speech deficiencies and neurological status. The degree of cognitive maturity, general health problems which include chronic illness malnutrition and fatigue which are also physical factors are also to be covered.

2.2.2. VISUAL DEFICIENCIES

Considerable historical research relating visual deficiency to pronunciation difficulty, has resulted in somewhat conflicting findings. An extensive review of studies compiled by Weintraub (1973) indicates that this disagreement and controversy still persists. However, some fairly consistent trends have emerged.

1) There is a slightly greater percentage of visual defects among children with pronunciation problems than among children without pronunciation problems.

2) Children with visual defects as a group, tend to pronounce more poorly than children without visual defects.

3) On the other hand, many children with visual defects learn to pronounce as well as or better than children without visual defects.

4) No matter what kind or type of visual deficiency is studied, some children can be found who have that specific kind or type of visual deficiency and who are making good progress in pronunciation.

Although the evidence concerning the relation between specific eye defects and pronunciation disability is ambiguous, there are certain relevant trends.

1) Eye defects appear frequently among both good and poor readers and can be a handicap to either group. Comfortable and efficient vision should be provided for all children whenever possible.

2) There is evidence that farsightedness, binocular incoordination, fusion difficulties may contribute to pronunciation difficulty. When there is a visual defect, there are usually other associated contributing causes.

3) Visual examinations are essential in the diagnosis of certain pronunciation disabilities.

2.2.3. AUDITORY DEFICIENCIES

Auditory deficiencies may be a primary cause to reading difficulty. Research shows a direct, though low correlation between certain auditory characteristics and reading success (Weintraub, 1972). In addition, clinicians such as Durrell and Murphy (1953) also report numerous cases in which auditory deficiencies were associated with reading problems. It is also expected that this factor would affect pronunciation too.

The relationship between hearing loss and reading difficulty is well documented by Dechant and Smith (1977, p. 140), Savage and Mooney (1979, p. 118-120), Spache (1976, pp. 49-50) and others. The relationship between audition and auditory processing and reading difficulty is quite controversial. Bryan and Bryan (1978, pp. 150-157), Groff (1975) and Hammill and Larsen (1974) offer critical reviews of the research. Clinical experience stresses that for some children improving listening skills and auditory processing abilities is essential to successful remediation. Since reading involves oral components in relation to speech, it is logical to assume that auditory deficiencies which affect reading would also affect the oral components of reading including fluency and pronunciation.

It has been noted that hearing impairment can be a handicap in learning reading. This is particularly true when the hearing loss is severe enough to interfere with normal auditory discrimination. Weintraub (1973) had evidence that hearing impairment may be associated with reading difficulty as a contributing cause when:-

1) the hearing loss is severe,

2) the child has high tone deafness, and

3) pupils with hearing loss are taught reading by predominantly auditory methods (Weintraub, 1973). It is expected that this factor would affect pronunciation too.

2.2.4 SPEECH DEFICIENCIES

Defective speech is associated with pronunciation difficulty according to research by Bond (1935), Lyle (1970) and Monroe

(1932). Usually inaccurate formation of speech sounds, articulation disorders are found to be more closely associated with pronunciation problems.

It is necessary that accurate formation of speech sounds and articulation be present in order to enhance accurate pronunciation which is necessary for effective communication.

2.2.5. NEUROLOGICAL STATUS

Among children who have not yet acquired the ability to read at the age of 5 or 6, there are very few who have sustained known brain damage before, during or after birth. Case studies from the Geneva-Medico Educational Service (1968) suggest that known brain lesions, unless very severe, often do not retard learning and that many children with verifiable brain damage do make good progress in reading.

In a study comparing reading problem, children with and without clinical signs of neurological dysfunction, Black (1973) found no real difference among the groups in severity of reading problems, overall cognitive functioning, or behaviour. He concluded from his research that suspected neurological dysfunction was not an important factor in planning proper remediation of reading difficulty. Brain damage is seldom a cause of reading problem, but when it is present, a very difficult instructional problem exists.

However, Bender (1957), Critchley (1970) and Rabinovitch (1962), among many others, have argued persuasively in favour of some type of neurological impairment, other than known brain pathology as a probable cause of reading difficulty. Research by Balow, Rubin and Rosen (1975) suggest that subtle, often undetected, neurological impairment associated with complications of pregnancy and birth is a cause of later reading difficulty among some children. This is in a case where the part of the brain which deals with reading is damaged through some illness during pregnancy or in the process of giving birth due to mishandling of the baby or just through an accident. Rourke (1975) also presents compelling evidence for the

view that neurological dysfunction, in the absence of known brain damage is a common associate of reading problems.

Spache (1976 b) provides a highly critical review of the current literature relating suspected neurological impairments to reading difficulties. He warns that some specialists appear to be attributing almost all reading difficulties to suspected neurological impairment, not only in the absence of known brain damage, but even in the absence of any signs of abnormal neurological functioning.

From these researchers, there is no concensus among them whether neurological status could affect the reading capability of a child. As was mentioned before, there are many contributing factors to reading difficulty, in this study to pronunciation difficulty. It is therefore necessary that a teacher finds out if some of the problems the child has in trying to pronounce words are due to neurological problems. This can only be identified if the child is taken for a neurological test, if need be, which might be lacking in our schools yet itis a very necessary requirement.

2.2.6. DEGREE OF MATURITY - MATURATIONAL FACTOR

Reading, as well as pronunciation, is learned by stages. That is, it is important that a child should be able to overcome the problems at one stage before he/she continues to the next stage. Reading failure is often a result of an accumulation of difficulties which were not dealt with at the proper time.

Abundant evidence can be cited to suggest that the period between five and seven years is a particularly fertile one for developmental change in basic aspects of cognition (Hale, Taweel, Green and Flaugher, 1978; Halford and McDonald, 1977; Kemler, 1978). They noted that the children at specific ages are at a level of maturation which facilitates or hinders their learning to read orally.

Satz and Ross (1973) postulated that reading difficulties are produced by a general maturational lag. Specifically, they suggest that at these same ages, children may be susceptible to perceptual

and motor delays in development. These particular skills develop quickly during this period within the normal child. However, skills involving language and conceptual development are slower to mature and develop mainly within the age range nine to twelve years. It is expected that pronunciation will also be affected at earlier ages than later ones.

Relating this concept of maturational lag to the beginning reader, Beech (1985) said that when a child is not progressing at the normal rate during a period when particular skills are mainly developing, the child will experience problems in reading. During this period, he concluded, the child learning to pronounce is learning to distinguish the individual letters from one another.

Evidence is also mounting that the primary specific mechanism that enables early reading success is phonological awareness, that is the knowledge of system of sounds in a language. Conscious access to the phonemic level of the speech stream and some ability to cognitively manipulate representations at this level will enhance accurate reading and even pronunciation. Although general indicators of cognitive functioning such as non-verbal intelligence, vocabulary and listening comprehension make significant independent contributions to predicting the ease of initial reading acquisition, phonological awareness stands out as the most accurate predictor (Share et al., 1984; Stanovich, Cunningham and Cramer, 1984; Tunmer and Nesdale, 1985). Phonological awareness tasks often correlate more highly with early reading acquisition than do other measures such as general intelligence tests, or reading readiness tests (Mann, 1984; Share et al., 1984; Stanovich, Cunningham and Freeman 1984 a; Zifcak, 1981). The more mature a pupil is, the more he will have developed phonological awareness due to the words he is exposed to.

Years of schooling is used instead of the age level due to great ranges of age in many classes in the Kenyan Schools where a child of age six might be in the same class with that of age eight. This is particularly true in rural areas. The years of schooling a child has is considered to be a contributing factor towards better pronunciation achievement by the child. It is in the upper grades that the children

will have acquired more phonological awareness. Consequently, the years of schooling of a child may contribute to how well a child develops pronunciation ability though not in all cases. Maturation occurs across the years children are in school and it affects reading. So years of school should show differences in reading abilities. It is also expected that the years of school should show differences in pronunciation.

Following in the next section are the general health problems as factors in pronunciation attainment.

2.2.7. GENERAL HEALTH PROBLEMS

Learning to pronounce words is a difficult, even arduous task. To succeed, the learner must be an attentive, active participant in the learning process. Any physical condition which lowers a child's vitality makes it difficult for him to sustain active attention to learning. Bond et al (1984) mentioned chronic illness, malnutrition and fatigue as some of the factors which may influence pronunciation.

Chronically ill or malnourished children are often unable to sustain attention to demanding learning tasks. School children who are sick are likely to miss much instruction due to frequent absenteeism which makes classroom learning even more difficult. When learning to read becomes a matter of having to catch up on a week's missed work, while feeling insecure about how to proceed, tired, unwell and perhaps hungry, it is little wonder that some children begin to dislike and avoid reading (Bond et al, 1984). It is assumed that since pronunciation is one aspect of reading, it will also be affected.

In U.S.A., it is often discouraging to hear a chronically fatigued and disabled reader give a detailed account of last evening's late, late television movie. Extensive television viewing or other factors which seem to be interfering with proper rest are causing student's reading difficulty. In other cases, overuse of television or other activities may be a child's way of escaping from the frustrations he feels, including the frustration of reading difficulty. This has also become true in urban areas in Kenya.

It is necessary that a child should have good health in order to perform satisfactorily in his/her endeavour to read or pronounce accurately. It is therefore the duty of the teacher to identify such students.

2.3. INTELLECTUAL ABILITY FACTOR

Intellectual ability is the ability to have a high degree of understanding. Investigators who have studied the relation between intellectual ability and reading capability, report practically without exception, a positive correlation as an expression of the connection between these factors. As a rule, the coefficients given are not higher than +0.50 to 0.60. Many investigators have stated, however, that intelligence is the most significant factor when it is a question of predicting the effect of elementary teaching of reading and even pronunciation. The higher the child's intelligence quotient, the greater the probability that he will learn to read easily (Kaufman, 1979). He found out that low intelligence is strongly contributing to the occurrence of reading difficulties in many cases. There are children with low intellectual standard who succeed without any great difficulties in learning elementary reading proficiency, while some children with normal or superior intelligence fail in this respect.

Bond et al (1984) pointed out that children grow at different rates. A child learns to read with his eyes, ears, energy, background of experience, interests, drives, emotional stamina and intelligence. Any difference found within the children in any of these traits will affect the rate at which they learn to read. The teachers know that it is quite normal for children to have differences in auditory acuity, in physical stamina and in intelligence. Methods of reading instruction and reading materials used in teaching reading should be tailored to the individual differences of the pupils.

Perfetti (1985) commented on greater number of motivational problems of low ability than high ability students using the framework of his verbal efficiency theory

> The low achieving reader starts out behind in terms of some of the linguistic knowledge on which this verbal processing system gets built. He falls further behind as his reading experiences fail to build the rich and redundant network that the high-achieving reader has. By the time a fifth grade student is targeted for remediation, the inefficiency and ineffectiveness of his/her verbal coding systems has had a significant history. To expect this to be remedied by a few lessons in decoding practice is like expecting a baseball player of mediocre talent to suddenly become a good hitter following a few days of batting practice. This problem, the need for extended practice is unfortunately coupled with the problem of motivation (Perfetti, 1985, p. 248).

Several instructional factors may contribute to the difference in good/average and poor readers' view of reading. There are differences in teachers' feedback to good and poor readers and in teachers' use of instructional time with these two groups. Teachers correct a poor reader more often than a good reader when each reads orally, regardless of whether or not the miscue fits the context (Allington, 1980). Teacher feedback also provides different types of information. Good readers' attention is directed to meaning cues, while poor readers are given information to help them pronounce the target word. Low Ability reading groups spend more time on decoding activities, while High Ability groups spend more time on meaning related activities (Hiebert, 1983). Infact, Gambrell, Wilson and Gant (1981) found that good readers spent much more time (57%) reading stories than did poor readers (33%). Teachers believe that poor readers should be given more time in pronunciation to enhance their capability in reading.

From the studies cited, there is a general consensus that high intellectual ability children should perform better in reading and even pronunciation although there are some exceptions to the rule where even high intellectual ability pupils may not read better than those low intellectual ability.

The next section will now direct itself to yet another factor which might contribute to standard pronunciation, which is a personality factor.

2.4.0. PERSONALITY FACTORS

This section covers the emotional factor, motivation and risk-taking as related to pronunciation. These factors are further discussed below.

2.4.1. EMOTIONAL FACTORS

When groups of poor readers are compared to good readers, the results usually show a somewhat larger percentage of pupils with signs of personality maladjustment among the poor readers. In most instances, the differences are not great. According to Sornon (1950), children who become reading disabled in the primary grades develop feelings of insecurity and show less satisfactory forms of personal and social adjustment than do their more successful peers.

The inability to learn to read satisfactorily usually means severe frustration for the child. When his unsuccessful attempts to read make him conspicuous in a socially unfavourable way, the child is hurt and ashamed. His continued lack of success with attendant frustration and feelings of insecurity brings on emotional maladjustment (Sornon, 1950). Some of these children become easily convinced that they are stupid. This feeling is frequently enhanced by the attitudes of their classmates, their parents, and even the teacher, if she fails to understand the real problem. The reading disabled child comes to dislike reading and seeks opportunities to avoid it. Sometimes failure leads children to become timid and withdrawn.

This could also be true of children who persistently mispronounced words during oral reading. They would develop the same feelings.

Occasionally a child has become emotionally unstable even before he begins school. The basis of this maladjustment may be environmental or may be due to a series of unfortunate incidents during the preschool years. Whatever the basis, some children exhibit impulsive responses, negative attitudes, irritability, attention difficulties and lack of energy. These children are unable to achieve the co-operation and sustained effort required in learning to read.

Until their adjustment is improved, there is little progress in learning to read or even pronounce.

The personality patterns of backward readers in two special classes were explored by Frost (1965). He found that 40% of the children rated as maladjusted and another 40% were unsettled or likely to become maladjusted. The outstanding characteristic of these children was depression.

Finally, it seems that emotional maladjustment may be both effect and cause. When an emotional reaction arises from a problem in reading, it may then become a handicap to further learning. There is in such cases, a reciprocal relationship between emotional conditioning and the reading problem When maladjustment is due to reading problem, it tends to disappear when the child learns to read satisfactorily. When the maladjustment is deep-seated, psychiatric help is needed.

A child who persistently mispronounces words would tend to give up too. They may not have the patience to try again.

2.4.2. MOTIVATION AND RISK TAKING

Butkowsky and Willows (1980) found that prior success or failure at a task influences the future expectancy of success, with expectancy increasing following success and decreasing following failure. In general, it has been found that causal attribution of an outcome to a stable factor such as ability increases the subjective probability of success following success and decreases expectancy of success following failure more than do ascriptions to an unstable cause such as effort or luck (Ostrove, 1978; Valle and Frieze, 1976; Weiner, Nierenberg and Goldstein, 1976).

Furthermore, persistence of behaviour in the face of failure has been found to be associated with attributions of failure to lack of motivation [effort] (Dweck and Reppucci, 1973). Attributions of failure to lack of motivation imply that failure is surmountable through increased effort, a factor that is generally perceived to be under the

child's personal control. Conversely, lack of persistence has more commonly been shown to be associated with the attribution of failure to uncontrollable external factors. When children who give up easily do take responsibility for failure, they are more likely than persistent children to blame their lack of ability. This means that pupils with internal locus of control tend to attribute their failure to their lack of ability while pupils who have external locus of control tend to blame their failure to other factors like poor teaching, lack of materials, etc.

Additionally, the literature suggests that higher expectations of success lead to greater persistence in the face of difficulty (Feather, 1968). Integrating these findings with the predictions made about the attributions of children of varying reading ability one would expect the low ability child who is a poor reader to be relatively less persistent in the face of difficulty than an average or good reader.

Butkowsky and Willows (1980) noted that:

> Children who give up easily in the face of difficulty may never persist long enough at the task to discover that success may, infact, be possible. Such children may never spontaneously discover that they do possess the capacity to achieve outcomes that exceed their expectations (Butkowsky and Willows, 1980, p. 419).

In another study, Allington (1980) stated that the way teachers dealt with children of different ability groups when teaching reading gave them differences in motivational levels. For example, a poor reader would be corrected more than a good reader and this might kill the morale of the poor reader and hinder him/her from making any efforts.

From the above studies, it is evident that a child will be motivated to try if he anticipates success part of the time and give up trying if failure is consistently anticipated. This is particularly true of children with external locus of control.

2.5. LANGUAGE FACTORS

Under language factors, reading in a multi-lingual society, Luo mother tongue influence on pronunciation and Luo dialect are to be covered.

