

**PHONEMIC AWARENESS IN ENGLISH LANGUAGE LITERACY AMONG
GRADE THREE PUPILS IN PUBLIC PRIMARY SCHOOLS IN EMBU
COUNTY, KENYA**

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Requirements for the Award of the Degree of Master of Arts in English
Language and Linguistics of Chuka University**

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DECLARATION AND RECOMMENDATION

Declaration

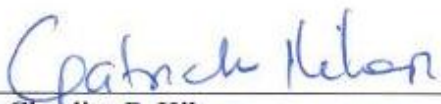
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Recommendation

This thesis has been examined, passed and submitted with our approval as University supervisors.

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DEDICATION

This work is dedicated to my dear wife Esther Karuana Njagi.

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I acknowledge Almighty God for granting me the good health throughout this study. I also express my sincere gratitude and appreciation to my supervisors Dr. C. Patrick Kihara and Dr. Mary N. Karuri for their guidance, scholarly contribution, supervision, encouragement, direction and insight throughout the entire study period. However, I am solely and personally responsible for the analyses presented in this work.

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ABSTRACT

Studies have shown that among the factors that influence learners' literacy acquisition in language is phonemic awareness. The purpose of this study was to investigate phonemic awareness in English language literacy and determine the level of phonemic awareness among Grade Three primary school pupils in Embu County. The study investigated the level of phonemic awareness, literacy level and the influence of phonemic awareness on the literacy level. The study was guided by Ehri's 1995 model on phases of reading sight word. The study sampled 40 public primary schools, 78 Grade Three teachers and 380 Grade Three pupils in line with Israel 2013 sampling formula. Stratified, random and purposive samplings were employed in identifying the schools, pupils and the teachers who were the participants. The study employed mixed study designs using questionnaires and a standard test for data collection. The study population comprised 386 public primary schools, 426 Grade Three teachers and 9976 Grade Three pupils. Data was analysed using descriptive statistics and One Way Analysis of Variance using software Statistical package for Social Sciences (SPSS) and presented in tables and charts pupils were then categorized into those who were phonemically aware, those demonstrating emerging phonemic awareness and those lacking phonemic awareness. It was found out that Grade Three pupils in public primary schools in Embu County have low phonemic awareness and English literacy level. Urban schools were found to have statistically significant higher level of both phonemic awareness and literacy. Phonemic awareness was found to have a strong positive correlation with English literacy level influencing 76% of literacy level. The researcher established that there was inadequate use of phonemic awareness strategies by Grade Three English teachers and concluded that there is need for enhanced use of phonemic awareness strategies by teachers in order to improve English literacy in lower primary.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
BECF	Basic Education Curriculum Framework
CBC	Competence Based Curriculum
CI	Confidence Interval
CSO	Curriculum Support Officer
EFL	English for Foreign Learners
EYE	Early Years Education
F	Frequency
GL	Grapholine
HSD	Honestly Significant Difference
IPA	International Phonetic Alphabet
KNEC	Kenya National Examinations Council
L1	First Language
L2	Second Language
MLP	Monitoring Learners Progress
N	Number
NACOSTI	National Commission for Science Technology and Innovation
PA	Phonological Awareness
PWPER	Presidential Working Party on Education Reform
SACMEQ	Southern and Eastern Africa Consortium for Monitoring Education Quality
SD	Standard Deviation
SLA	Second Language Acquisition
SPSS	Statistical Package for the Social Sciences
UNESCO	United Nations Educational Scientific and Cultural Organization
UNISA	University of South Africa
USA	United States of America

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Literacy is the expansion of one's knowledge of reading and writing by decoding written messages for use in communication, acquisition of knowledge and coping with the needs of every day's life (Wells, 1987). Literacy level in a language can be measured through assessed fluency in reading, communication and proved proficiency in writing in a particular language (Sedita, 2020). Language acquisition is the internalization of rules and formulas that can be connected and used to communicate, while learning is internalization of rules of symbols of a language that can be used for communication through formal education (Khasinah, 2014). Khasinah further adds that language acquisition is a conscious study of language through formal classroom teaching and learning.

According to Fromkin, Rodman and Hyams (2003), the acquisition of another language after the First Language (L1) has been sufficiently learned by an individual is referred to as Second Language Acquisition (SLA). SLA is determined by a series of interwoven factors that may be individual while others are environmental or social. SLA can therefore occur through social interaction with community or through formal instruction. The British introduced English in Kenya as a L2 during their colonial administration and rule. English language established its solid foundation as the official language of communication and not the national language. According to Giouroukakis and Honigsfeld (2010), the language of instruction may have negative effects on student's content grasp, reading motivation, reading habits among others.

To address challenges posed by language literacy in Kenya primary schools, *Tusome* literacy programme was started by the government in 2014. The programme, which is still active in primary schools in Kenya, aims at improving language literacy in lower primary grades in primary schools by providing literacy resources in schools and training public schools lower primary teachers and Curriculum Support Officers (CSO) on English and Kiswahili literacy methodologies.

Lack of literacy in English is identified as one of the most significant factor in escalating illiteracy in most African countries. The UNESCO Report on Global literacy of 2013 revealed the trend that Sub Sahara Africa followed closely by South West of Asia had the lowest literacy level and this accounted for 53% of the global illiterate population, Kenya not being an exception (UNESCO, 2013).