2.5.1. READING IN A MULTI-LINGUAL SOCIETY

Multi-lingualism is the knowledge of many languages. Over a billion people in the world speak more than one language fluently (Dulay, Burt and Krashen, 1982). In the Philippines, for example, many people must speak three languages if they are to engage fully in their Community's social affairs. In small countries, such as the Netherlands or Israel, most children are required to study at least one foreign language in school and sometimes several. Even in the United States, whose inhabitants are unconcerned about languages other than English, about 10% of the residents usually speak at least one language in addition to English in the course of their daily lives (National Centre for Education Statistics, 1978). Throughout much of the world, being able to speak at least two languages and sometimes three or four is necessary to function in society.

Neurolinguistic research is beginning to suggest that people who know more than one language make use of more of the brain than monolinguals do (Albert and Obler, 1978). Though the evidence is scant, it appears that the part of the brain that is used in second language functioning remains underdeveloped in monolingual brains Albert and Obler (1978) reviewed a series of postmortem studies on polyglot brains, that is, brains of people who spoke from three to twenty six languages and found that certain parts of these brains were especially well developed and markedly furrowed.

Psycholinguistic studies further indicate that people who control more than one language are verbally more skillful than monolinguals, and they mature earlier with respect to linguistic abstraction skills. Lereah and Laporta (1971) and Palmer (1972) cited in Dulay, Burt and Krashen (1982) report fore example that bilinguals have better auditory memory than monolinguals. Slobin (1968) found that bilinguals are better at intuiting meaning from unknown words. Feldman (1971) discovered that low-income bilingual children were

better at learning new labels than low-income monolinguals and Peale and Lambert (1962) cited in Dulay, Burt and Krashen (1982) concluded that ten year olds who spoke both French and English demonstrated higher skills in linguistic abstraction than their monolingual counterparts.

To further stress the importance of learning a different language, Carroll (1973) in her findings which were consistent with Pissleur's (1966) found out that:

> ... the talent for learning foreign languages consists of three components. The first is verbal intelligence by which is meant both familiarity with words (this is measured in the Language Aptitude Battery by the vocabulary part) and the ability to reason analytically about verbal materials (this is measured by the part called "Language Analysis"). The second component is motivation to learn the language. The third component is called "auditory ability" (Carroll, 1973, p. 182).

In even more recent research, there is a suggestion that attitudinal and motivational factors have more to do with the successful attainment of communicative skills in a second language than metalinguistic awareness does. In addition to reducing the amount of filtering which screens all incoming language based on affective factors, the learner's motives, attitudes and emotional states, high motivation can "determine whether or not the student avails himself of informal language context" (Gardner, Smythe, Clement and Gliksman, 1976, p. 200). These recent research studies suggests that three internal processing factors play a substantial role in the second language acquisition. These are the filter, the organizer and the monitor.

The filter is that part of the internal processing system that subconsciously screens incoming language based on what psychologists call "affect", the learner's motives, needs, attitudes, and emotional states. The organizer is the part of the internal processing system that is responsible for the learner's gradual organization of the new language system. Its function is subconscious and is based on what psychologists call "cognitive" principles: analytical and logical criteria for the organization of knowledge and behaviour. The monitor

is the part of the learner's internal system that appears to be responsible for conscious linguistic processing or learning.

Research evidence indicates that the successful acquisition of communicative skills in the new language depends primarily on filtering and organizing factors rather than on monitoring (which linguists, in contrast,say we cannot do without).

These views by Dulay, Burt and Krashen (1982); Albert and Obler (1978); Slobin (1968); Peale and Lambert (1962); Carroll (1969); Pimsleur (1962); Gardner, Smythe, Clement and Gliksman (1976) further strengthen the idea that the mother tongue has a lot of influence on the way a child speaks the second language. They also show the importance of multi-lingualism in the cognitive development of a child.

Kenya, therefore being a multi-lingual country renders its diverse ethnic groups into different problems in acquiring the second or even a third language, in this study, English. The following section addresses itself to the Luo mother tongue influence on pronunciation.

2.5.2. THE LUO MOTHER TONGUE INFLUENCE ON PRONUNCIATION

Strevens (1966), noted that the fundamental issue in speaking a foreign language, is that we commonly use the sounds of our mother tongue which we imagine to be equivalent to the sounds of the foreign language, in joining sounds together, in connecting speech, in stress, in rhythm, in intonation. He went further to say that each of these can be taught and learned, but it is exceedingly rare for a complete acceptable pronunciation to be acquired unless either the pupil begins to learn in childhood, or he is systematically taught over a long period or both.

Dulay, Burt and Krashen (1982) also noted that the first language has long been considered the villain in second language learning, the major cause of a learner's problems with the new language. In recent years however, data has accumulated that place the second language learner's first language in a more respectable,

sometimes even valuable place in the scheme of things. They said that the first language is no longer considered an annoying "interference" in a learner's effort to acquire a second language when an individual finally becomes bilingual, the availability of both the first and second languages is recognized as an erichment of the individuals communicative repertoire.

They went further to say that to a large extent, controversies over the role of the first language in second language acquisition have resulted from vague and varying uses of the terms "interference" and "transfer". When the terms are clarified and when empirical data is assembled, there appears to be a convergence of opinion on the role of the first language in second language acquisition. They noted that research results suggest that the major impact the first language has on second language acquisition may have to do with accent, which is part of pronunciation but not with grammar or syntax. It is therefore possible that the Luo accent or way of pronunciation could easily be used in English.

However, the Luo pronunciation can also be affected by the various dialects. For example Luos from Ugenya pronounce Otieno [Otieno] as [ODieno]. There are seven vowels sounds in Luo language but only six phonemes. They are /u/, /ɔ /, /e/, /i/, /ʌ/ and /æ/. The sound /i:/ is mainly used for stress purposes. For example [in] means you (singular) but when we substitute the [i] with [i:], it becomes [i:n] implying you, no one else but you.

There are twenty one consonants in the Luo language. These are:-

[p] as in paro: to think
[b] as in biro: to come
[h] as in hera: love
[t] as in teko: strength
[d] as in diel: goat
[k] as in kor: chest
[m] as in mach: fire
[n] as in mano: that
[ɲ] as in nyako: girl
[ŋ] as in ng'uono: forgiveness

[f] as in fuwo: folly
[ɲ] as in mathoth: many
[ð] as in dhako: women
[s] as in san: plate
[tʃ] as in chon: a long time
[dz] which some dialects also pronounce as [dze] as in jajuok: a night runner
[l] as in agulu: pot
[g] as in got: a mountain
[r] as in chuor: husband
[j] as in ywak: to cry
[w] as in hawi: blessing

In the Luo language, the following sounds present in English do not exist [v] as in divai called difai, [ʒ] as in zaburi called saburi, [ʃ] as in English called Englis, and [z] as in zamani called samani. This explains why a Luo speaker will encounter problems while learning English or Kiswahili for instance. A Luo speaker will easily pronounce "English" with an [s] at the end because [ʃ] is not present in his/her language. In Kiswahili, a Luo speaker will pronounce "zamani" as "samani". However, these are problems that can be overcome with practice (Ooko, 1986).

Simons (1973) suggests that the mismatch between mother tongue and standard English causes reading interference. He criticizes both the unsystematic attempts to teach standard English along with reading and readers in which the stories are written in dialect. He feels that teaching standard English as a part of the reading lesson interferes with learning to read. Simons and others including Venezky and Chapman (1973) and Rystrom (1973), believe that the teacher's knowledge of mother tongue differences and her attitude towards children who do not speak standard English are more important than the pupils' knowledge of mother tongue.

Although dialectical differences interfere with learning to read standard English, language differences create even more serious problems. There is a great need for bilingual teachers who understand the positive qualities and are sensitive to the real needs of the non-English speaking child. In an extensive review of literature,

Engle (1975) was unable to determine whether minority children in a bilingual culture should be taught to read in their native language or the dominant language. She pointed out that any method which undermines a child's pride in his native language or culture, or places a child in a situation in which he cannot understand the teacher's instruction, will be unsuccessful.

In summary of this section, the authors Simons (1973), Venezky and Chapman (1973) and Engle (1975) agree that teachers of children with language differences must understand these differences in order to be effective in teaching reading. A positive attitude is also necessary as is the ability to communicate to each child a sense of his dignity and worth.

Following is now the Luo dialect and how it affects pronunciation.

2.5.3 THE SOUTH NYANZA DIALECT OF DHOLUO

Although studies in Dholuo dialectology are yet to be done, the language is said to have two major dialects - "The Trans Yala" dialect spoken in Ugenya, Alego, Yimbo and parts of Gem Location and the South Nyanza dialect spoken in Kisumu District, South Nyanza District and other parts of Gem Location.

These dialects, however, maintain a remarkable level of mutual intelligibility, which means that differences between them are relatively small and confined to matters of vocabulary and pronunciation rather than structure (Stafford, 1967). Stafford noted that the alphabet differs from English only in that q, v, x and z are not used, though v and z are found in borrowed words, for example, "divai" - wine, "zaburi"-psalm; though these are often pronounced "difai" and "saburi".

Okoth-Okombo (1982) noted that officially, there is no standard Dholuo dialect. However, he went on, probably because it has the greater number of speakers, the South Nyanza variety is the one which is used in the Bible and Dholuo readers in schools.

It is therefore quite possible that the dialect of the Luo, in this case, South Nyanza dialect could influence the way the children pronounce English words considering that there are some alphabet letters like q, v, x, z which are not found in the dialect of the Luo language.

2.6. EDUCATIONAL FACTORS

Some of the educational factors which might influence pronunciation are school administrative policies, lack of readiness for beginning reading instructions, lack of adjustment to individual differences, methods of teaching, the role of the teacher and the role of the library or media centre.

Whether developing reading skills or educating the whole child should be the chief concern of the school during the early grades is controversial. Some educators believe that the emphasis should be almost entirely on developing reading skills. Others object to this and feel that the school's chief concern should be to the happy balanced development of each child's personality. The argument of those opposing ineffective reading in the primary grades is that putting pressure on the children to read sometimes produces maladjustment. They claim that emphasis upon reading destroys learning since, as they claim, reading is an activity foreign to the real interest of children in these grades. Reading instruction suffers when administrative pressure overemphasizes or underemphasizes reading in the primary grade.

In Kenya, reading is integrated in language which is taught as any other subject. But pronunciation receives very little attention especially from Standard Four onwards.

As much as the teacher might try to direct his/her attention to different areas in the attainment of the reading skills, sometimes the time allocated might not be sufficient enough to cover all the areas. This then makes the children move to higher classes when they are still wanting in other aspects of reading skills, one of them being pronunciation.

Success in beginning reading largely depends on the child's overall level of maturity. The pattern of growth entails many types of abilities, acquired behaviours and specific knowledge. Although some aspects of reading readiness come with maturation, many of the most important ingredients are learned and can therefore be taught. This means that when a child approaches beginning reading lacking certain essential skills and knowledges, these can and should be taught before or during beginning reading instructions.

Research by Spache (1965) has demonstrated the effectiveness of appropriate training in visual and auditory perceptual skills for children who need such skill development to succeed in beginning reading. The evidence suggest that the training was effective in developing visual and auditory perceptual skills before beginning reading instruction, and that in addition, such pre-reading skill development facilitated initial reading success. Other beginning reading achievements, such as knowledge of word meanings, attention to oral directions, ability to work independently and to work co-operatively in groups, and even the desire to read, can be taught.

Beginning in grade one and continuing in every grade thereafter, reading instruction can be effective for all pupils only when there is satisfactory adjustment to individual differences. Without such adjustment, reading difficulties arise.

Failure to acquire the necessary learnings or the acquisition of faulty learnings is most frequent due to ineffective teaching. One or more of the following factors may be involved in the ineffective teaching which brings about reading problems, in this study pronunciation problem, too rapid progress in the instructional schedule, isolation of reading instructions from other school activities, inappropriate emphasis on some technique or skill or treating reading as a by-product of content studies. Frequently, the difficulty occurs because the instructional programme has failed to maintain a balance in the growth of the large numbers of skills and abilities involved in learning to read.

The books used in the schools could also be a factor which might pose a problem. This could be a case where the books are

either too difficult or too easy for the students so that they either do not follow what is being read or pronounced or that they do not gain from them. With this in mind, it is necessary that in a particular Class, the books being used are of different levels so that the students who are not good enough at reading can gain from them and those who are quite good in reading can advance more.

In conclusion, in this section, it could be said that there is no one cause for all pronunciation problems. Each case is unique. Only when there is a valid diagnosis will there be a sound basis for planning an individual remedial programme to alleviate the shortcoming in pronunciation.

2.7. SYNTHESIS OF THE LITERATURE

Reading is a complex skill which could be divided into subskills. These subskills include oral reading, silent reading, word recognition, pronunciation and comprehension. Reading is defined as receiving communication, making discriminative responses of graphic symbols to speech and obtaining meaning from the printed page (Gibson, 1965; Tinker and McCullough, 1962; Strang, 1968; and Kirk, 1962).

Pronunciation is an important component of reading. Correct pronunciation is a skill which should be practical both in school and at home in order to enhance its continual standard usage. A theoretical analysis of reading suggest that pronouncing words clearly and correctly plays an important role in effective communication and understanding when one is reading or speaking. It is important that in second language learning, there is need to learn to pronounce the words properly because it will affect reading and speech.

Research has identified different factors which contribute to standard pronunciation. Some of these include physical factors, intellectual ability factors, language factors, personality factors and educational factors. Development studies have shown that physical factors like visual deficiencies, auditory deficiencies, maturational factors and general health are possible causes of mispronunciation.

Studies have also shown that personality factors which include motivation, risk-taking and emotions can also contribute to the way a child pronounces words. It was found out that sometimes it is necessary for a child to continually take a risk in trying to pronounce new words instead of giving up too soon.

Language factors have also been found to contribute to standard or non-standard pronunciation. The sounds of a foreign language, in this study English, may be difficult for a learner either because they are unfamiliar to those of his/her mother tongue language, which in this case is Luo language, or because they happen to be slightly different in quality. In the typical rural Luo family, the children are constantly exposed to their mother's language and this may also compound the way the students pronounce English words.

Educational factors which include school administrative policies, methods of teaching, age range in standards, lack of readiness for beginning reading instruction, lack of adjustment to individual differences, role of the teacher and role of the library media centre may also contribute to mispronunciations.

To conclude, in this section, it could be said that there are diverse contributors to reading and even pronunciation problems. Since the influence of these factors in Kenyan schools is affecting one aspect of reading which is pronunciation, it is necessary to have an investigation into some factors.

2.8. METHODOLOGICAL ISSUES RELATED TO STUDYING PRONUNCIATION

In this section, we need to look at specific issues that relate to studying variables which influence mispronunciation. Because of their theoretical orientation, most studies that have focussed on oral reading have looked at comprehension in context and not on mispronunciation in list of words (Spache, 1981; Monroe, 1932). Furthermore, these studies on comprehension of context did not focus on mother tongue influence. At the same time, most studies have dwelt on the development of reading proficiency in reading texts, although a few have investigated on fluency. These variations in

methodology might have led to conflicting results in studying fluency in oral reading or mispronunciation. Various methods of testing could be employed; in this instance the list of words was used to test children's ability in standard pronunciation as it was deemed appropriate since it did not require the use of complicated skills. Furthermore, the study was designed to investigate if mother tongue influence could bring about the differences in pronunciation. The children's word pronunciation was not confounded by other aspects of reading like semantics, syntax or even comprehension.

Regarding maturation of the students, there were inconsistencies in that some researchers looked at pronunciation errors with children of different maturational level while others used children of the same maturational level. For example, Monroe (1932) showed that an average of 15% of oral error in grades one through six were in omissions and a similar amount for additions. Pratt (1974) showed gradual increase in additions and omissions in grades three through nine in a study of oral reading of over 1,000 pupils. It was also reported by other researchers that substitutions were the most common type of errors particularly when mispronunciations are included in this category (Goodman, 1970; Weber, 1970; D'angelo and Wilson, 1979).

In the United States of America and other European countries, when the maturational age of a child is to be considered, it includes both chronological age and learning experience. In Kenya, it is the formal learning experience which is considered independent of age since children of various ages are in the same class. This is why the standard of the child is being used as opposed to chronological age.

In studies concerning intellectual ability, it has been found that there is a significant relationship between intellectual ability of the child and ability to decode words. As a rule, the coefficients given are not higher than +0.50 to +0.60. Kaufman (1979) found out that the higher the child's intelligence quotient, the greater the probability that he will learn to decode words easily.

In other countries like the United States, intelligence scores derived from intelligence tests are used to determine the ability level

of the children while in Kenya such tests are not yet available. In order to get the children of upper and lower ability groups, one possible alternative are the achievement scores of the children.

Realizing that in Kenyan Schools both English and Kiswahili are taught simultaneously, this confounds the research problem because Kiswahili is phonics oriented while English is not. Sounds learnt from one language can easily affect the way one tries to pronounce English words in the standard form. In this study, the Luo sounds are different from English sounds and Kiswahili sounds.

Based on the preceding analysis, the following hypotheses were advanced.