Studies have shown that there exists a strong correlation between early childhood literacy skills level and future development of literacy skills (Adams, 1990). Similarly, Green and Riddell (2012) asserted that education is a strong determinant of growth in acquisition of literacy skills underscoring the need for educationist to closely monitor the impact of education system and curricula and its impact on learners' literacy skills development. English is an essential language for all across the globe as evidenced by its international acceptance as medium of communication. English is taught in our schools not only as a medium for effective communication but also as the official language of instruction, English reading and writing literacy becomes the most essential facet for success in schools. According to Lewis-Moreno (2007), learners require language literacy skills to enhance ease of understanding concepts in different subjects as well as day to day social interactions. Various studies have shown that learners using English as a L2 face challenges in acquiring English literacy skills. Industry Skills Council of Australia (2011) asserted that nurturing acquisition of English literacy in Kenyan schools must therefore be a fundamental goal for learners in Early Years Education (EYE) grades in primary schools in Kenya.

According to the Basic Education Curriculum Frame Work (BECF) document developed by the government of Kenya in 2019, Lower primary level is instructed in the'' language of the catchment area'' (P 32). During the two years of pre- primary education and three years of instruction in grades one, two and three, learners are encouraged to be taught the ''foundational skills of reading and writing English language'' at the earliest opportune time (p 36) from grade four onward, English replaces the language of the catchment area or the indigenous languages and becomes the medium of instruction (p 41). According to this document, the rationale for English as language of instruction stems from its position as the language of education, information, trade, diplomacy and social networking (p 41). In order to unlock these

global communities, English is positioned to serve the key. The fact that pupils in lower primary are only taught foundational skills in English means that their literacy in English is constrained largely by their acquisition of phonemic awareness skills.

Although fossilization affects language learning process in learners who take English as L2 and makes it difficult for them to improve on errors they make orally and in writing, most fossilization in English speaking and writing among children are temporary and can be reduced or eliminated by specific strategies among them strategies in phonemic awareness (Selinker, Swain & Dumas 1975). When correct error analysis strategies are put in place, this will not only help learners learn English but will also help teachers improve on teaching English language literacy. This is because a thorough analysis of specific cases on causes of fossilization points to teachers' feedback on errors made by learners as major causes of fossilization. (Selinker, Swain & Dumas 1975). This essentially means that the errors made by learners in English can be reduced significantly or eradicated through instruction and modelling thus improving their literacy level.

The 2019 Monitoring Learners Progress (MLP) assessment conducted nationally in Kenya by the Kenya National Examination Council (KNEC) at Grade Three to test the basic acquisition and proficiency in the four basic literacy skills in English revealed that the pupils performed dismally in all the four main English language skills (see Table 1). This raises concerns on the level of influence phonemic awareness has on acquisition of English language literacy in Embu County and consequently motivated the researcher to conduct the study.

Table 1: National Performance in Grade 3 MLP

Task	Listening and Speaking		Reading Aloud		Reading Comprehension and Language Structures		Writing Skills	
	N	P	N	P	N	P	N	P
Exceeding Expectation	350488	29.1%	35322	6	213801	17.8%	170304	14.2%
Meeting Expectation	431117	35.8%	38099	5	397198	33.0%	392071	32.6%
Approaching Expectation	312976	26.0%	30432	7	310497	25.8%	371553	30.9%
Below Expectation	108074	9.0%	16424	5	280715	23.3%	268714	22.3%

Source: KNEC 2019 Grade 3 MLP

1.2 Statement of the Problem

Orthographic mapping and Phonemic awareness are vital foundational skills required by children for the development of automatic sight word reading. Research done by KNEC in 2019 on literacy level of the pupils in Kenya showed that nationally pupils performed poorly in the four main skills in English language with the number of pupils meeting expectation and above being 64.8% in Listening and Speaking, 60.1% in reading aloud, 50.8% in reading comprehension and language structures while only 46.8% met expectations in writing. Although a number of studies have been done on factors affecting English literacy level among primary school pupils in Kenya, little and inconclusive research has been done on phonemic awareness and how it affects English literacy acquisition. Inspired by these findings, this work seeks to investigate the influence of phonemic awareness on English language literacy among Grade Three pupils in public primary schools in Embu County.

1.3 Purpose of the Study

This study investigated the influence of phonemic awareness on English language literacy among Grade Three Public primary school pupils in Embu County.

1.4 Research Objectives

The following objectives guided this study:

- i. To determine the level of phonemic awareness in English language among Grade Three pupils in public primary school in Embu County.

- ii. To investigate the phonemic awareness strategies used in teaching English language literacy to Grade Three pupils in public primary schools in Embu County.

1.5 Research Questions

The study was guided by the following research questions:

- i. What is the level of phonemic awareness in English language among Grade Three public primary school pupils in Embu County?
- ii. What phonemic awareness strategies are used in teaching English language literacy to Grade Three pupils in public primary schools in Embu County?

1.6 Significance of Study

The research is expected to be a point of reference to teachers, parents, educational officers, County and the National Government as a whole in English literacy pedagogy in lower primary. The study will help curriculum developers evaluate the influence of the phonemic awareness in promotion of English language literacy which is a core component in language teaching in Competence Based Curriculum (CBC) at lower primary since English language literacy is now an independent learning area in CBC at the EYE tier. Further, the study will help devise ways of improving English language literacy skills crucial to English language achievement during MLP assessment.

The research report will help the County Governments which are responsible for early childhood education identify resource gaps in literacy programmes and enhance English language literacy methodologies in preschool classes. The research report will make recommendations on intervention measures that will help improve English language phonemic awareness in lower primary grades in public primary schools. The report will equip the teacher trainees in teacher training colleges with modern strategies, approaches and methods for effective literacy instruction in primary schools.

1.7 Research Assumptions

The following assumptions guided the study:

- i. All words selected for the segmentation test are familiar to all public primary school pupils.
- ii. The curriculum content of the English Language had been covered adequately in all schools by the time of the study.

1.8 Scope of the Study

The study investigated phonemic awareness as a factor influencing achievement of English language literacy among pupils in public primary schools in Embu County only although other regions may have similar problems. The study used Grade Three pupils as the population although other grades may have the same problem. It was deemed that Grade Three pupils had learned adequately on phonetic awareness thus the grade was representative. Although there are many factors that affect Language literacy, the study investigated Phonemic awareness in English language because phonemic awareness is the only phonological awareness skill that enhances word decoding and fluency through the awareness that written language such as English has sounds that corresponds to spoken language hence creating a link between oral and written language.

1.9 Limitations of the Study

There was no control whatsoever over individual pupils' cognitive ability and phonological memory factors which are important ingredients in responses and performance in the Yopp-Singer phoneme segmentation test which was administered by the researcher. However, the study ensured that there was no negative influence on the findings by employing stratified sampling to capture all categories of schools and give all learners equal chance of participation in the study. This ensured that pupils at all levels of cognitive abilities participated in the study.

1.10 Definitions of Terms

Continuous Sound:	Spoken sounds made with a continuous flow of air from the mouth or nose.
Decoding:	Using the names of letters to match their sound correspondences for word recognition and reading in an alphabetic language.
Fossilization	A process in which a learner's incorrect language becomes a habit and cannot easily be corrected.
Grapheme:	A specific letter or multi letter representations which are used to represent a single phoneme.
Literacy:	A reader's ability to recognise English consonant and vowel sounds and connect them to read and write words.
Orthography:	The representation of proper spelling, developed to help readers read words in a language.
Phoneme:	Distinctive part of a speech sound from conversations or utterances that distinguish words.
Phonemic Awareness:	The specific ability to focus on and manipulate individual sounds (phonemes) in spoken words.
Public Primary School:	An institution of basic education owned and managed by the government of Kenya offering education for children between 4-11 years.
Pupil:	A Grade Three learner in a public primary school.
Reading:	Learner's ability to recognize English language syllables, consonants and vowel sounds and connect them to form words and construct meaning from these words for the purposes of comprehension.
Scaffolding	Chunking English literacy tasks to help learners read and write independently.
Sight Words:	Words which trigger their correct spelling, pronunciation and meaning in the memory of a reader as a result of reading them accurately several times.
Teacher:	A Grade Three Teacher in primary school.

CHAPTER TWO

LITERATURE REVIEW

2.1 English Language Literacy

Various studies offer different definitions of reading literacy. According to Kalanje (2011), reading could be viewed as the process through which one constructs meaning of words through a reader's prior interaction with knowledge and written context. On the other hand, Yambi (2010) defines reading as the activities that lead to translation of written text into words and sentences with meaning to the reader. Reading could also be viewed as the construction of meaning from a collection of words or letters (Pang et. al., 2003). In this study reading infers the learner's ability to recognize English consonants and vowel sounds and connect them to form words and construct meaning from these words for the purposes of comprehension.

Different studies have explained the acquisition of basic reading skills as a key problem in early learning especially in the L2 or foreign languages. For instance, Cummins (2007), in a study that compared literacy level in English language for English natives and English foreign language users in USA, says that native speakers of English takes about two years in developing literacy skills compared to their peers using English language as a L2 or foreign language, who take as long as six years to acquire the same skills. Supporting these sentiments, Lewis-Moreno (2007) reported that, while English speaking learners can read and comprehend English language in about three years, it takes as long as a decade for English language learners to achieve the same.

Reading in children starts developing way before formal reading instruction in school. This art of early literacy in reading was coined by Marie Clay in early 1960's and it is referred to as emergent literacy. According to Canadian Literacy and Language Research Network (2007), a beginning phase of literacy in reading is coupled by a two year old learner's recognition of words, sounds and at times learning to write some text and occurs as early as the second year of life. Further, emergent literacy occurs through experience and interaction with words and symbols that the child comes across. Supporting this ideology, Whitehurst and Lonigan (2001) opined that these fundamental literacy competencies learned during preschool years lay a foundation for continuation in learning language literacy at later stages of life. Consequently, it is more

difficult to internalize L2 than one's native language. Since the development of emergent literacy occurs without formal instruction, family interaction plays a key role and therefore home language becomes the child's L1.

Children from families that interact in English may therefore develop English literacy with ease. Similarly, schools that use English as a medium of communication are likely have higher learning rates in English literacy. English being a L2 among a vast population of the learners who lack means of exposure or interaction with English speakers both at home and school find it more difficult for such learners to internalize the English phonemes which may in turn affect their Literacy level in English. This study thus sought to establish the level of phonemic awareness and its effect on literacy levels as well as establish the kind errors that are made by learners in reading English Language. Further, the study investigated variations in phonemic awareness and literacy level among different categories of schools. Among the proponents of emergent literacy scholars Whitehurst and Lonigan have played a pivotal role in describing emergent literacy. In their work in 1998, they described emergent literacy as composed of seven components, namely: language, linguistic awareness, knowledge of letters, conceptions of print and letter sound connection (Whitehurst & Lonigan, 1998). Notably, the components have been used in developing reading literacy curriculum for early childhood language education in many educational systems.