1. The number of years of formal schooling is related to children's pronunciation of English words.

2. The level of academic achievement is related to children's pronunciation of English words.

3. The number of years of formal schooling is related to children's pronunciation of English words containing mother tongue phonemes.

4. The level of achievement is related to children's pronunciation of English words containing mother tongue phonemes.

CHAPTER THREE: METHODOLOGY

This Chapter includes the design of the study, description of sampling procedures, instruments used and data analysis.

3.0. DESIGN OF THE STUDY

This is an exploratory, empirical study investigating the influence of mother tongue on English pronunciation in Kenya. The dependent variables were mispronunciation and mother tongue related mispronunciations while the independent variables were ability level and standard level. The instrument developed was "Luo Pronunciation of English Words" (LPEW) test to assess children's pronunciation. The study focused on the main effects of independent variables on the dependent variables rather than any interaction among the variables since this is a complex area.

3.1.1. POPULATION

The population of the study consisted of rural primary school children. These children were from a homogeneous language group, that is, an area where only one language, Luo, was spoken at home and in the community. The pupils were not exposed to other languages although they may have been exposed to Kiswahili and English on radio but they exclusively speak Luo. When in school, they also spoke Luo during play time.

3.1.2. SAMPLE

The sample consisted of Luo children from schools in Central Nyanza. This Luo location was picked because the study was designed to investigate if Luo mother tongue can influence the way in which the children pronounce English words. The area was also selected because the dominant Luo dialect that is spoken in the region is the South Nyanza one. Furthermore, the investigator chose this area because she was familiar with the dialect.

Two (2) Schools out of twenty-four (24) Primary Schools in Mnara Zone of Muhoroni Division of Kisumu District, were selected for

the Study. School A had three streams to represent the larger Schools and School B had two streams to represent the smaller streams. The two Schools were in the same zone though geographically twenty kilometres apart.

To study the effect of experience and exposure to schooling, Standards Two, Four and Six were chosen from the two representative Schools A and B. Although there were 176, 152 and 140 students in Standard Two, Four and Six respectively from the two Schools, only forty were chosen from each class because of time constraint. Specifically, 20 pupils were chosen from each class in each of the two Schools, making it a balanced design for ease of calculation.

The number of years in school was operationalised to refer to the class. Class and age are correlated but are not the same because some students begin Standard One when they are as old as nine years especially in the rural areas.

The sample of the pupils was purposefully selected based on their two test score results from the previous year:

1) aggregate marks derived from the scores in Maths, English, Kiswahili, G.H.C., Science and Agriculture

2) then marks in English.

Since the study was looking at children with different ability levels, children selected as "HA" scored high in the aggregate and English tests and those selected as "LA" scored low in both aggregate and English tests.

The assumption made was that these performance scores reflects the intellectual ability of the child for the reasons given in Chapter 2. The subjects were also the ones for testing in the national examinations.

"Ability" level therefore was operationalised to the upper ten pupils in the class and the lower ten pupils in the rank order of the

pupils in the same class. Henceforth, these groups will be referred to as "Higher" and "Lower" ability groups.

The total number of pupils who were chosen were one hundred and twenty, sixty from both Schools. Following is a table showing the distribution.

Table 3.1.

Pupils by School and Standard

School A

Standard	Number in Class	Number for Study		Mean Age	Sex Male	Sex Female
2	100	U	10	9.5	5	5
		L	10	9.1	5	5
4	86	U	10	11.7	7	3
		L	10	12.0	4	6
6	90	U	10	13.5	4	6
		L	10	14.3	7	3
TOTAL	276	60			32	28

School B

Standard	Number in Class	Number for Study		Mean Age	Sex Male	Sex Female
2	76	U	10	9.6	6	4
		L	10	9.3	3	7
4	66	U	10	10.9	5	5
		L	10	12.4	4	6
6	50	U	10	14.0	3	7
		L	10	14.2	8	2
TOTAL	192	60			29	31

From the table, it is evident that in School A, there were equal number of boys and girls in the Upper and Lower ability groups in

Standard Two while in Standard Four, there were more boys than girls in the Upper ability group and less boys than girls in the Lower ability group. In Standard Six, there were more girls in the Upper ability group while more boys in the Lower ability group.

In School B, there were more boys than girls in the Upper ability group but less boys in the Lower ability group in Standard Two. In Standard Four, there were equal number of boys and girls in the upper ability group yet less boys in the Lower ability group. In Standard Six, there were more girls in the Upper ability group while more boys in the Lower ability group.

In summary, it is clear that 30 out of 61 boys were in the Upper ability group while 30 out of 59 girls were in the upper ability group. Since gender was not a variable being investigated, no effort was made to balance the number of boys and girls in each class.

3.1.3. INSTRUMENTS

The test is the instrument used and it includes the "Luo Pronunciation of English Words" (LPEW) test, cards and individual test record sheets for recording the pupils' response during the test. This test (LPEW) was specifically designed for this study. The test was developed for Standards Two, Four and Six pupils. The purpose of the test was to assess the pupils' ability to pronounce English words and to identify if there was any mother tongue influence. Therefore, a word list was used. "Mother tongue influence" in this study refers to the influence one gets by speaking the language one learnt initially in the environment one grows in and the transfer of these sounds into the new language which one is learning.

The (LPEW) consisted of a word list test. For each level, the test was made and guided by the following criteria: easy words were chosen from the lower grade so that they could easily recognize them; a few unfamiliar words as a challenge for the brighter children and words which could reflect the Luo mother tongue influence were also chosen. The rationale for selection of the words was based on the fact that this was a pronunciation test and not a reading comprehension test. Consequently, the weaker pupils who had

grammar problems had to be given a chance to be able to pronounce some of the words yet at the same time, present a challenge to the brighter pupils.

For Standard Two pupils, pictures also accompanied the words to help them identify the words since they had been exposed to English for only a few terms. The words for Standard Two pupils were obtained from Standard One book (10) words, Standard Two book (24) words and Standard three (6) words. The same procedure was used to construct tests for Standards Four and Six levels. (See Appendix A for the titles of Readers used for word selection). Following are a few examples of easy and hard words and some with Luo mother tongue influence.

Table 3.2.

Examples of Words per Standard

Standard	Easy	Hard	Luo mother tongue influence
2	hat cat dog bird	these thief busy farm	shelf shirt ship shore
4	sing nose dead ask	hospital chart aloud hare	ship rush fish short
6	class lazy read here	someone sixteen stream cousin	cash dish shallow conclusion

Each of the forty words were written boldly in ink on a flash card of 3 x 5". For a complete list of words for each class refer to Appendix B.

To record students responses accurately, record sheets were designed to accompany each test. Below is an example of what the record sheet looks like.

Table 3.3.
Individual "Luo Pronunciation of English Words"
Record Sheet

Child's Name: _____ Date: _____
Standard: _____ Sex: _____ Age: _____
Name of School: _____ Location: _____

Word	Standard Pronunciation	ATTEMPTS 1st	2nd	3rd	Comment
hat	/hæt/				
cat	/kæt/				
dog	/dog/				

Number of attempts: _____
Number of standard pronunciation: _____
Number of mispronunciation: _____
Number of mother tongue related mispronunciations: _____
(For more details refer to Appendix B).

The word to be pronounced was shown to the student. If in the first attempt the student did not pronounce the word according to the standard pronunciation, he/she was told to say if louder, but if in the second attempt the word was still not pronounced properly, he/she was told to say it softly. The student would therefore not know whether he/she had made a mistake or not as this would discourage him/her. If the student did not make any attempt at all but instead said DK ("I don't know"), then the DK would be put in the comments column. This would continue for all the 40 words in the "LPEW" test.

3.1.4. PILOT STUDY

Before the actual study, a pilot study was conducted with the following objectives: -

1) To check if the words selected were appropriate for the test. Looking at the distribution of the test scores, the mispronunciation scores ranged from 0-54, 0-81 and 0-77

for Standards Two, Four and Six respectively while the mother tongue mispronunciations ranged from 0-42, 0-54 and 0-45 for Standards Two, Four and Six respectively. The results therefore showed that the difficulty of the words was appropriate.

2) To ascertain whether the drawings for Standards Two pupils were necessary. The speed of the pupils responses showed that the drawings were necessary.

3) To verify the adequacy of the test administration instructions. To put the pupils at ease, they were given instructions on what would happen during the test and that they should not be afraid of anything since nobody would really fail. Immediately after rapport setting, administration of the test began. The pupils were also encouraged by giving them three different attempts.

4) To verify the test scoring procedure to be used, results of the pilot study suggested that for greater accuracy, transcription of the words be done later, and that a more refined tape-recording machine was required in order to get every detail of the pupils' pronunciation. The use of the tape recorder did not seem to interfere with them. (For results of the Pilot Study, refer to Appendix C).

3.1.5. ADMINISTRATION OF THE "LPEW" TEST

The test was individually administered in a quiet room. The pupil sat facing the investigator. A tape recorder was used to record the proceedings so that the words could later be transcribed.

To create rapport with the subjects, each one was asked to narrate a brief story about him/herself. On completion of the story which roughly took two to three minutes, the introduction of the "LPEW" test began. One card was held in front of the subject. The subject was asked to pronounce the word. In this Study, "pronunciation" is referred to as the act or manner of uttering words with reference to the pattern of accent, choice of phonemes, vowel quality and syllable length

employed (Dictionary of Pronunciation, 1976). If the subject mispronounced the word he was given another attempt, which in this Study was referred to as the number of times a pupil tried to pronounce a word. "Mispronunciation" is referred to in this study as deviations from Standard Pronunciation of English words during speaking and/or reading.

If the children mispronounced words, they were not told. In the first attempt, if the pupil did not pronounce the word in the standard English pronunciation, he was asked to say it louder. If in the second attempt the student did not pronounce the word using the standard English pronunciation, he was given the third attempt, which was the final one. Specifically, the student was told to say the word more slowly. This is only to distinguish the final instruction from the first one in order not to make the pupil suspicious of whether he had pronounced the word correctly or mispronounced it. If the student kept quiet despite being prompted by the researcher to make first, second and third attempts, it was recorded in the comments column (DK - Don't know). The instructions used were consistent for all the pupils.

After the session, the tape recorded version was played and replayed. During these processes, the pupil's actual pronunciation of each word was transcribed. The transcription was based on the Standard Pronunciation of English guide.

Below is an example of how an incorrect pronunciation was treated. If in the first attempt the pupil pronounced "here", phonetically coded as /hiəɹ/, as "hare", phonetically coded as /hēəɹ/, he/she was told to say it louder. If in the second attempt he called it "her", phonetically coded as /həɹ/, he/she was given a third chance. If in the third attempt the word was pronounced in the Standard English Pronunciation, then the word "here" was entered in the third column in its correct form of pronunciation, that is / hiəɹ/.

The same procedure was used in the case of words with Luo mother tongue mispronunciations. For example, if in the first attempt the pupil pronounced "shilling", phonetically coded as /ʃi-liŋ/, as "siling", phonetically coded as /si-liŋ/, he was given a second attempt. If in the second attempt the word was pronounced as "seleng",

phonetically coded as /se-kɔ/, he was given a third attempt. If in the third attempt the word was pronounced in the Standard English Pronunciation, the word "shilling" was entered in the third column in its correct form of pronunciation, that is /ʃi-liŋ/. (See Appendix D for instructions for administration of the test).

As suggested by the Pilot Study, to increase the reliability of the test, phonetically transcribed words were checked by two independent transcribers.

It is important to note that:

- The maximum number of mispronunciations were 120 while the minimum number was 0.

- The maximum number of mother tongue mispronunciations were 51, 54 and 57 for Standards Two, Four and Six respectively while the minimum number was 0 for the three classes.

- The maximum number of standard pronunciations were forty while the minimum was 0.

- The maximum number of attempts which could be made were 120 while the minimum number was 0. There were 3 attempts for each word.

- Normality refers to a score of 20 or above since the maximum score was 40.

In the case where a pupil continuously said (DK -Don't know), then the DK's were 40.

3.1.6. DATA COLLECTION

The data was collected at the beginning of the School year, that is in February, 1990. One week was allocated for a School. The collection started with Standard Two followed by Standard Four then Six.

3.1.7. DATA ANALYSIS

In this study, data was collected on the LPEW test scores of mispronunciations and mother tongue influence. The study was designed to explore if there were any differences in performance by children of different Standards and abilities, Two, Four and Six, and LA and HA respectively.

Descriptive statistics were used to describe the collected data. To explore further, the distribution of these variables graphs were drawn using Tukey's Leaf and Stem Method (1977).

The following null statistical hypotheses were tested: -

Ho. 1. There is no significant difference in the number of mispronunciations counts on LPEW tests by children of Standards Two, Four and Six.

Ho. 2. There is no significant difference in the number of mispronunciations counts on LPEW tests by children of High and Low intellectual abilities.

Ho. 3. There is no significant difference in the number of mother-tongue related mispronunciation counts on LPEW tests by children of Standards Two, Four and Six.

Ho. 4. There is no significant difference in the number of mother-tongue related mispronunciation counts on LPEW tests made by children of High and Low intellectual abilities.

To find out if there were any significant differences in the variables amongst the children of different Standards and ability levels, a non-parametric statistical procedure, Wilcoxon's Sum of Ranks Test (1945) was used. The rationale for choosing this test was that the selection of subjects was not random, the number of subjects chosen were small and the distribution was also skewed.

The data required for the test was the number of measurements in Sample A (N_A), the number of measurements in Sample B (N_B), and all the individual measurements in both samples. With more than 20 measurements in one or both samples, the significance of the smaller rank total ($\bar{R}$) is found by calculating Z from the formula below: -

$$Z = \frac{n_R(n_A + n_B + 1) - 2\bar{R}}{\sqrt{\frac{n_A \cdot n_B(n_A + n_B + 1)}{3}}}$$

Where n_R = number of measurements in whichever sample possess the smaller Rank total; it thus equals n_A or n_B depending on the circumstances.

In Wilcoxon's Sum of Ranks test, the level of confidence was set at .01, since the study was exploratory, I wanted to be confident of results as meaningful and valid.

Non- parametric statistics are less powerful than parametric statistics so a t-test was used for curiosity. (The results of the t-test are in Appendix F). The level of confidence was set at 0.01 since the tests were less powerful.

It is also necessary to note that the other variables like attempts, correct pronunciations were calculated and may help in interpretation of the test scores.

CHAPTER FOUR: RESULTS

4.0. INTRODUCTION

This chapter presents the obtained results, statistical analyses of the data collected and discussion.

The first section covers descriptive statistics of the test scores on mispronunciations, mother tongue related mispronunciations, Standard English pronunciations and the number of attempts. The second section covers the testing of hypotheses together with the discussion.

As was stated in Chapter Three, to investigate whether there were significant differences in mispronunciation of English words and mother tongue related mispronunciations by children of Standards Two, Four and Six and of Upper and Lower ability levels, the Wilcoxon's Sum of Rank Test was used. In each of these analyses, the level of significance was set at 0.01.

4.1.0. DESCRIPTION OF TEST SCORES ON LPEW

The Luo Pronunciation of English Words (LPEW) tests yielded 4 scores. The first one was the number of mispronunciations with a maximum of 120 and a number of mother tongue related mispronunciations with a maximum of 51, 54 and 57 for Standards Two, Four and Six respectively.

In addition to these, two additional characteristics of the test will be described because during the testing session, significant variations between pupils of the two schools were noticed. These were Standard English Pronunciations with a maximum score of 40 and a number of attempts with a maximum score of 120. (For details, see description in Chapter 3). Table 4.1 shows these test scores, for all the students.

TABLE 4.1: MEASURES OF CENTRAL TENDENCY AND VARIABILITY MEASURES ON STANDARD LEVELS FOR THE TEST SCORE

Test scores	Measures of Central Tendency			Variability measures	
	Mean	Mode	Median	SD	Range
Mispronunciations					
Std. Two	15.63	3.0	12.0	15.48	0-54
Std. Four	38.73	42.0	36.0	19.57	0-81
Std. Six	33.25	28.91	33.5	19.30	0-71
Mother tongue related Mispronunciations					
Std. Two	7.03	0	3.0	11.60	0-42
Std. Four	9.55	0	3.0	14.88	0-54
Std. Six	7.95	0	3.0	12.31	0-45
Standard English Pronunciation					
Std. Two	14.45	4.0	13.0	11.26	0-36
Std. Four	17.70	16.0	18.5	10.55	0-34
Std. Six	26.88	27.5	28.0	7.59	1-37
Attempts					
Std. Two	29.87	41.0	22.0	22.40	1-76
Std. Four	56.37	61.0	62.5	23.41	0-92
Std. Six	60.03	64.0	62.0	15.47	10-92

4.1.1. MISPRONUNCIATIONS WITHIN EACH STANDARD

From Table 4.1, it can be seen that the score distribution of this variable was quite skewed negatively for all the classes but much more in Standard Two than in Standards Four and Six. The spread of the scores showed that the number of mispronunciations were more in Standard Four than Six and lastly Two. As may be recalled from Chapter 3, the maximum number of mispronunciations was 120. The means were 15.63, 38.73 and 33.25 for Standards Two, Four and Six

respectively while the ranges were 0-54, 0-81 and 0-71 for Standards Two, Four and Six respectively.

Tukey's Leaf and Stem Method was used to explore further the distribution of the mispronunciation scores of different grades. These scores were first ranked and then the sums of the ranks added after which the ones with smaller rank total was checked in the table. Figure 4.1 shows the distribution.

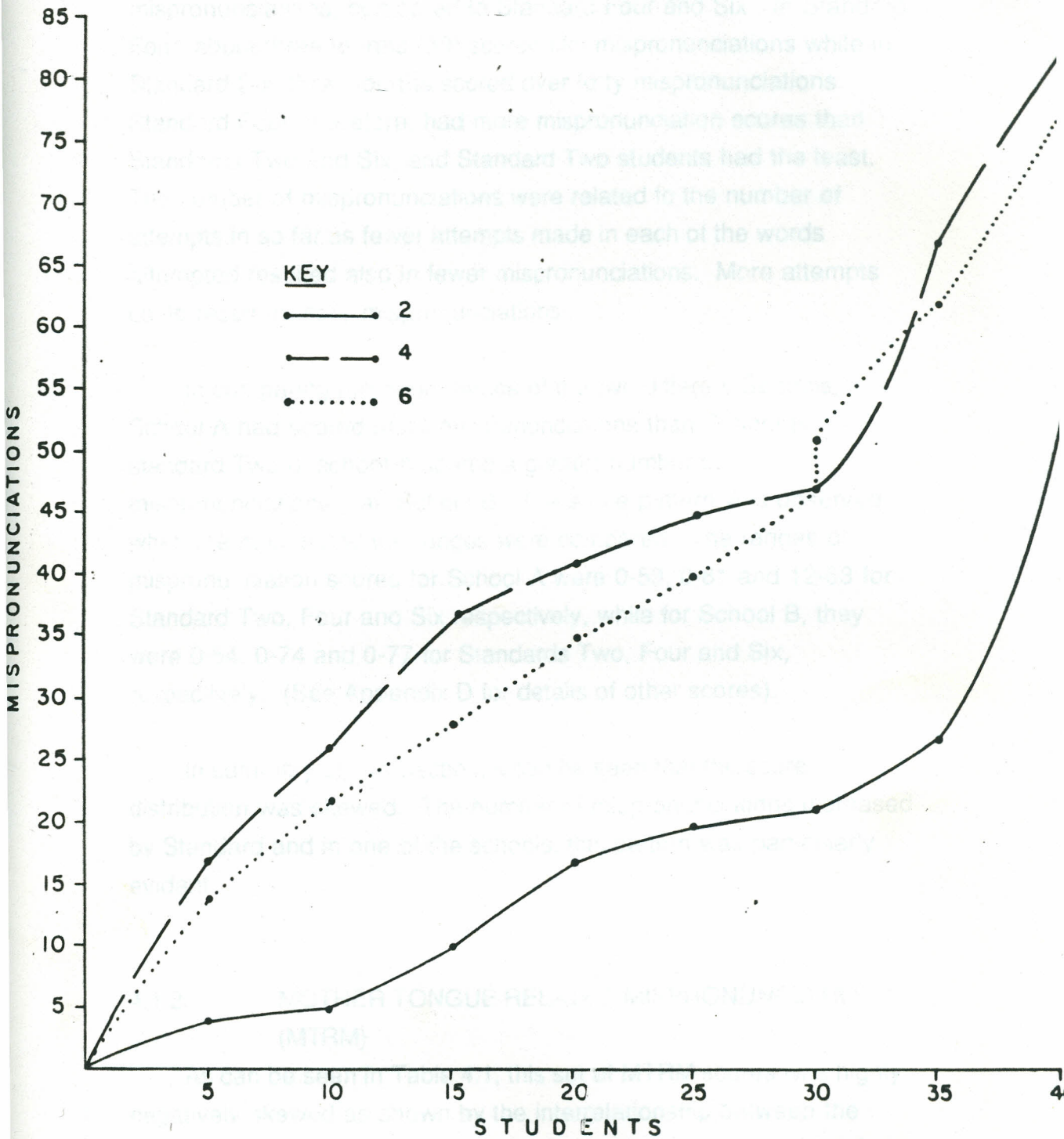


FIGURE 4.1.

NUMBER OF MISPRONUNCIATIONS MADE BY EACH PUPIL IN STANDARD TWO, FOUR AND SIX

As can be seen from the graph, it shows that the Standard Two pupils made fewer number of mispronunciations. More specifically, three fourths of the students (30) scored less than twenty mispronunciations, compared to Standard Four and Six. In Standard Four, about three fourths (30) scored fifty mispronunciations while in Standard Six, three fourths scored over forty mispronunciations. Standard Four, therefore, had more mispronunciation scores than Standards Two and Six, and Standard Two students had the least. The number of mispronunciations were related to the number of attempts in so far as fewer attempts made in each of the words attempted resulted also in fewer mispronunciations. More attempts could result in more mispronunciations.

In comparing the performance of the two different Schools, School A had scored more mispronunciations than School B. standard Two of school A scored a greater number of mispronunciations than School B. The same pattern was observed when the means and the ranges were compared. The ranges of mispronunciation scores for School A were 0-53, 0-81 and 12-63 for Standard Two, Four and Six respectively, while for School B, they were 0-54, 0-74 and 0-77 for Standards Two, Four and Six, respectively. (See Appendix D for details of other scores).

In summary of this Section, it can be seen that the score distribution was skewed. The number of mispronunciations increased by Standard and in one of the schools, this pattern was particularly evident.

4.1.2. MOTHER TONGUE RELATED MISPRONUNCIATIONS (MTRM)

As can be seen in Table 4.1, this set of MTRM scores was highly negatively skewed as shown by the interrelationship between the three measures of central tendency. Although the maximum number of mother tongue related mispronunciations were 51, 54 and 57 for Standards Two, Four and Six respectively, the ranges were 0-42, 0-54 and 0-45 for Standards Two, Four and Six respectively. The score of 0 was got because some students did not know the words despite being given three different attempts.

Tukeys Leaf and Stem distribution graph on Figure 4.2 shows the distribution of the mother tongue related mispronunciations.

From the graph in Figure 4.2, it is evident that very few MTRM were scored by students in the three classes. In Standard Two, over 75% of the pupils scored between 0-6 mother tongue related mispronunciations out of the 20 words. In Standard Four, about 67% of the pupils scored between 0-9 mother tongue related mispronunciations while in Standard Six over 75% of the pupils scored between 0-6 mother tongue related mispronunciations. However, it is also apparent that a few students scored high in MTRM's.

In looking at the two Schools, the difference in mother tongue related scores was not very evident. In School A, Standards Two and Four had higher MTRM scores than School B while Standard Six of school B had a higher MTRM score than School A. However, in the three classes, the disparity as reflected by the Standard Deviations was great because many students especially in Standard Two said that they did not know many times whereas other students tried to pronounce the words frequently (i.e. made many attempts at pronunciation but also made many MTRM). School A's number of MTRM scores ranged from 0-36, 0-54 and 0-33 for Standards Two, Four and Six respectively while School B's MRTM scores ranged from 0-42, 0-30 and 0-45 for Standards Two, Four and Six respectively. Refer to Appendix E for the Statistics of mother tongue related mispronunciations per School.

In summary in this Section, the score distributions are quite skewed negatively. A few children scored high numbers of MTRM's whereas the majority had very few. The performance is consistent across the three Standards suggesting that the problem persists for a few children, however, and is not reduced by schooling experience.

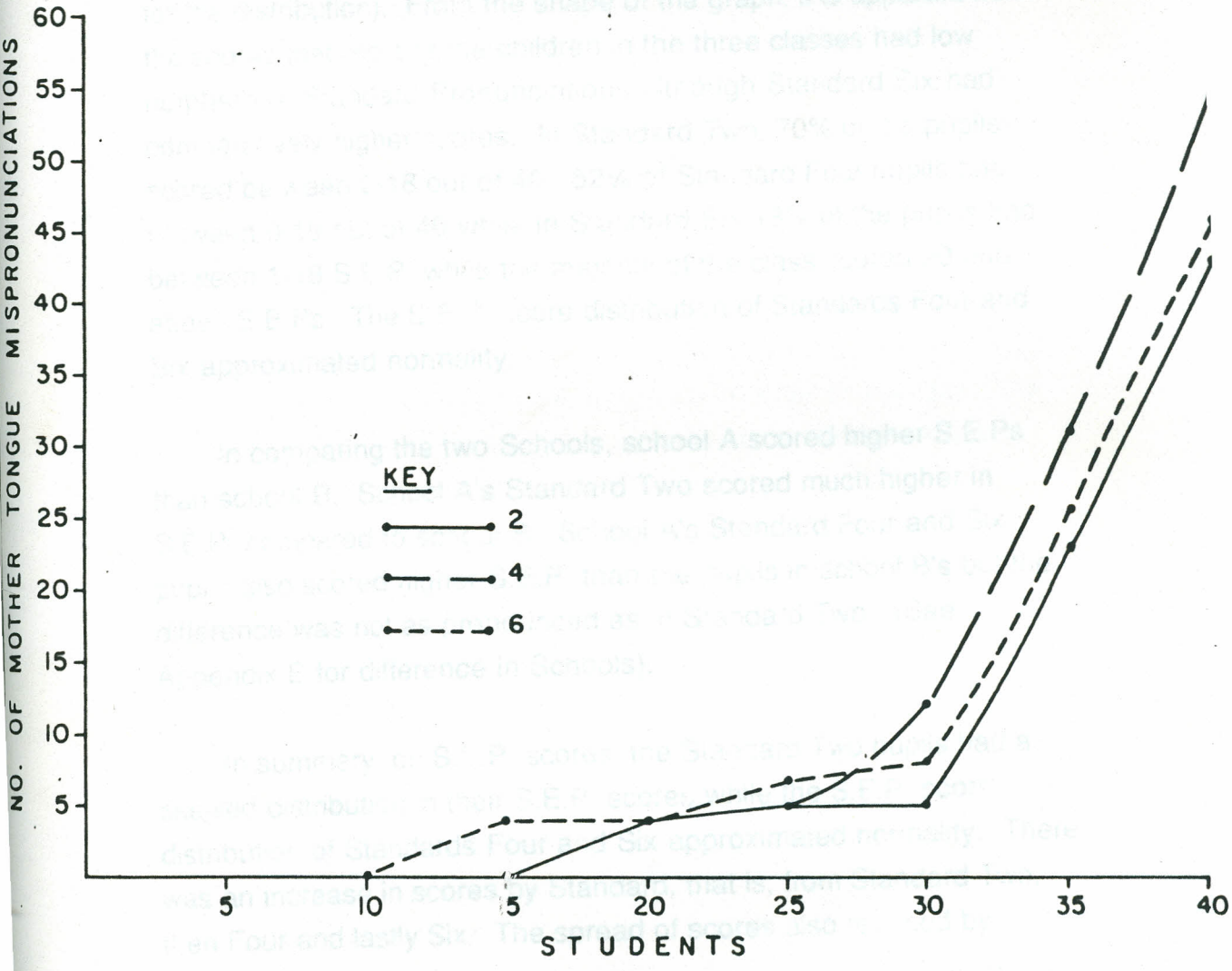


FIGURE 4.2.

NUMBER OF MOTHER TONGUE MISPRONUCIATIONS MADE BY EACH PUPIL IN STANDARD TWO, FOUR AND SIX

4.1.3. STANDARD ENGLISH PRONUNCIATIONS (S.E.P.)

The Standard English Pronunciation (S.E.P) scores are the correct pronunciation scores. They ranged from 0-36, 0-34 and 1-37 for Standards Two, Four and Six respectively, out of the maximum score of 40. The range of the scores suggests that the test task provided enough easy items to the beginning readers and more challenging items for a more advanced reader.

Tukey's Leaf and Stem Method was used to further show the distribution of the number of correct pronunciations. (See Appendix G for the distribution). From the shape of the graph, it is apparent from the scores that most of the children in the three classes had low numbers of Standard Pronunciations although Standard Six had comparatively higher scores. In Standard Two, 70% of the pupils scored between 0-18 out of 40. 52% of Standard Four pupils had between 0-19 out of 40 while in Standard Six 13% of the pupils had between 1-19 S.E.P. while the majority of the class scored 20 and above S.E.Ps. The S.E.P. score distribution of Standards Four and Six approximated normality.

In comparing the two Schools, school A scored higher S.E.Ps than school B. School A's Standard Two scored much higher in S.E.P. compared to school B. School A's Standard Four and Six pupils also scored higher S.E.P. than the pupils in school B's but the difference was not as pronounced as in Standard Two. (See Appendix E for difference in Schools).

In summary, on S.E.P. scores, the Standard Two pupils had a skewed distribution in their S.E.P. scores while the S.E.P. score distribution of Standards Four and Six approximated normality. There was an increase in scores by Standard, that is, from Standard Two, then Four and lastly Six. The spread of scores also reduced by Standard.

4.1.4. ATTEMPTS

The Standard Two score distribution of attempts was skewed negatively, because they had often said "I don't know" whereas those of Standards Four and Six approached normality. The mean scores

were 29.87, 56.37 and 60.03 for Standards Two, Four and Six respectively.

The distribution of the scores for the attempts was wider in Standard Four, then Six and lastly Two, an indication that the Standard Two pupils made fewer attempts. These scores ranged from 1-76, 0-92 and 10-92 for Standards Two, Four and Six respectively with the maximum number of attempts being 120.

Tukey's Leaf and Stem Method was used to show the distribution of the number of attempts by pupils of the three different grades. (See Appendix H for the distribution).

From the shape of the graph, it is apparent that most of the students in Standard Two made fewer attempt when compared to Standards Four and Six. In Standard Two, over 90% of the pupils made less than half of the maximum number of attempts. In Standard Four, approximately 45% of the pupils made less than half of the maximum number of attempts, while in Standard Six, about 40% of the pupils made less than half of the maximum number of attempts. It is evident, therefore, that the number of attempts increased with the grade level.

In comparing the two Schools, School A pupils made more number of attempts than School B. It was noted that Standard Two pupils in School A had higher number of attempts per item than the pupils from School B. This was supported by the difference in the means. The mean attempts for School A were 39.90, 58.508 and 60.65 for Standards Two, Four and Six, respectively, while for School B were 19.85, 54.25 and 59.40 for Standards Two, Four and Six, respectively.

The spread of the scores for attempts was not very pronounced except in Standard Four for both schools, where the attempts were higher than in Standard Two and Six for both Schools. The ranges were 3-68, 0-92 and 48-82 for School A's Standards Two, Four and Six respectively, while School B had the attempts ranging from 1-76, 4-86 and 10-92 for Standards Two, Four and Six respectively. There is a school difference in Standard Two. A student in School B had

very low number of attempts scored due to unwillingness to try again compared to students in School A. (Refer to Appendix E_1 for school differences in the number of attempts).

In summary, it can be seen that the number of attempts increased by Standard. The spread was more in Standard Four. More older students were willing to try again and many pupils were getting greater number of items correct. However, Standard Two's, especially School B students refused to make attempts.

4.2.0. DESCRIPTION OF UPPER AND LOWER ABILITY DIFFERENCES

The four test scores, that is, mispronunciations, mother tongue related mispronunciations, Standard English pronunciations and the number of attempts, were tabulated and is shown in Table 4.2 for the Upper and Lower ability groups in each Standard.