Building on emergent literacy components, Hawken, Johnston and McDonnell (2005) identified five emergent literacy activities that were adopted in school head start programme; the pupils appreciation of book knowledge from their home was used as a spring board for literacy lessons at school and this involved book handling and care, learners were given a variety of activities to build on their awareness on print, phonology tasks such as rhyming through singing were adopted, letters of alphabet were sang, written in the air and on specially prepared surfaces to introduce learners knowledge on the alphabet and early writing. Different components of emergent literacy have evolved with time and one research group to another building up to a rich literature on the subject matter.

USA National Institute for Literacy carried out a systematic investigation to determine the connection between the components of emergent literacy and reading literacy for

children at later years of schooling. Their report identified: awareness on phonological tasks, automatic letter naming, writing, phonological memory and alphabet knowledge, as the fundamental determinants of literacy development among children. On the other hand, print concepts, oral language, visual processing, reading readiness and print knowledge were classified as moderately influencing a learner's development of reading literacy in later stages of life (USA National Institute for Literacy, 2008). Teacher competence measured across diverse indicators such as teacher experience, in-service training, cultural background, use of materials, availability of infrastructure and many more have shown significant influence on learner achievement (Troyer and Yopp, 1990).

In a bid to explore the factors that influence reading fluency in Africa Commeyras and DeGroff (2007) conducted a study involving a meta-analysis of panel data in reading and in mathematics from the Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ) database archive collected in the year 2000 in all South African countries except Zimbabwe. The study found that the reading skills of the learners were below average in general and was influenced by the cognitive domain, the affective domain and the behavioural domain of the learners.

Ngwaru and Opoku-Amankwa (2010) investigated home and school literacy practices in Africa, particularly focusing on Zimbabwe and Ghana. The study established a statistically significant relation between improvement in learners' Reading Comprehension skills and the frequency with which teachers deployed phonemic awareness strategy to evoke word recognition skills before reading lessons. In a similar study carried out in South Africa, Pretorius (2000) found that undergraduate students at the University of South Africa (UNISA) demonstrated low level of word recognition, which affected learners' ability to make valid inferences. The study reported a significant correlation between word recognition and the ability to draw valid inferences, which is central to reading comprehension because inferential processing involves perceiving connections and relationships between various entities in a text. Research into the level of English Language proficiency in Kenyan primary schools has revealed significant level of underperformance. For example, the study by Uwezo (2012) revealed that grade six learners in Kenyan primary schools were far below

meeting expectations in reading English as only 32% could read and comprehend grade 2 English content. Isutsa (2011) noted that poor instructional methods were the major cause of poor literacy among primary schools' pupils in Matuga Sub-County, Kwale County. On the hand Ongotah (2017) affirmed the sentiments by Isutsa (2011) when he reported that lack of interactive learning in phonics instruction greatly contributed to poor reading skills.

Kathuri (2014) investigated the factors influencing performance in Kenya Certificate of Primary Education (KCPE). Kathuri found that teacher related factors such as teaching methodology and competency were significant factors in determining pupils' performance. However, the study didn't explore strategies in phonemic instruction. It is therefore imperative that a specific study is carried out to establish the factors that influence English Literacy level. This study therefore investigated phonemic strategies use by teachers in order to establish their influence on English literacy among Grade Three pupils. The study examines reading strategies with reference to the teaching of reading to early childhood learners. It revealed that teaching of reading at the early stages is important because the quality of experience children get at this level affect or lay the foundation for reading development. It is therefore imperative to look into strategies used in phonemic awareness instruction in Kenya.

2.2 Phonemic Awareness and Literacy Level

Phonological awareness occurs when readers display the ability to analyze spoken language in terms of its sound structures (Schuele, Skibbe, & Rao, 2007). This implies that such readers learn how to combine sounds to make words. According to (Schuele et al., 2007), phonemic awareness concentrates on description and analysis of phonemes arising from utterances and conversations in words that are spoken. It is an area that falls under a broader area of metalinguistic awareness known as phonological awareness (Chapman, 2003). Phonological skills that are acquired during a child's early stages positively influence the development of language literacy at later stages of life. Such skills help learners decode written words thus enhancing fluency in reading and writing. Proponents of phonological awareness have developed a series of activities that help children enhance their phonemic awareness.

Hawken et al. (2005) noted that playing with sounds, reading, reciting words or rhythms, sound practice using sounds and using sound for word construction are some of the activities children may engage in to acquire phonological awareness. According to Ehri (1995), the development of phonological skills is progressive and begins with basic skills as one move to intricate skills. The orderly manner in which the learning activities should be arranged demands that children would first master segmented syllables, then rhymes before reading initial sounds and then final sounds.

Once these have been achieved, children are then able to join sounds to make words or even segment into respective sounds and syllables. Finally, the learner is able to substitute words with others of similar meanings (Schuele et al., 2007). However, these skills overlap and could be learned concurrently though the ability of the child to achieve success largely dependent on the child's exposure to learning opportunities at his/her disposal as well as interest in learning the language. Research has demonstrated that phonemic awareness determines a child's success on the first day of schooling and is taken to be the clearest single indicator of success or failure a learner will experience in reading and writing (Adams, 1990). Consequently, exposing children to phonemic awareness activities accelerates children reading and writing achievements Ball and Blachman (1991).

Children who have not acquired sufficient phonemic awareness skills will not correctly complete blending activities, for example they will have difficulties putting together sounds /c/ /o/ /t/ to make the word 'cot'. Such children will have challenges in phoneme substitution for example replacing the consonant blend /gr/ in the word 'grow' with the consonant cluster /cr/ to make the word 'crow'. They will have problems telling how many syllables there are in words for example 'cat' has one syllable, they will also have difficulties in recognising rhyming words such as 'king' and 'sing.'