4.2.1. MISPRONUNCIATIONS

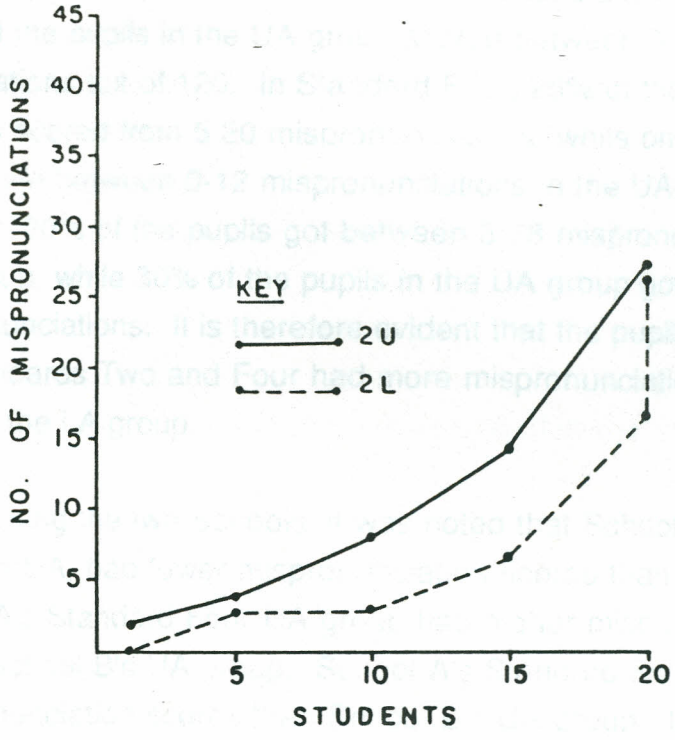
As is demonstrated by the mean scores of Standard Two and Four Upper Ability group (UA), the mispronunciations scores are higher than the Lower Ability group (LA). This is because the pupils of the UA group made more attempts and, in the process, more mispronunciations when compared to the LA group who just said that they did not know and therefore only attempted the words they could pronounce and so they made few mispronunciations. This pattern reversed in Standard Six when the LA group had higher mispronunciation scores than the Upper Ability group. The mean scores are 19.35, 42.20 and 31.65 for the UA for Standards Two, Four and Six respectively, while the scores for the LA are 11.90, 35.25 and 34.85 for Standards Two, Four and Six respectively.

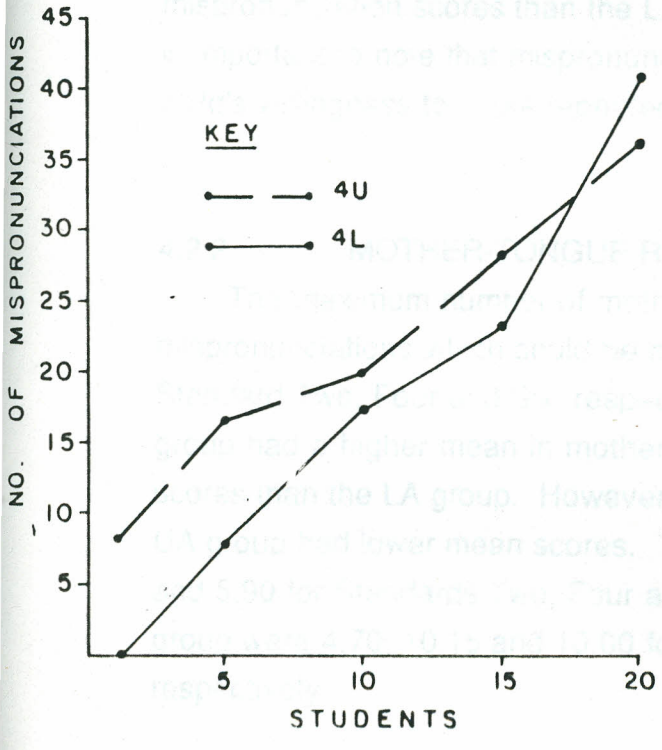
The spread of the scores in the LA group showed that some pupils even got 0 score. This phenomena was brought about by the pupils saying that they do not know. These scores ranged from 3-54, 16-71 and 12-65 for Standards Two, Four and Six, and for the LA, they ranged from 0-53, 0-74 and 0-77 for Standards Two, Four and Six respectively.

TABLE 4.2: MEASURE OF CENTRAL TENDENCY AND VARIABILITY MEASURES BY ABILITY LEVELS

Dependent Variables	Standard		Measures of Central Tendency			Variability Measures	
			Mean	Mode	Median	S.D.	Range
Mispronunciations	2	U	19.35	3.0	15.5	15.12	3-54
		L	11.90	3.0	3.0	15.27	0-53
	4	U	42.20	36.6	40.0	16.21	16-71
		L	32.25	0	34.5	22.31	0-74
	6	U	31.65	20.0	28.5	16.02	12-65
		L	34.85	36.0	36.0	22.42	0-77
Mother tongue related Mispronunciations	2	U	9.35	0	3.0	13.62	0-42
		L	4.70	1.5	3.0	8.91	0.36
	4	U	8.95	0	3.0	16.87	0-36
		L	10.15	0	3.0	13.07	0-44
	6	U	5.90	1.5	3.0	10.58	0-45
		L	10.00	3.0	5.0	13.79	0-42
Standard Pronunciations	2	U	20.45	28.3	19.0	10.37	4-35
		L	8.45	8.5	6.5	8.76	0-36
	4	U	23.10	22.0	26.0	8.16	0-34
		L	12.30	4.0	11.5	10.02	0-30
	6	U	28.60	30.4	29.0	6.29	11-36
		L	25.15	20.0	25.5	8.51	1-37
Attempts	2	U	39.40	41.6	42.0	20.16	7-76
		L	20.35	30.0	11.0	20.18	1-68
	4	U	65.35	68.2	65.0	15.21	17-87
		L	47.40	24.5	50.1	26.90	0-92
	6	U	60.25	66.0	61.5	10.10	47-78
		L	59.80	62.0	62.0	19.73	10-92

Tukey's Leaf and Stem Method was used to explore further the distribution of the number of mispronunciations by the children of different ability levels by ranking them. The graph in Figure 4.3 shows the distribution.





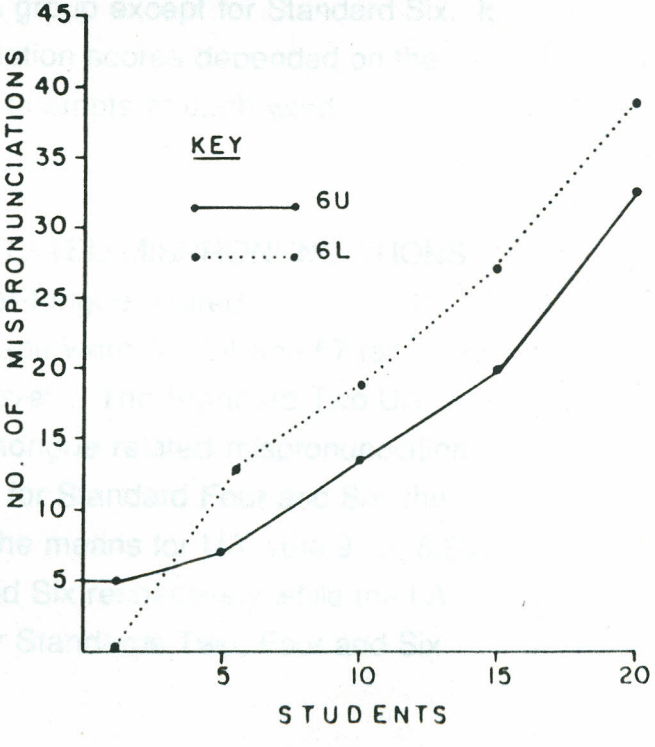


FIGURE 4.3.

NUMBER OF MISPRONUNCIATIONS MADE BY EACH PUPIL IN UPPER AND LOWER ABILITY IN STANDARDS TWO, FOUR AND SIX

The shape of the graph shows that in LA group of Standard Two, 80% of the pupils scored between 10-20 mispronunciations out of 120, while 65% of the pupils in the UA group scored between 0-15 mispronunciations out of 120. In Standard Four, 25% of the pupils in the LA group scored from 5-20 mispronunciations, while only 10% of the pupils made between 0-12 mispronunciations in the UA group. In Standard Six, 20% of the pupils got between 8-18 mispronunciations in the LA group, while 30% of the pupils in the UA group got between 3-16 mispronunciations. It is therefore evident that the pupils in the UA group in Standards Two and Four had more mispronunciation scores than those in the LA group.

In comparing the two Schools, it was noted that School A's Standard Two UA, had lower mispronunciation scores than School B's. School A's Standard Four UA group had higher mispronunciation scores than School B's UA group. School A's Standard Six UA had lower mispronunciation scores than School B's UA group. (See Appendix E for the difference in schools).

In summary, it is evident that the UA group had higher mispronunciation scores than the LA group except for Standard Six. It is important to note that mispronunciation scores depended on the child's willingness to make repeated attempts at each word.

4.2.2. MOTHER-TONGUE RELATED MISPRONUNCIATIONS

The maximum number of mother-tongue related mispronunciations which could be made were 51, 54 and 57 for Standard Two, Four and Six, respectively. The Standard Two UA group had a higher mean in mother-tongue related mispronunciation scores than the LA group. However, for Standard Four and Six, the UA group had lower mean scores. The means for UA were 9.35, 8.95 and 5.90 for Standards Two, Four and Six respectively while the LA group were 4.70, 10.15 and 10.00 for Standards Two, Four and Six respectively.

The spread of the scores in mother-tongue related mispronunciations was not very much different. The scores of the UA group ranged from 0-42, 0-36 and 0-45 for Standards Two, Four and

Six respectively while the LA group had scores ranging from 0-36, 0-44 and 0-42 for Standards Two, Four and Six respectively.

The differences in the dispersion were also not great between the Standards. In the UA group, the Standard Deviations were 13.62, 16.87 and 10.58 for Standards Two, Four and Six respectively while for the LA group were 8.91, 13.07 and 13.79 for Standards Two, Four and Six respectively. This shows that the (MTRM)'s do not necessarily decrease by Standard nor by ability.

Tukey's Leaf and Stem Method was also used to explore further the distribution of the number of mother tongue related mispronunciations made by the students of UA and LA levels as shown in Figure 4.4.

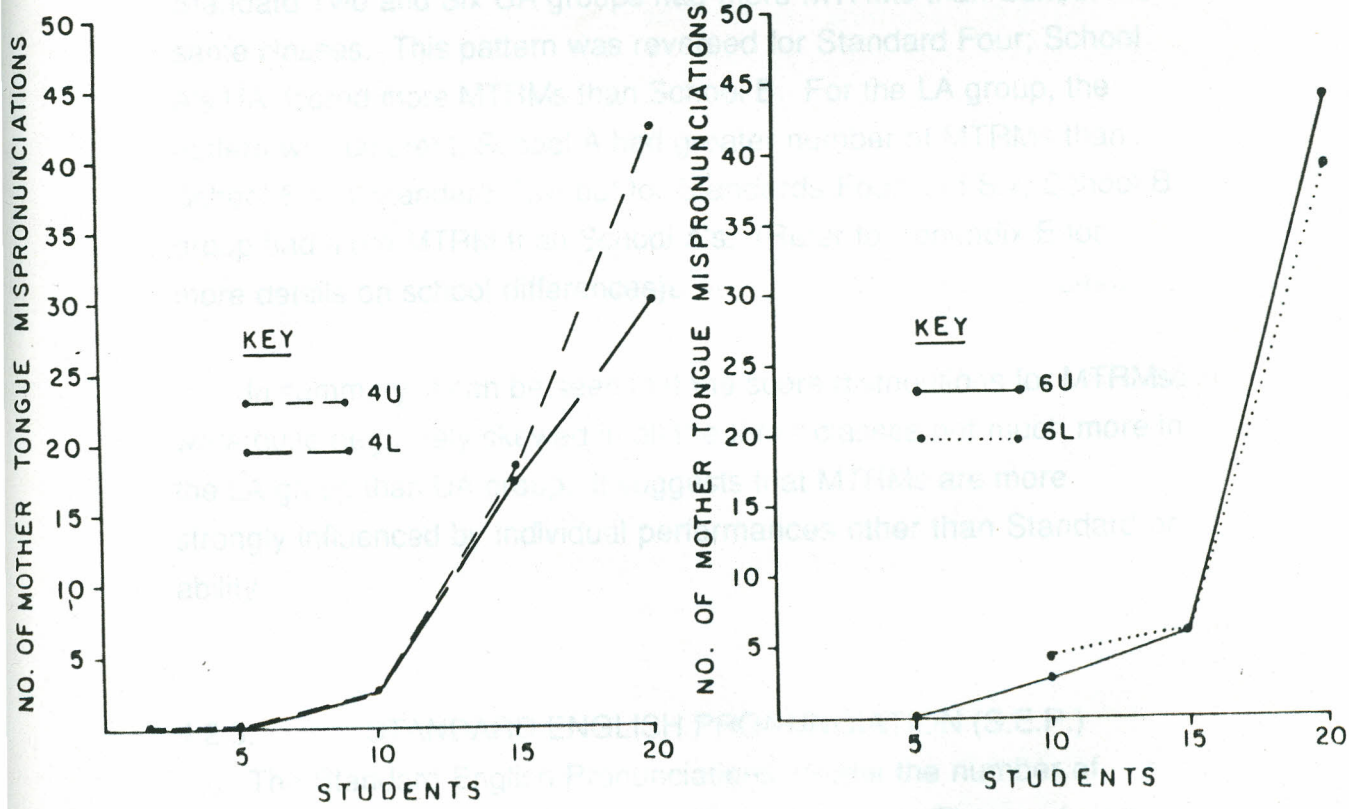


FIGURE 4.4.

NUMBER OF MOTHER TONGUE MISPRONUNCIATIONS MADE BY EACH CHILD IN UPPER AND LOWER ABILITY IN STANDARDS TWO, FOUR AND SIX

The shape of the graph shows that there is a little difference between the UA and LA groups in mother tongue related mispronunciations and that the score distributions were negatively skewed. In Standard Two UA, 75% of the pupils had less than 10 MTRM, while 25% of the pupils scored over 24-42 MTRMs. In the LA, 90% of the pupils scored less than 10 MTRM while only 10% of the pupils got above 30 MTRMs.

In Standard Four UA group, 80% of the pupils had fewer than 20 MTRMs while 20% of the pupils had over 20 MTRMs. In the LA, Standard Four's 75% of the pupils scored less than 20 MTRMs and 25% of the pupils scored over 21 MTRMs.

In Standard Six UA group, 75% of the pupils had fewer than 10 MTRMs while only 20% of the pupils had between 20-35 MTRMs. In the LA, Standard Six's 20% had from 10-45 MTRMs while about 80% had fewer than 10 MTRMs.

The performance in the two Schools showed that School B's Standard Two and Six UA groups had more MTRMs than School A's same classes. This pattern was reversed for Standard Four; School A's UA scored more MTRMs than School B. For the LA group, the pattern was different; School A had greater number of MTRMs than School B's in Standard Two but for Standards Four and Six, School B group had more MTRM than School A's. (Refer to Appendix E for more details on school differences).

In summary, it can be seen that the score distributions for MTRMs were quite negatively skewed in all the three classes but much more in the LA group than UA group. It suggests that MTRMs are more strongly influenced by individual performances other than Standard or ability.

4.2.3. STANDARD ENGLISH PRONUNCIATION (S.E.P.)

The Standard English Pronunciations means the number of correct pronunciations which the pupils could score. The maximum number of scores which could be achieved were 40.

The mean scores for the UA group approached normality and they were 20.45, 23.10 and 28.60 for Standards Two, Four and Six respectively. For the LA group, the mean scores were lower at 8.45, 12.30 and 25.15 for Standards Two, Four and Six, respectively. This suggests that the UA group in all the three classes at least pronounced correctly between 50 - 70% of the words and the LA group scored between 5-15% of the words.

The spread of the scores was quite wide for the three classes. In UA group, the scores ranged from 4-35, 0-34 and 1-36 for Standards Two, Four and Six, respectively while for LA group ranged from 0-36, 0-30 and 1-37, respectively showing that some students in the LA group said that they did not know the words hence scoring 0. The Standard Deviations for UA groups were 10.37, 8.16 and 6.29 for Standards Two, Four and Six, respectively while for the LA group was 8.76, 10.02 and 8.51 for Standards Two, Four and Six, respectively. This indicates that the higher the ability, the better the pronunciation as can be seen from the means.

Tukey's Leaf and Stem Method was also used to explore the distribution of the number of Standard English Pronunciations by the children of different abilities by ranking them. (See Appendix I for the distribution. The shape of the curve was extremely skewed. Very few pupils in the LA group had high SEPs. For instance, in Standard Two LA group, 90% of the pupils had scored between 0-15 SEPs while the other 10% of the pupils had scored between 22-36 SEPs out of 40. In Standard Four, 80% of the pupils scored between 0-20 SEPs while 20% of the pupils scored between 24-30 SEPs out of 40. In Standard Six, 30% of the pupils scored between 1-20 SEPs while 70% of the pupils had between 26-37 SEPs. There was therefore an evident grade effect in the LA group with Standard Six scoring more SEPs followed by Standard Four then Two.

The UA group, however, had higher scores SEPs. In Standard Two UA, 50% of the pupils had SEP's ranging from 4-18 while the other 50% of the pupils had SEPs scores ranging from 20-35. The Standard Four pupils of UA had 35% of the pupils scoring between 1-19 SEPs while 65% of the pupils scored between 20-35 SEPs. The Standard Six pupils had 20% of the pupils scoring between 1-20

SEPs out of 40 while 80% of the pupils scored between 20-37 SEPs. There was also a definite grade effect amongst the pupils in the UA group just as it was for the LA group.

The performance of the two different schools showed that the Standard Two for both Schools were almost the same. These pupils had lower SEPs scores than School B's same classes. The Standard Four for School A had high SEPs scores than School B, while the Standard Six of both Schools were almost the same. (See Appendix E for more details on School differences).

In summary, it can be seen that the SEP score distribution for the UA group approached normality for all the three classes. This pattern was also apparent for the LA group for Standard Six. However, the SEP scores for the LA group for Standard Two and Four were quite low for almost all of the students. This could be attributed to lack of making attempts by the LA groups. To record a SEP, the students had to attempt the word.

4.2.4. ATTEMPTS

The mean attempt scores for Standard Four and Six UA levels approached normality but for Standard Two, the distribution of scores was skewed negatively. The means were 39.40, 65.35 and 60.25 for the Standards Two, Four and Six respectively for the UA group and those of the LA group scored 20.35, 47.40 and 59.80 for Standards Two, Four and Six respectively. There is a grade effect in the LA group with Standard Two making the lowest number of attempts followed by Four then Six.

The number of attempts for UA ranged from 7-76, 17-87 and 47-78 for Standards Two, Four and Six respectively while the LA group ranged from 1-68, 0-92 and 10-92. It should be noted that the LA group in Standards Two and Four make fewer number of attempts than those in the UA group.

Tukey's Leaf and Stem Method was used to show the distribution of the number of attempts at pronunciation of English words by the children of different ability levels. (See Appendix J for the distribution).

This graph also shows that the pupils in the LA group in all the three Standards made fewer attempts than those in UA. For instance, in Standard Two LA group, 65% of the pupils made between 0-20 attempts while 35% of the pupils made between 38-68 attempts out of 120. In the UA group, 20% of the pupils made between 7-18 attempts and 80% of the pupils made between 21-76 number of attempts.

In Standard Four, the LA group had 25% of the pupils with attempts ranging from 0-18 while 75% of the pupils had attempts ranging between 33-92. In the UA group, 5% of the pupils had less than 17 attempts while 95% of the pupils had attempts ranging from 52-87.

In Standard Six's LA, 50% of the pupils had attempts ranging from 1-54 while the other 50% had attempts ranging from 62-92. In the UA group, 50% of the pupils had the number of attempts ranging from 1-52 while 50% had the number of attempts ranging from 60-78. The trend shows that there was grade level effect and that the UA group in all the three classes made more attempts than the LA group, except for Standard Six LA group.

However, the performance in the two Schools shows that School A's UA group had a higher mean number of attempts compared to School B's UA group in Standard Two. For Standards Four and Six UA group, School B made more attempts than School A. For LA group, School A made more number of attempts than School B in all the three classes. (Refer to Appendix J for the difference in the number of attempts according to ability levels between the two Schools).

In summary, it can be seen that the number of attempts for Standard Two UA group were skewed negatively while of Standard Four and Six were approaching normality. The number of the attempts increased with the Standards indicating a Standard effect. The higher the Standard, the greater the number of attempts made. In all the three Standards, the UA group had more number of attempts than the LA group, except for Standard 6 LA group who made more attempts than UA group.

4.3.0 HYPOTHESIS TESTED

This Section presents the obtained results from the four hypotheses. As may be recalled from Chapter 3. Wilcoxon's Sum of Ranks Test was used to determine if there were significant differences.

4.3.1. THERE WILL BE NO SIGNIFICANT DIFFERENCES IN MISPRONUNCIATION SCORES BY PUPILS OF STANDARDS TWO, FOUR AND SIX.

The mispronunciation scores for all children were tabulated. The results are shown in Table 4.3.

TABLE 4.3: WILCOXON'S SUM OF RANK VALUES FOR DIFFERENCES IN MISPRONUNCIATIONS AMONG PUPILS OF STANDARD TWO, FOUR AND SIX.

(i) 2-4 (ii) 2-6 (iii) 4-6

WILCOXON'S SUM OF RANKS TEST (=M TEST)		
Standard	**Z-Value**	**Critical Value**
2 - 4	9.06*	2.58
2 - 6	6.19*	2.58
4 - 6	2.4	2.58

* Significant at $\alpha = 0.01$.

It was hypothesized that there would be no significant differences in mispronunciation of English words by pupils in Standards Two, Four and Six. The null hypothesis was rejected at $\alpha = 0.01$ for the pupils of Standard Two and Four and Standard Two and Six. However, the null hypothesis is accepted for pupils of Standard Four and Six. This means that children of Standard Two and Four and Two and Six made significant differences in their number of mispronunciation.

As can be seen from the Table, the Z value and Probability was (9.04, 0.02%), (2.4, 0.05%) and (6.19, 0.02%) for Standards Two and Four, Four and Six and Two and Six respectively. (See Appendix E_1

for T-test results which were also used for curiosity). This finding suggests that there are significant differences in mispronunciation scores in Standard Two and Four, Two and Six but not between Four and Six.

4.3.2. THERE WILL BE NO SIGNIFICANT DIFFERENCE IN MISPRONUNCIATION SCORES BY PUPILS OF UPPER AND LOWER ABILITIES

The mispronunciation scores for all children of Upper and Lower ability were tabulated. The results are shown in Table 4.4.

TABLE 4.4: WILCOXON'S SUM OF RANK VALUES FOR DIFFERENCES IN MISPRONUNCIATION BETWEEN PUPILS OF UPPER AND LOWER ABILITY LEVELS

WILCOXON'S SUM OF RANK TEST			
Standard		**R = Smallest Rank Total**	**Critical Value**
2	UA		323-497
	LA	296.5*	
4	UA		323-497
	LA	370.5	
6	UA		323-497
	LA	389.5	

* Significant at $\alpha = 0.01$

It was hypothesized that there would be no significant differences in mispronunciation scores by pupils of Upper and Lower ability. The null hypothesis was rejected at $\alpha = 0.01$ for the pupils of Upper and Lower ability in Standards Two only. However, the null hypothesis was accepted for the pupils of Standards Four and Six.

As can be seen from the Table, the Smallest Rank Total and Probability was (296.5, 0.02%), (370.5, 0.10%) and (389.5, 0.10%) for Standards Two, Four and Six respectively. (See Appendix F_1 - F_4 for T-test results). The results also suggest that there were significant

differences in mispronunciations scores between pupils of Upper and Lower ability in Standards Two only but not in Standard Four and Six. The prediction was that there would be differences in all the three Standards between Upper and Lower ability groups. Also since a single test of significance was used, the conclusion is that in Standard 2 UA had significantly more mispronunciation than LA.

4.3.3 THERE WILL BE NO SIGNIFICANT DIFFERENCES IN MOTHER TONGUE RELATED MISPRONUNCIATIONS BY CHILDREN OF STANDARDS TWO, FOUR AND SIX

The mother tongue related mispronunciation scores for all children of Standards Two, Four and Six were tabulated. The results are shown in Table 4.5.

TABLE 4.5: WILCOXON'S SUM OF RANK VALUES FOR DIFFERENCES IN MOTHER TONGUE RELATED MISPRONUNCIATION SCORES BETWEEN PUPILS OF STANDARD TWO, FOUR AND SIX

WILCOXON'S SUM OF RANKS VALUE		
Standard	**Z-Value**	**Critical Values**
2 - 4	4.08*	2.58
2 - 6	3.80*	2.58
4 - 6	3.17*	2.58

* Significant at $\alpha = 0.01$.

According to the third hypothesis, it was expected that there would be no significant differences in the number of mother tongue related mispronunciations by children of Standards Two, Four and Six. The null hypotheses were rejected at $\alpha = 0.01$ for all the three Standards Two, Four and Six. The conclusion was that there were significant differences between the children of Standards Two and Four, Standards Two and Six and Standards Four and Six.

4.3.4 THERE WILL BE NO SIGNIFICANT DIFFERENCE IN MOTHER TONGUE RELATED MISPRONUNCIATION SCORES BY PUPILS OF DIFFERENT ABILITY LEVELS

The mother tongue related mispronunciation scores for children of Upper and Lower ability for the three Standards were tabulated as shown in Table 4.6.

TABLE 4.6: WILCOXON'S SUM OF RANK VALUES FOR DIFFERENCES IN MOTHER TONGUE RELATED MISPRONUNCIATION SCORES BETWEEN PUPILS OF UPPER AND LOWER ABILITY LEVELS

WILCOXON'S SUM OF RANK VALUES			
Standard		R = Smallest Rank Total	Critical Value
2	U L	289.5*	323-497
4	U L	318.0*	323-497
6	U L	327	323-497

* Significant at $\alpha = 0.01$

In the fourth hypothesis, it was expected that there would be no significant difference in mother tongue related mispronunciation scores between pupils of Upper and Lower ability. The null hypothesis was rejected at $\alpha = 0.01$ for pupils of Upper and Lower ability in Standards Two and Four but the null hypothesis was accepted at $\alpha = 0.01$ for the pupils in Standard Six.

The Table shows that the Smallest Rank Total and Probability was (289.5, 0.002%), (318.0, 0.01%) and (327, 0.05%) for Standards Two, Four and Six respectively.

The results suggests that there are significant difference in mother tongue related mispronunciations scores between the children of Upper and Lower ability in Standards Two and Four but not in Standard Six. In addition, it is concluded that in Standard Two UA had

significantly more MTRM than LA and the reverse was the case in Standard Four.

4.4.0. SUMMARY OF RESULTS

The number of mispronunciations increased by class and in one of the Schools, this pattern was particularly evident. The number of mispronunciations increased from Standard Two to Four but there was no significant differences in the number of mispronunciations between Standards Four and Six.

In ability group, it was hypothesized that there would be no significant differences in mispronunciation scores by pupils of Upper and Lower ability groups. The results, however, suggest that there were significant differences in mispronunciation scores between pupils of Upper and Lower ability in Standard Two only but not in Standards Four and Six.

In mother tongue related mispronunciations, a few pupils scored high numbers of MTRMs whereas the majority had very few. The performance is consistent across the three Standards suggesting that the problem persists for a few pupils, however, and is not reduced by schooling experience.

In ability group, it was hypothesized that there would not be significant differences in MTRMs between pupils of UA and LA. The results suggest that there were significant differences in MTRMs between the pupils of UA and LA in Standards Two and Four but not in Standard Six.

CHAPTER FIVE

DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

5.0. DISCUSSION

The results indicate that mispronunciations generally increased from Standard Two to Four with fewer increases thereafter. The number of mispronunciations increases with Standard due to the higher number of attempts that were being made by the students of upper classes. This finding was consistent with Butkowsky and Willows (1980) who found out that the students who had been exposed to more schooling would make more attempts to pronounce words. In our case, more attempts could lead to higher number of mispronunciations.

The number of attempts increased with the Standard also, indicating that the pupils in the upper classes took the risk at pronunciation of the words more than those in the lower classes. This finding is consistent with the finding of Cole (1938) who suggested that success in reading largely depends on the child's overall level of maturity. It is hoped that since pronunciation is one aspect of reading, it will also be performed better if the child has attained a certain age level. It is important to note here that the number of attempts made does not necessarily ascertain success in pronunciation.

The Standard English Pronunciation scores showed that there was an increase by Standard. This shows that the more the child is exposed to the School, the more the standard pronunciation he will make. (Similar findings were obtained by Hale, Taweel, Eireen and Flaugher, 1978; Halford and McDonald, 1977; Vemler, 1978.)

It should be observed here that the inconsistency could be a phenomenon given the reading level of these pupils. The pupils in Standard Two are still experimenting on letter-sound correspondence and have not consolidated their phonological skills. Liberman and Shankweiller (1985) cited in Kangethe (1988) have stated that "the child's awareness of phonological structure does not happen all at the same time but develops gradually over a period of years" (p. 9-10).

For mother tongue related mispronunciations, the performance was consistent across the three Standards where the majority had few numbers of MTRMs. However, this suggests that the problem persists for a few children and is not reduced by schooling experience. This strongly suggests that MTRMs in certain children are strongly resistant to the effect of schooling. This could be explained in reference to the potential auditory problems described by Carroll (1973) in which these few children do not develop the ability or capability of hearing the different sounds.

The results indicate that there are significant differences in mispronunciation scores between pupils of Upper and Lower ability in Standard Two only and not in Standards Four and Six. The significant differences in mispronunciation scores by pupils of Lower ability group in Standard Two could be attributed to their hesitation in making attempts as was discussed. Most of the pupils in the Lower ability said that they did not know instead of making an attempt. If no attempt is made, no mispronunciation or S.E.P. is scored. Although the instructions for the test were such that the pupil could not know whether or not he had pronounced the word correctly, there is a possibility that there was still some fear of making mistakes. Sornon (1950) noted that a pupil's unsuccessful attempts to read make him conspicuous in a socially unfavourable way and the child gets hurt and demoralised. Otto (1976) argues that children of higher intellectual ability are usually expected to pronounce better than those of lower intellectual ability. Consistent with these findings in this study was also Durkin (1966) who said that brighter children will do better in pronunciation than the less brighter ones.

These results are quite consistent with Kaufman (1979) who postulated that the higher the child's intelligence scores, the greater the probability that he will learn to read and hence pronounce words correctly. He found out that low intelligence is an important contributing cause to the occurrence of reading difficulties in many cases.

Integrating these findings with the predictions made about performances of children of varying intellectual ability, one would expect that the low intellectual ability child who is a poor reader, would

be relatively less persistent in the face of difficulty than average or good readers and to make few attempts to sound out words they encounter.

This study also confirmed that the Lower ability group apparently did not make many attempts. This showed lack of persistence on the pupil's side.

The results indicated that there were significant differences in the number of MTRMs by pupils of Standards Two, Four and Six. The scores on mother tongue related mispronunciation was higher in Standard Two, a fact attributed to the number of attempts made as opposed to experience in being in School longer. This finding is not in conformity with what Muthiani (1984) observed when he reckoned that "The sounds of foreign language may be difficult for a learner either because they are unfamiliar to those of his first language or they happen to be of slightly different quality" (p. 53). It is therefore possible that a child who has been in School for only a few years will easily fall back on the sounds of the mother tongue as opposed to one who has had more practice in the new language.

The results indicated that there were significant differences in mother tongue related mispronunciation scores between the pupils of Upper and Lower ability in Standards Two and Four but not in Standard Six.

These results are consistent with Strevens (1966) who postulated that the pupils who are high in their intellectual ability and begin to learn in childhood would pronounce better than those in Lower ability group.

5.1. IMPLICATIONS AND RECOMMENDATIONS

Fluency is expected to improve as children get more experience with reading and mature physically and psychologically. The number of mispronunciations of young children are expected to decrease as they mature or go to higher classes. This expectation is partly based on the assumption that schooling among other factors makes the children more proficient in their pronunciation. The teachers should

therefore be tolerant with students in earlier classes yet firm in making sure that they learn standard pronunciation.

The teachers should also be aware of the type of mis-pronunciations the pupils make and help them accordingly. This should be carried on to the upper classes too.

A survey of the mispronunciation of one ethnic group may help predict the likely problem areas of a future similar group. Of course one has to remember that each ethnic and linguistic group is different and that plans may have to be modified accordingly. Students of the same age and preferably in the same Standard and intellectual ability with similar language and teaching background are likely to have similar problems in developing fluency.

It is possible also that mother tongue influence might not end immediately, hence the effort to eradicate it should be eventually done although perhaps in a later Standard. It was however, not a serious problem for the few who had mother tongue related mis-pronunciations. If the teachers realise that the mispronunciations which are being made by the pupils are due to mother tongue influence, then they should have patience with the pupils and not discourage them by looking down upon them since the problem will not disappear easily but for those who persist, extensive practice should be given to them.

It was also evidenced that the number of mispronunciations was affected by the number of attempts made. The more the number of attempts the pupil made, the more the number of mispronunciations. In order for the teacher to identify a large number of mis-pronunciations, the teacher should encourage the students to make as many attempts as possible.

From the implications mentioned, it would be necessary to incorporate reading tasks and teaching methods that favour pronunciation by having pronunciation games. The teacher should be prepared to devote some of the lesson time to pronunciation and, by his whole attitude to the subject, should get the student to feel that here is a matter worth receiving his close attention, so there should be

occasions when other aspects of English such as grammar or spelling are allowed for the moment to take second place. If this is done in different standards, there will be an improvement in the pupils pronunciations.

Curriculum designers (K.I.E.) should realise the importance of correct pronunciation and allocate ample time for the teachers to utilize in teaching pronunciation in their time tables. After initial instructions in early grades, the present curriculum does not necessarily emphasize pronunciation as a skill in reading. The K.I.E. should therefore emphasize the need for more lessons in pronunciation of English words by the pupils of different Standards and if possible, have the pupils tested on their pronunciations so that they might put an extra effort in it. The teachers should also be able to identify the pupils with prevailing pronunciation problems in their standard and then pass the information to the next higher standard teacher so that the problem can be curbed.