Word recognition is an automatic language skill that involves correct identification of grapheme and sound units by a reader. Word recognition skills are less taught directly and predict reading effectiveness (Gillon, 2004). The implication for this is that children should recognise words effortlessly which is vital in reading and writing for example the sentence '*Nyaga is happy*' has three words. A component of phonology is syllable

awareness for example. 'cat' has one syllable and 'somehow' has two syllables. It's important for children to know that words can be broken into parts as this helps them to decode words when reading and spelling words when writing.

Before writing syllables, it is important for children to develop syllable auditory awareness through various children literature and materials rich in alliteration. Children experiencing challenges in the manipulation of phonemes from spoken utterances will not be able to link phonemes to letters as they appear in words which are written. This means that the foundation to phonics clearly lies in the readers' phonemic awareness. In view of this, this study investigates the influence of phonemic awareness on English language literacy among pupils in public primary schools in Embu County.

Adams et al. (1998) describes seven stages of phonemic awareness, which begins with instruction in listening skills, familiarizing the children with the need to listen actively before other, more advanced, skills are taught. During the second stage, the children move to the skill of rhyming where they begin to listen to language and find out it has meaning, as well as beginning to find out that the alphabet plays a part in language. The third stage includes introducing the children to the concept that language is made up of words and sentences. When the children have this base, they are introduced to the fourth stage- listening for syllables.

The fourth stage is directing the children to listen for the initial phoneme in a word, followed by listening for the final phoneme in a word. When all the preceding stages have been mastered, (Adams et al. 1998), recommends moving on to the sixth stage, dividing words into phonemes using manipulatives such as blocks and cubes. The last stage (seventh), According to Adams et al. (1998), is introducing letters and spellings, leading the children to transfer the skills they have worked on into reading.

Children Phonemic awareness can be measured directly through phonemic awareness assessment or indirectly through observation and game-like tasks. Any assessment that occurs should be brief and enjoyable in order to minimize frustrations and ensure accurate results (Griffith & Olson, 1992). According to Yopp (1988), learners who have sufficient phonemic awareness are able to identify rhyme in words, and also blend and count sounds in words, they are able to segment sounds in words and manipulate such

sounds in words by either substituting, adding or deleting sounds as they appear in words. Despite the relationship that exists between phonemic awareness skills and reading and learning to spell words correctly, questions on the best strategies to use for effective instruction on phonemic awareness remains unanswered in primary schools sub-sector in Kenya (Gathigia & Rutere, 2018). This study therefore seeks to identify the strategies used by teachers in teaching English Language literacy. In order to enhance phonemic awareness among early language learners, researchers recommend the appropriate use of phonemic skills or strategies.

2.3 Phonemic Awareness Strategies Used by Teachers

Phonemic awareness has been defined in various ways by different proponents of the use of phonemes in teaching language literacy. One of the universally acceptable definitions is the ability to focus on and manipulate phonemes in the spoken word (Ehri, Nunes, Willows, & Schuster, 2001). Phonemes are the smallest units in the spoken language. It is estimated that the English Language has approximately 41 phonemes (Ehri & Nunes, 2002). Research indicates that phonemic awareness and letter knowledge are key predictors to students' success in learning to read (National Reading Panel, 2000). Confirming this, the predictive study by Ehri & Roberts (2006) indicated that when children enter kindergarten with the ability to manipulate phonemes and identify letters, they progress at a faster pace in learning to read.

According to Phillips and Torgesen (2006), phonemic awareness is both an understanding and a skill. For instance, in order to identify the phonemes in [cat], learners must understand that there are sounds at the beginning, middle and at the end that can be manipulated. To be phonemically aware, learners must also be able to complete phonemic awareness tasks such as the following:

Phoneme isolation: Isolate phonemes in a word, for example, "being able to tell the first sound in the word "cat" that is /k/. Phoneme identity: This is the ability to recognize common sounds in different words; for example, identifying the common sound in the same sound in 'rug', 'rat', and 'roll'. Phoneme categorization: Refers to the ability to identify the word with the odd sound in a sequence; for example, "the word that does not belong in 'sat', 'sag', and 'rug'? Phoneme blending: Blending is defined as the

ability to identify and read each sound in a written word and then reading all the sounds in a single breath (Bara & Bonneton-Botte, 2017). For example, the ability to combine separate sounds such as [b-a-t] to form the word “bat”. Phoneme segmentation: This involves breaking of words into separate sounds; for example, “breaking the sounds in the word “bag” (Ehri et al., 2001).

Inverizzi (2003) posits that phonemic awareness development is progressive and that identifying beginning and ending sounds is much easier than recognizing medial phonemes. This implies that there is imperative need for explicit, systematic instruction in phonemic awareness that is integrated within a literacy program (National Reading Panel, 2000). It is with this understanding of the importance of phonemic strategies in enhancing phonemic awareness that this study established the strategies used by teachers in Embu County in teaching English in primary schools. This would help make recommendations on best strategies that can help teachers improve English Literacy level for their learners.

Phoneme Segmentation: This is a linguistic instructional technique used in teaching phonemes by breaking words down into their individual phonemes, or sounds (Scott, 2009). Scott further adds that phonemic segmentation involves guiding readers to isolate and identify the distinct sounds in a word. This skill is essential for developing phonics skills, as it allows readers to connect individual phonemes to their corresponding graphemes (letters or letter combinations) in written English Language (Scott, 2009). For example, in the word "cat," the phonemic segmentation process would involve breaking it down into its three phonemes: /k/ - /æ/ - /t/. By isolating these sounds, the reader can then match each phoneme to its corresponding letter or letters in the word.