Apart from this question of time given to pronunciations, McCarthy (1972) also said that there are two other requirements for the teacher; the first knowledge of what pronunciation is and the part it plays in effective communication; the second technique of how to teach pronunciation. It is imperative that the teacher should be in possession of the necessary information about pronunciation. This can generally be obtained from books dealing with pronunciation, some idea of the mechanics of speech and of what phonetics entails. It is also possible in this way to get a clear mental picture of the relationship between the sounds of different languages between the speech habits of native English speaking people and those of the students. Unless the teacher has such a picture, any comments he may make on his students' pronunciation are unlikely to be of much use and lesson time spent on pronunciation may well be time wasted. It is therefore necessary for the Kenya Teachers Colleges through K.I.E. to put a lot of emphasis on adequate knowledge of phonics.

Apparently, teachers in their preparation for the teaching of reading, may not have been made sufficiently aware of the fact that they should focus their attention upon the requirements of the child's acquisition of pronunciation techniques and adjust aims, materials and

procedures to his or her needs and way of learning. To improve pronunciation instruction, it is essential that Colleges of Education put more emphasis on the preparation of teachers especially in reading and reading skills like oral fluency and pronunciation.

In mother tongue related mispronunciations, it could be due to the fact that some pupils were able to leave mother tongue pronunciations by not making any effort. It is therefore recommended that K.I.E. should stress on the need of having more practice especially on the words which have mother tongue related influences in the earlier classes so that by the time the pupils with persistent problems will have reached upper classes, there would be less problems encountered. Teachers should recommend some hearing tests for the pupils and they should also put an exerted effort to try as much as possible to pronounce the mother tongue related words correctly since the pupils tend to imitate the way their teachers speak and also pronounce the words. The teachers should not be allowed to teach the younger pupils but older ones. The students should also be tested on pronunciation skills so that they can put an extra effort in doing it properly.

For the purposes of future research, it is recommended that other two scores, that is, Standard English Pronunciation and Attempts made by students be examined in another study. This is because the scores were only used to help in understanding the two scores of mispronunciations and mother tongue related mispronunciations since it was evidenced that there were school differences.

The (LPEW) Test which was developed for this study needs to be validated for use with larger samples. This can be done by adding more words. It can also be used for further research with other ethnic groups. There is also a need of replication and extension of the study to other languages spoken in Kenya.

As mentioned in the beginning, this is an exploratory, empirical study and it is highly hoped that it will provoke further research in these areas.

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APPENDIX A_1

SERIES OF READERS USED: -

FOR STANDARD 2 WORDS LIST:

1. The Progressive Peak English Course. Standard One Course Book. Jointly published by the Jomo Kenyatta Foundation and the Oxford University Press, Nairobi on behalf of the K.I.E., Ministry of Education, Kenya, 1975.

2. The Progressive Peak English Course. Standard Two Course Book. Jointly published by the Jomo Kenyatta Foundation and the Oxford University Press, Nairobi on behalf of the K.I.E., Ministry of Education, Kenya, 1976.

3. The Progressive Peak English Course. Standard Three Course Book. Jointly published by the Jomo Kenyatta Foundation and the Oxford University Press, Nairobi on behalf of the K.I.E., Ministry of Education, Kenya, 1975.

APPENDIX A_2

FOR STANDARD 4 WORDS LIST

1. The Progressive Peak English Course. Standard Three Course Book. Jointly published by the Jomo Kenyatta Foundation and the Oxford University Press, Nairobi on behalf of the K.I.E., Ministry of Education, Kenya, 1975.

2. Primary English Pupils' Book for Standard Four: New Adventures. Published by Jomo Kenyatta Foundation. Written by K.I.E., Ministry of Education, Kenya (1986).

3. Primary English Pupils' Book for Standard Five: Neighbours Published by Jomo Kenyatta Foundation on behalf of K.I.E., Ministry of Education, Kenya (1987).

APPENDIX A_3

FOR STANDARD 6 WORDS LIST

1. Primary English Pupils' Book for Standard Five: Neighbours
   Published by Jomo Kenyatta Foundation on behalf of K.I.E.,
   Ministry of Education, Kenya (1987).

2. Primary English Pupils' Book for Standard Six: Marching Ahead
   Published by Jomo Kenyatta Foundation on behalf of K.I.E.,
   Ministry of Education, Kenya (1988).

3. Primary English Pupils' Book for Standard Seven
   Published by Jomo Kenyatta Foundation on behalf of K.I.E.,
   Ministry of Education, Kenya (1989).

APPENDIX B_1

INDIVIDUAL (LPEW) TEST RECORD WITH WORDS

Child's name: _____ Date: _____

Standard: 2 Sex: _____ Age: _____

Name of School: _____ Location: _____

Word	Standard Pronunciation	ATTEMPTS 1st	2nd	3rd	Comment
hat	/hɑət/				
cat	/kɑət/				
dog	/dɑg/				
top	/tɑp/				
boy	/bɔi/				
bag	/bɑɑg/				
bus	/bɔs/				
shop	/ʃɛp/				
shelf	/ʃɛlf/				
brush	/brɔʃ/				
shirt	/ʃɘ̄ɹt/				
wash	/wɑʃ/				
bird	/bɘ̄ɹd/				
dish	/diʃ/				
head	/hɛd/				
hand	/hɑɑnd/				
these	/ðiz/				
fish	/fiʃ/				
short	/ʃɘ̄ɹt/				
sad	/sɑɑd/				
six	/siks/				
ship	/ʃip/				
sing	/siŋ/				
help	/hɛlp/				
thief	/θif/				
chief	/tʃif/				

Word	Standard Pronunciation	ATTEMPTS			Comment
		1st	2nd	3rd	
shake	/ʃēik/				
shamba	/ʃaambaa/				
shore	/ʃōōɹ/				
finish	/fi.niʃ/				
busy	/bi.zi/				
shoe	/ʃū/				
bell	/bel/				
big	/big/				
dig	/dig/				
farm	/fāɹm/				
sheep	/ʃip/				
shilling	/ʃi-liŋ/				
classroom	/klassrūm/				
bookshop	/bukʃop/				

Number of attempts: _____ Number of mispronunciations: _____

Number of Standard Pronunciation: _____ Number of mother tongue related mispronunciations: _____

APPENDIX B_2

INDIVIDUAL (LPEW) TEST RECORD WITH WORDS

Child's name: _____ Date: _____

Standard: 4 Sex: _____ Age: _____

Name of School: _____ Location: _____

Word	Standard Pronunciation	ATTEMPTS 1st	2nd	3rd	Comment
ship	/ʃip/				
sing	/siŋ/				
help	/help/				
hear	/hiəɹ/				
salt	/sɑlt/				
rush	/rʌʃ/				
bead	/bid/				
dead	/ded/				
cart	/kɑɹt/				
nose	/nōuz/				
hole	/hōul/				
whole	/hōul/				
fish	/fiʃ/				
hospital	/hɑ-spitəl/				
dish	/diʃ/				
shorts	/ʃɑɹts/				
wash	/wɑʃ/				
short	/ʃɑɹt/				
ask	/ask/				
call	/kɑl/				
wood	/wud/				
easy	/izi/				
chart	/tʃɑɹt/				
hare	/hēəɹ/				
shower	/ʃauəɹ/				
shelf	/ʃelf/				

Word	Standard Pronunciation	ATTEMPTS			Comment
		1st	2nd	3rd	
here	/hiəɹ/				
aloud	/əlaʊd/				
cash	/kæʃ/				
insect	/insekt/				
shelter	/ʃe.ltəɹ/				
fisherman	/ʃiʃəɹmaen/				
showroom	/ʃōuɹūm/				
shop-keeper	/ʃɒpkipəɹ/				
workshop	/wɒɹkʃɒp/				
shade	/ʃēid/				
shilling	/ʃi.liŋ/				
bookshop	/bukʃɒp/				
box	/boks/				
hurt	/hōdt/				

Number of attempts: _____ Number of mispronunciations: _____

Number of Standard Pronunciation: _____ Number of mother tongue related mispronunciations: _____

APPENDIX B_3

INDIVIDUAL (LPEW) TEST RECORD WITH WORDS

Child's name: _____ Date: _____

Standard: 6 Sex: _____ Age: _____

Name of School: _____ Location: _____

Word	Standard Pronunciation	ATTEMPTS			Comment
		1st	2nd	3rd	
class	/klas/				
ask	/ask/				
stream	/strim/				
aloud	/əlɑu-d/				
easy	/ī zi/				
chart	/tʃɑdt/				
lazy	/lēi.zi/				
bad	/bɑɑd/				
sad	/sɑɑd/				
cash	/kɑɑʃ/				
hear	/hīəɹ/				
here	/hiəɹ/				
bark	/bɑɹk/				
bird	/bəɹd/				
bend	/bend/				
dish	/diʃ/				
shirt	/ʃəɹt/				
shelf	/ʃelf/				
read	/rid/				
someone	/sɒmwɒn/				
shower	/ʃauəɹ/				
hare	/hēəɹ/				
shallow	/ʃɑɑ.lou/				
splash	/splɑɑʃ/				
shelter	/ʃeltəɹ/				
hammer	/hɑɑ-məɹ/				

Word	Standard Pronunciation	ATTEMPTS			Comment
		1st	2nd	3rd	
sixteen	/sikstiːn/				
english	/iŋgliʃ/				
shilling	/ʃi-liŋ/				
discussion	/diskɒ-ʃən/				
cousin	/kɒ-zin/				
calabash	/kæ-ləbæʃ/				
chicken	/tʃiken/				
erosion	/irəʊʒən/				
workshop	/wɜːkʃɒp/				
fisherman	/fiʃədmæn/				
bookshop	/bukʃɒp/				
admission	/ædmi-ʃən/				
instruction	/instrʌ-kʃən/				
conclusion	/kənkluː-ʒən/				

Number of attempts: ________ Number of mispronunciations: ______
Number of Standard Pronunciation: ______________ Number of mother tongue related mispronunciations: ____________________

APPENDIX C

PILOT STUDY RESULTS

DESCRIPTIVE DATA: MEASURES OF CENTRAL TENDENCY AND VARIABILITY MEASURES ON STANDARD LEVELS FOR THE TEST SCORES

Test Scores	Measures of Central Tendency			Variability Measures	
	Mean	Mode	Median	SD	Range
Mispronunciations					
Std. 2	14.50	2.0	10.0	13.60	1-60
Std. 4	36.60	38.0	34.0	16.50	2-85
Std. 6	30.25	26.70	32.0	15.20	3-70
Mother Tongue Related Mispro-nunciations (MTRM)					
Std. 2	6.02	1	4.0	10.30	0-50
Std. 4	8.15	2	5.0	12.70	3-60
Std. 6	5.80	2	6.0	16.21	5-65
Standard English Pronunciations (SEP)					
Std. 2	16.35	6.0	15.0	9.30	1-35
Std. 4	19.20	18.0	19.5	7.50	3-36
Std. 6	28.18	29.5	30.0	5.61	5-38
Attempts					
Std. 2	27.30	44.0	25.0	23.0	1-70
Std. 4	58.20	65.0	66.5	25.30	3-101
Std. 6	65.05	68.0	67.3	10.45	15-106

APPENDIX D

INSTRUCTIONS FOR ADMINISTRATION OF THE (LPEW) TEST

1. The researcher will hold the card with a word so that the pupil can see it clearly.

2. The researcher will ask the pupil to pronounce the word slowly and clearly.

3. If the student pronounces the word using Standard English Pronunciation in the first attempt then that Standard Pronunciation will be entered in the first attempt column.

4. If the student does not pronounce the word in Standard English Pronunciation, the researcher will ask the student to try again but not let him/her know that there was a mistake. Specifically, the researcher will ask the student to (say the word louder please).

5. If in the second attempt the student still does not pronounce the word using the Standard English Pronunciation, the student will be given a third attempt which will be the final one. Specifically, the researcher will ask the student to (say the word slowly).

6. If the student kept quiet despite being prompted by the researcher to have the second and third attempts, the researcher will record in the comments column if the student kept quiet, either noded or said that he/she does not know.

7. Whatever pronunciation attempts made in the three attempts will be recorded in the three different columns.

   (a) In the first column attempt, if the pronunciation is the Standard one then there will be no request for another attempt.

(b) Second column is used if the pronunciation in the first attempt was not the Standard one.

(c) The third column is used if both pronunciation in first and second columns were not of Standard English.

APPENDIX E_1: DESCRIPTIVE DATA: Measures of Central Tendency and Variability Measures on Standard Levels

	Standard and School	Measures of Central Tendency			Variability Measures	
		Mean	Mode	Median	SD	Range
Mispronunciations	2 A	19.35	7.5	15.5	15.34	0-53
	B	11.90	3.0	4.5	15.07	0-54
	4 A	38.85	31.3	36.0	22.79	0-81
	B	38.60	42.0	37.5	16.32	0-74
	6 A	32.25	33.0	26.0	15.78	12-63
	B	34.25	39.0	36.5	22.66	0-77
Mother Tongue Related Mispronunciations	2 A	7.35	3.0	3.0	11.97	0-36
	B	6.70	3.0	3.0	11.52	0-42
	4 A	10.65	1.5	3.0	18.45	0-54
	B	8.45	0	3.0	10.57	0-30
	6 A	5.90	1.5	3.0	9.36	0-33
	B	10.00	6.0	3.0	14.65	0-45
Standard English Pronunciation	2 A	20.55	22.60	19.50	11.19	0-36
	B	8.35	4.0	5.5	7.55	1-27
	4 A	19.60	16.0	20.0	10.06	0-34
	B	15.80	4.0	15.0	10.93	0-32
	6 A	28.30	33.0	29.00	5.86	19.36
	B	25.45	27.0	27.00	8.92	1-36
Attempts	2 A	39.90	47.5	43.0	17.94	3-68
	B	19.85	5.0	12.5	22.29	1-76
	4 A	58.50	66.6	63.5	26.03	0-92
	B	54.25	58.0	58.0	20.92	4-86
	6 A	60.65	60.1	56.0	10.36	48-82
	B	59.40	66.0	64.0	19.57	10-92

Key: A = School A
B = School B

APPENDIX E_2: DESCRIPTIVE DATA: Measures of Central Tendency and Variability Measures on Ability Levels

	Standard and School	Measures of Central Tendency			Variability Measures	
		Mean	Mode	Median	SD	Range
Mispronunciations	2 A U	18.80	15.0	15.5	12.73	3-43
	L	19.90	3.0	15.5	18.27	0-53
	B U	19.90	3.0	15.0	17.93	3-54
	L	3.90	3.0	3.0	4.01	0-12
	4 A U	43.20	58.0	39.0	19.69	16-71
	L	34.50	0	34.5	25.83	0-81
	B U	41.20	40.0	40.0	12.84	26-66
	L	36.00	42.0	36.0	19.56	0-74
	6 A U	22.90	18.00	21.00	15.85	12-43
	L	41.60	41.00	39.00	8.94	21-63
	B U	40.40	39.0	39.5	17.09	12-65
	L	28.10	0	30.5	26.61	0-77
Mother Tongue Related Mispronunciations	2 A U	6.90	0	0	12.57	0-36
	L	7.800	1.5	3.0	11.99	0-36
	B U	11.80	3.0	3.0	14.85	0-42
	L	1.60	0	0.5	1.51	0-3
	4 A U	12.30	3.0	3.0	21.77	0-54
	L	9.00	1.5	3.0	15.46	0-44
	B U	5.60	0	0	10.11	0-30
	L	11.30	0	10.00	10.75	0-30
	6 A U	2.10	0.0	4.5	2.025	0-6
	L	9.70	3.0	2.5	12.193	0-33
	B U	9.70	6.0	5.0	14.15	0-45
	L	10.30	3.0	5.0	15.89	0-42

	Standard and School	Measures of Central Tendency			Variability Measures	
		Mean	Mode	Median	SD	Range
Correct Pronunciation	2 A U	13.40	32.0	31.5	7.30	17-35
	L	27.70	12.0	12.0	9.86	0-36
	B U	13.200	13.2	14.5	7.55	4-27
	L	3.50	4.0	3.5	3.31	0-11
	4 A U	21.30	16.0	22.0	9.67	1-34
	L	17.90	20.0	20.0	10.66	0-30
	B U	24.90	26.0	26.5	6.32	12-32
	L	6.70	4.0	4.0	5.33	0-16
	6 A U	31.90	33.5	33.00	3.48	25-36
	L	24.70	24.0	23.50	5.62	19-35
	B U	25.30	24.5	26.5	6.87	11-36
	L	25.60	37.0	28.5	10.99	1-37
Attempts	2 A U	46.50	50.0	47.0	9.16	33-61
	L	33.30	33.3	39.5	22.33	3-68
	B U	32.30	32.3	27.0	25.73	7-76
	L	7.40	5.0	5.0	6.54	1-19
	4 A U	64.60	64.6	66.0	19.93	17-87
	L	52.40	16.0	62.5	30.83	0-92
	B U	66.10	62.5	65.0	9.47	54-84
	L	42.40	33.0	42.5	22.85	4-86
	6 A U	54.8	52.0	53.5	5.69	48-68
	L	66.50	62.0	62.5	10.87	54-82
	B U	65.70	66.0	66.0	10.82	47-78
	L	53.10	50.5	60.0	24.57	10-92

Key: A = School A
B = School B

APPENDIX F_1

T-VALUES FOR DIFFERENCE IN MISPRONUNCIATIONS OF ENGLISH WORDS AMONG CHILDREN OF STANDARDS TWO, FOUR AND SIX

(i) 2 - 4 (ii) 2 - 6 (iii) 4 - 6

Standard	T-Values Pooled Variance Estimate		
	Degree of Freedoom	T-Value	2 Tail Probability
2 - 4	78	-5.86	0.000*
2 - 6	78	4.51	0.000*
4 - 6	78	1.26	.211

APPENDIX F_2

T-VALUES FOR DIFFERENCES IN MISPRONUNCIATIONS OF ENGLISH WORDS BETWEEN CHILDREN OF UPPER AND LOWER ABILITIES

Standard	T-Values Pooled Variance Estimate		
	Degree of Freedoom	T-Value	2 Tail Probability
2 U L	38	-1.55	.130
4 U L	38	-1.13	.267
6 U L	38	.52	.607

APPENDIX F_3

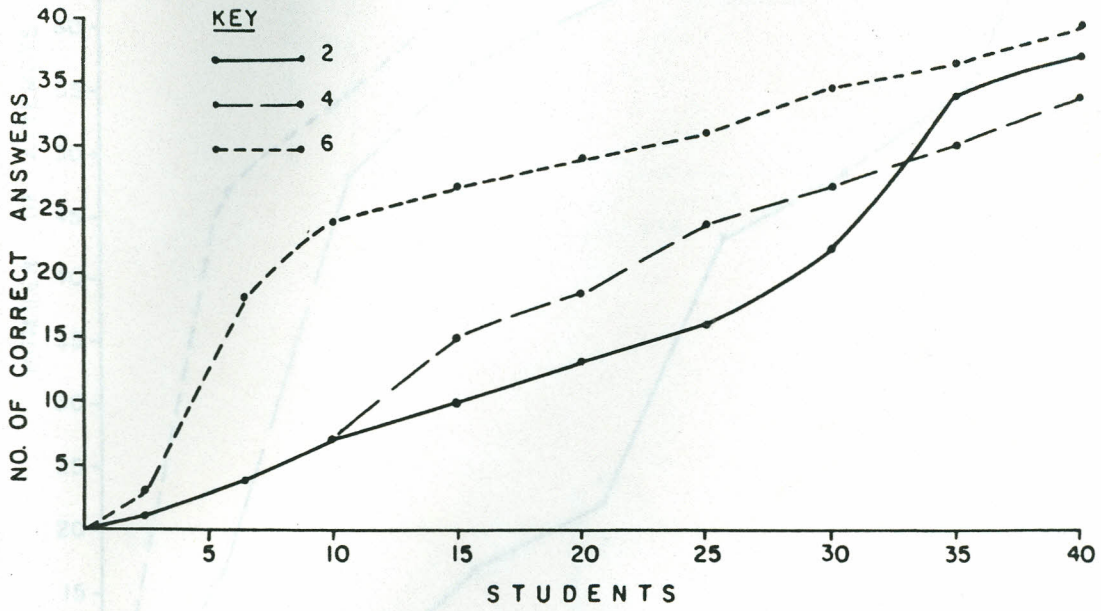
T-VALUES FOR DIFFERENCES IN MOTHER TONGUE RELATED MISPRONUNCIATIONS OF ENGLISH WORDS BY CHILDREN OF STANDARDS TWO, FOUR AND SIX

Standard	T-Values Pooled Variance Estimate		
	Degree of Freedoom	T-Value	2 Tail Probability
2 - 4	78	-.85	.40
2 - 6	78	.35	.7
4 - 6	78	.52	.60

APPENDIX F_4

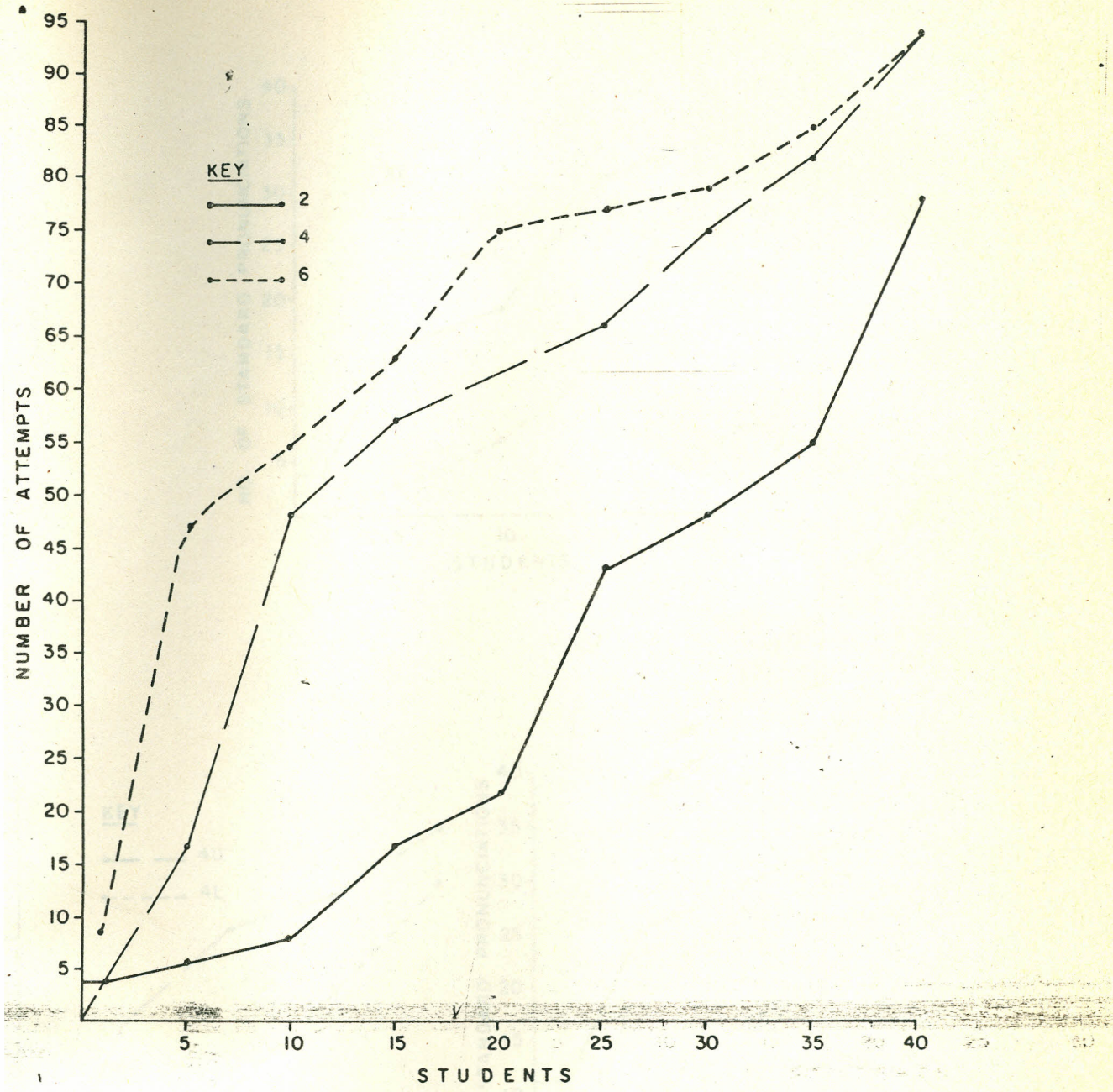
T-VALUES FOR DIFFERENCES IN MOTHER TONGUE RELATED MISPRONUNCIATIONS OF ENGLISH WORDS BY CHILDREN OF UPPER AND LOWER ABILITIES

Standard	T-Values Pooled Variance Estimate		
	Degree of Freedoom	T-Value	2 Tail Probability
2 U L	38	-1.28	.210
4 U L	38	.25	.803
6 U L	38	1.05	.299



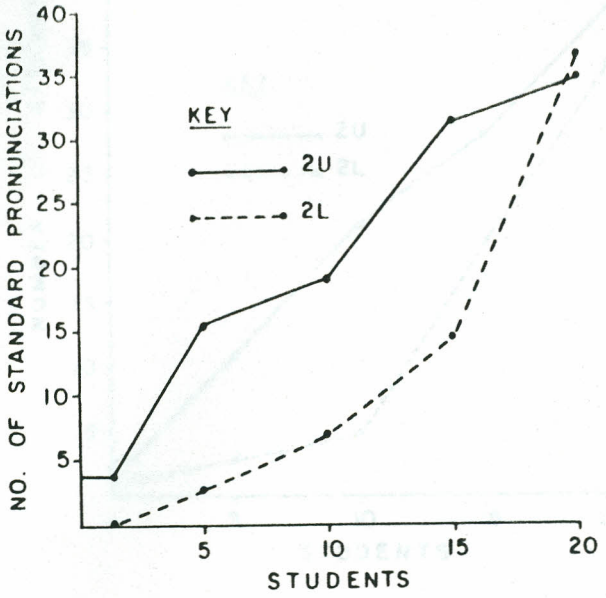
APPENDIX G

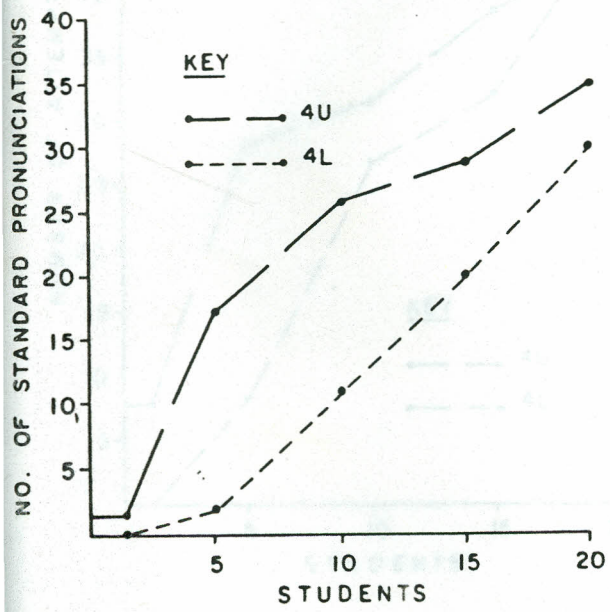
NUMBER OF CORRECT PRONUNCIATIONS MADE BY EACH CHILD IN STANDARD TWO, FOUR AND SIX

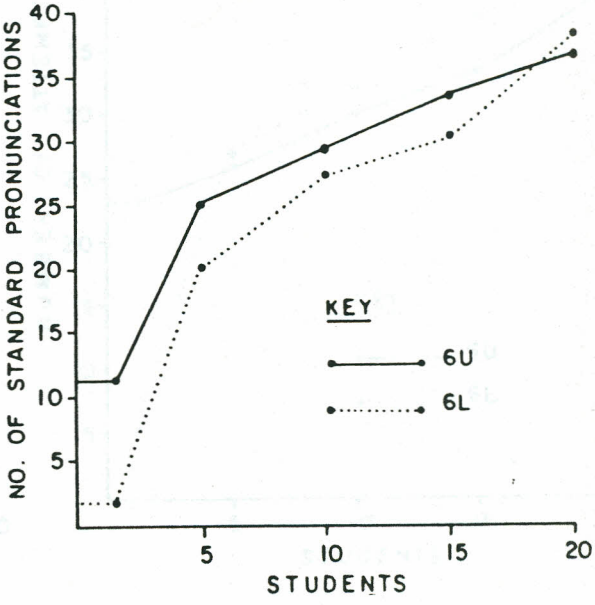


APPENDIX H

NUMBER OF ATTEMPTS MADE BY EACH CHILD IN STANDARD TWO, FOUR AND SIX

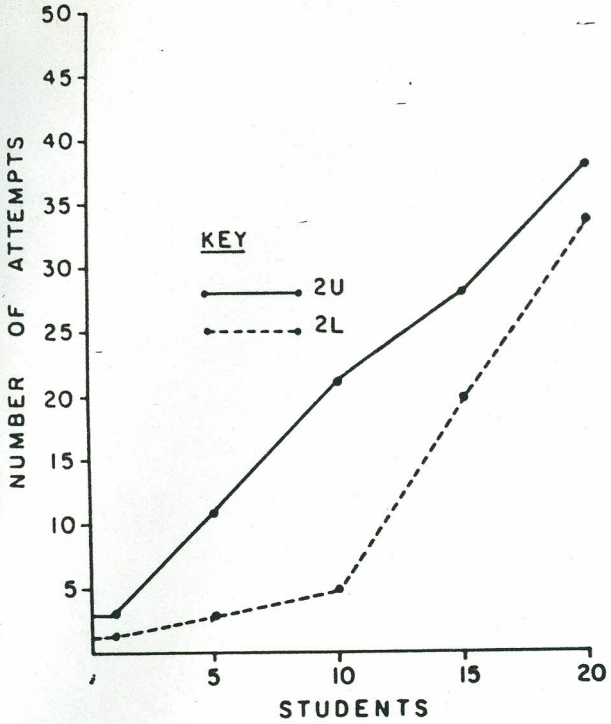


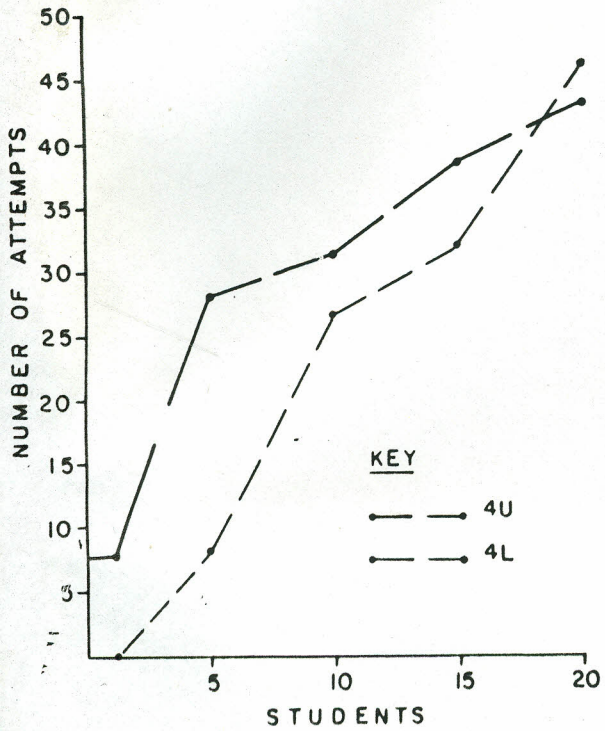


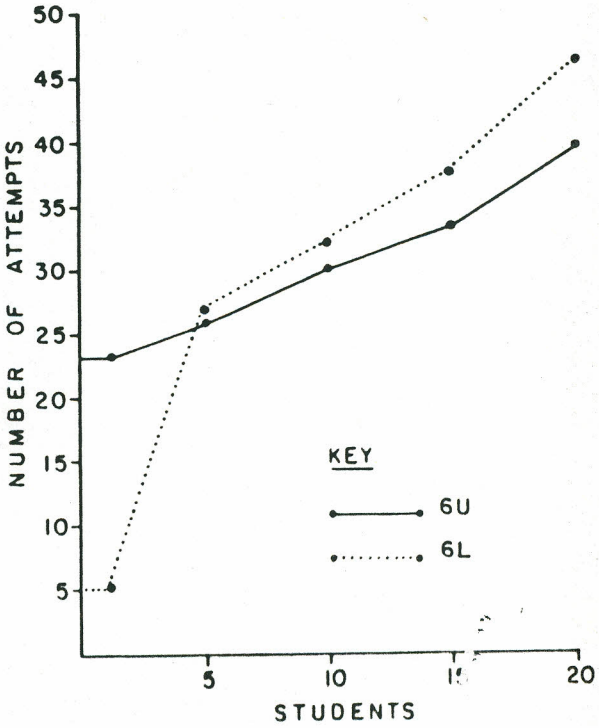


APPENDIX I

NUMBER OF CORRECT PRONUNCIATIONS MADE BY EACH CHILD IN UPPER AND LOWER ABILITY IN STANDARDS TWO, FOUR AND SIX







APPENDIX J

NUMBER OF ATTEMPTS MADE BY EACH CHILD IN UPPER AND LOWER ABILITY IN STANDARDS TWO, FOUR AND SIX