Supporting these sentiments, Ehri and Roberts (2006) asserted that Phonemic segmentation is particularly useful when encountering new or unfamiliar words, as it enables readers to sound out the word by blending the individual phonemes together. This blending process helps readers decode the word and understand its meaning.

Phonemic manipulation: This is an instructional technique that is aimed at giving learners the skills and knowledge to change, add, or delete phonemes to create new words or variations of existing words (Daly, Chafouleas & Skinner, 2005). According to Daly, Chafouleas & Skinner (2005) phonemic manipulation helps readers understand the relationship between sounds and letters, enabling them to decode and encode words more effectively. The skill of phoneme manipulation enables a learner to recognize, rearrange, add, delete or substitute alphabetical letters orally in order to read and write. For example, in identifying capital and small letters in English alphabet so that “ B” is capital and letter” b” is a small letter, from the word ” top” one can have the words ‘pot’, and ‘opt.’ (Daly, Chafouleas & Skinner, 2005). Phonemic manipulation involves three distinct techniques: phonemic addition, phonemic deletion and phonemic substitution.

Phoneme addition: This involves the addition of a new phoneme to a word to create a new word. Example: When /d/ sound is added at the beginning of the word "sun" the word "dun" is formed (Daly, Chafouleas & Skinner, 2005). **Phoneme deletion:** This is removing a phoneme from a word to form a new word. For example, in the word: "bat" the phoneme deletion could involve removing the phoneme /b/ resulting in a new word "at"(Daly, Chafouleas & Skinner, 2005). **Phoneme substitution:** This entails replacing one phoneme with another to create a new word. For instance in the word: "cat" the phoneme /k/ could be replaced by the phoneme /r/ resulting into formation of a new word "rat" (Daly, Chafouleas & Skinner, 2005).

Phonemic isolation: This is a fundamental phonemic awareness skill that involves the ability to recognize and identify individual phonemes without blending or manipulating them (McGee & Ukrainetz, 2009). If we consider the word “cat”, phonemic isolation would require separating the phonemes and sounding them as follows: /k/ sound for "c", /æ/ sound for "a", and /t/ sound for "t" Phonemic isolation involves a variety of activities which may include but not limited to asking students to identify the beginning, middle, or ending sound of a given word, sorting words based on their initial sounds, or matching pictures with words that share the same initial or ending sound (Burani, Thornton & Zoccolotti, 2017).

According to McCarthy (2008), Phonemic isolation is an essential pre-reading skill that lays the foundation for more advanced phonemic awareness skills. By isolating and identifying individual phonemes in words, learners become more aware of the sounds that make up spoken language. This heightened phonemic awareness helps learners develop phonics skills where they later connect these individual sounds to their corresponding letters or letter combinations in written language. Phonemic isolation activities may include asking learners to identify the beginning, middle, or ending sound of a given word, sorting words based on their initial sounds, or matching pictures with words that share the same initial or ending sound (McCarthy, 2008).

McCarthy (2008) further notes that in phonemic isolation one seeks to equip the learner with vital pre-reading skills that lays the foundation for more advanced phonemic awareness skills. By isolating and identifying individual phonemes in words, learners become more aware of the sounds that make up spoken language. This heightened phonemic awareness helps learners develop phonic skills, where they later connect these individual sounds to their corresponding letters or letter combinations in written language.

Minimal pairs: These are pairs of words in a language that differ by only one phoneme (sound), resulting in different meanings. In linguistics and phonetics, minimal pairs are used to demonstrate the phonemic contrast between two sounds and to show how a change in a single sound can create a distinction in meaning (Cameron, 2012). Burani, Thornton and Zoccolotti (2017) notes that the word minimal is derived from the fact that the words are as similar as possible with only one phoneme varying between them. The pairs often share the same syllable structure and stress pattern, so the only difference is in the specific sound being pronounced (Burani, Thornton & Zoccolotti, 2017). For example, "cat" and "bat". The two words are the same with the only difference being the initial phoneme, /k/ versus /b/. However, this result into different meanings as well as the way they are pronounced. Other examples are "ship" and "sheep" - The only difference is the vowel sound in the middle, /ɪ/ versus /i:/, resulting in different meanings. Other examples are "pen" and "pan". The only difference is the vowel sound in the middle, /ɛ/ versus /æ/, resulting in different meanings.

Gaming Activities: Gaming activities is a common instructional technique that has been embraced in teaching young learners. Using game-like activities as a phonemic strategy is an effective and engaging way to teach phonemic awareness and phonics to young learners (Patel, Torppa, Aro, Richardson & Lytinen, 2022). Gaming is a complex phonemic strategy that is applied to reinforce learning of the different phonemic skills and knowledge. A review of findings across 28 Grapholine (GL) studies highlighted that the effectiveness of GL varies across languages and educational contexts (McTigue et al., 2019). According to Patel et.al. (2022), game like activities enhanced phonemic awareness by enhancing students' physical engagement that motivating learner's more through active learning. Patel further asserts that gaming activities due to their repetitive nature allow learners to practice phonemic skills with much interest.

In their study on the effect of computer based games in learning Vanbecelaere, S., Van den Berghe, Cornillie, Sasanguie, Reynvoet, and Depaepe (2020) noted that many phonemic games give a multi-sensory experience to learners as they incorporate visual, auditory, and kinaesthetic elements. This multi-sensory experience helps cater to different learning styles and enhances retention. Van den Berghe et al. (2020) further notes that the social interaction in gaming activities reduces anxiety, gives immediate feedback thus enhancing long term retention of the skills learned. Gaming activities may be as simple as phonemic games include rhyming word matching games, phoneme blending and segmenting activities, phonics board games, and word building puzzles among others.

2.3.1 Phonemic Awareness and Reading and Writing

Writing is the art of scribbling alphabet symbols in order to communicate certain message in print form (Hawken et al., 2005). It comes with the recognition that letters printed together have a meaning. There is a strong connection between writing and phonemic awareness as well as phonological memory as one must attach a meaning to a symbol that he can recall before replicating it in print. This symbiotic connection between reading and writing is well explained (Clay, 2014; Hill, 2015). When learners are able to write certain words correctly they are able to read them easily thus, this improves on their literacy level.

It's worth noting that children learning to write early come up with their own spelling to stand for words, because they are contending with grapheme-phoneme connections and print concepts. In the same way, children learning to read early put together the language structures and features of text during reading (Hill, 2015). In so doing, these early literacy learners make use of their knowledge of letters to decode words using their skills in phonemic knowledge (Goswami, 2014).

The act of composing requires early learners to bring their knowledge of letters and sounds to the fore to enable a purposeful message to be written. It is during this process where learners see the direct link between hearing and identifying phonemes and matching to graphemes. Goswami (2014) observes that young literacy learners should be motivated to express their thoughts freely in a variety of contexts and it is during such avenues of expression when the development of phonological awareness is at its best (Daffern, 2017). It is largely accepted that young literacy learners rely on the knowledge they have on spellings, and word structure to succeed in literacy development and progression (Daffern, 2017). Such spellings represent sounds that make up phonemes thus a phonemically aware learner may show better reading abilities.

Learners learning to read and write early use their prior knowledge on letter formation in their names as a blue print in reading and writing (Mackenzie, 2016). This means that known words should be used to help them get into other similar words for example, having known how to write the word 'day' could help in writing the word 'play.' Learners should also use some strategies such as using beginning, middle and final sounds which would help them segment unknown words and eventually help spell and read them for example ('cd' = 'could' 'wds' = 'words').

Middle sounds needs a greater concentration in their processing as they rely mostly on letter sound connection that is already known to early learners (Daffern, 2017). The process of identifying syllables in words will help them perceive word segments and therefore read the words for example, the word 'button' will be broken into 'but-ton' however, the process of syllable identification for words with more than one syllable requires a more complex skill and it's attained progressively (Daffern, 2017). To

improve on learners' grasp of the reading skill it is necessary that the words are further broken into phonemes which may be easy to grasp than syllables. The connection between word recognition, phonological knowledge and reading fluency has been widely studied. Nunes et al. (2012) conducted a study to investigate children's use of large graphophonic units, use of morphemes and reading fluency among children in United Kingdom. The use of morphemes was found to have a strong positive correlation with fluency in reading. The researcher recommended frequent use of morphemes to improve on reading fluency.

In Scotland, Barth et al. (2014) examined the effect of phonological decoding on fluency in reading. The findings showed that phonological decoding which is an aspect of phonemic awareness accounted for high variability in learners' reading fluency; In the United States, Opitz and Lindsey (2010) reported that learners trained on the use of phonemics and sight words became more fluent in their reading than those untrained, because training improved their phonemic awareness skills. In this regard, the study recognised phonemic awareness as one of the strategies enabling learners to improve their skills in word recognition, reading proficiency and performance in tests. The authors explained that the strategy entails encouraging learners to examine the order of letters and combine their sounds in order to identify how new words should be read. In view of this, failure by English language teachers to apply phonemic awareness in reading lessons is tantamount to denying learners vital skills for recognising and decoding new words by themselves.

In another study in Canada to establish the influence of the use of syllabification by English Language teachers on reading skills, it was reported that syllabification had a statistically significant relation with learners' comprehension reading abilities (Kwiatkowska-White, 2012). The researcher reported that syllabification gave learners the ability to attach meaning to words before reading, thus learners were able to construct the meaning of the whole sentence. Failure to use syllabification was seen to be a cause for frequent interruption as learners pause to establish the meaning of unknown sounds.

Amartha (2013) carried out a study in Indonesia to establish the effect of phoneme and word recognition skills on reading comprehension reading effectiveness. The study reported that there was a significant difference in ability to read comprehension between learners with phonemic recognition skills and the control group. Based on this, the study suggested use of phonemic strategies and word recognition skills training can improve learners reading fluency in English. Further the study attributed the improved reading fluency to syllabification and phonemic segmentation.

Ngwaru and Opoku-Amankwa (2010) investigated practices of language at home and in school in Zimbabwe and Ghana. The findings of the study revealed that there was a strong relationship between abilities of the learners to read comprehension and the use of phonemic awareness strategies. The researchers further reported phonemic awareness instruction evoked word recognition skills. The low level of English Literacy noted were attributed to inadequate use of phonemic awareness strategies.

In Kenya Anyiendah, Odundoh and Kibuyi (2020) carried out a quasi-experimental study to establish the effect of word recognition on achievement of reading comprehension among learners in Vihiga County. The study reported that word recognition strategies had a statistically significant positive effect in improving comprehension reading skills. The study further reported that the most effective skills in teaching word recognition were syllabification, context clues, phonemic awareness and fluency. However, the application of context clues was occasional in the experimental group, but rare in the control group; the use of phonemic awareness was uncommon in both groups; while fluency skills were barely used by teachers in both groups. This implies that teachers rarely used phonemic awareness strategies in teaching English Literacy. This underscores the uniqueness of this study which measured the level of phonemic awareness and its influence in reading literacy in English.

2.4 Phonemic Awareness and Pronunciation Errors

Learning to speak a language involves many aspects: firstly, one must learn how the sound system is organized, how units of meaning are organized in words, the principles by which these words are put together to form sentences, and principles by which

interaction with other speakers is regulated (Khalifa 2020). Reading usually occurs in a spontaneous condition with little time for thinking and correction. Khalifa (2020) argues that the speaking skill is so important to our language learning that when we refer to speaking a language, we often mean knowing a language. The relationship between speaking and pronunciation is undeniable. One cannot speak without pronouncing the language (Al Yaqoobi, Ali & Sulan, 2016). One of the essential language learning skills is pronunciation because it makes communication possible. Dost (2017) stated that the majority of English L2 learners' main difficulty is learning how to pronounce and that generally, learners consider pronunciation as the main cause for their communication problems (Ababneh, 2018).

It can therefore be noted that pronunciation is an important element in achieving success in any oral discourse. A lot of attention must be paid to pronunciation as it contributes to conveying the right message in oral discourse. If the message is not properly articulated, pronunciation might sometimes hinder communication or lead to vital misunderstanding (Ababneh, 2018). It is believed that pronunciation is crucially important as it is usually the first thing people notice about any language speaker or learner. Though pronunciation is an important sub-skill of any language, its teaching is partially neglected in the whole language teaching process to a great extent. That is to say, to enhance learner ability in English articulation, teachers should develop a view of pronunciation as a crucial and integral part of communication that should be incorporated into classroom activities.

In order to improve in teaching English literacy for L2 learners, one must be able to clearly identify the pronunciation errors made by early language learners and their possible sources, various studies have identified different types of errors that learners commit while reading English language. In this study, the level of literacy was measured by evaluating learners on their pronunciation while reading different words and noting the errors made by the learners. According to Cameron (2012), the common errors in reading English language where English is a L2 can be classified as follows; letter confusion, poor letter sound correspondence, substitution errors, consonant cluster reduction, epenthesis errors, difficulties with multi-syllabic sounds, blending difficulties and slow pronunciation errors.

2.4.1 Letter Confusion

Letter confusion in English reading errors refers to a situation where readers mistakenly mix up or interchange similar-looking letters while reading a text. This type of error can occur for various reasons, such as visual similarity between letters, dyslexia, lack of familiarity with certain letter combinations, or simple typographical errors in the text itself. It is more common among beginning readers or individuals with reading difficulties (Cameron, 2012). Cameron further clarifies that letter confusion can take different forms such as reversing the order of writing. For example a learner may confuse "b" and "d" or "p" and "q." similarly, a learner may have a problem of substituting similar-looking letters such as "m" and "n," "u" and "v," or "w" and "m," . Mixing up letter combinations is also common where readers confuse letter combinations that look similar, such as "ei" and "ie" in words like "receive" and "belief." Burani & Arduino (2004) noted that there are other forms of letter confusion such as misreading cursive handwriting. In cursive writing, some letters can look similar, leading to confusion between letters like "a" and "o," "r" and "n," or "u" and "v.", Difficulties with irregularly shaped letters such as "g," "j," or "q," may pose challenges due to their unique shapes. In other cases, while reading, some learners may unintentionally skip or ignore silent letters in words which can affect the correct pronunciation and understanding of the word (Burani & Arduino, 2004). In supporting letter confusion as a common error in reading Burani, Thornton, & Zoccolotti, (2017) reported that misreading similar-sounding letters by confusing letters that sound similar, such as "k" and "s" or "b" and "p." occurs frequently with early language learners.

2.4.2 Poor Letter Sound Correspondence

Cameron (2012) defines poor letter sound correspondence as a reading error where the reader struggles to accurately match the sounds of letters to their corresponding written symbols. This difficulty can make it challenging for the reader to decode words and understand their meanings. This error manifests itself in many ways such as; incorrect pronunciation: Readers might mispronounce words because they are unable to associate the letters with their appropriate sounds.

Guessing words: Instead of decoding the words based on their letter sounds, readers may resort to guessing words based on context, appearance, or their existing vocabulary, which can lead to inaccuracies. Omitting or adding sounds: Readers may omit or add sounds in words, altering their pronunciation and sometimes making the text incomprehensible. Inconsistent reading: Readers with poor letter sound correspondence may read the same word differently each time they encounter it due to the inconsistency in their understanding of the letter-sound relationships (Cameron, 2012).

This being a common problem, linguistic teachers must endeavour to minimise it. Gambrell, Morrow, & Pressley (2007) noted that poor letter sound correspondence can be improved by applying a number of teaching strategies. These are; phonics instruction: Where the focus is on learning the relationship between letters and their corresponding sounds through phonics instruction. Sound drills: Where learners engage in regular sound drills and practice associating letters with their sounds. Reading practice: This occurs when regular reading practice using phonics-based materials is used to reinforce letter sound correspondence. Multisensory learning: This is the use of multisensory approaches, such as tapping out sounds while saying them in order to reinforce letter sound connections. Decoding strategies: This is where various decoding strategies are taught in order to help readers break down unfamiliar words into smaller units to decode their sounds. Sight word recognition: This is where phonics instruction is combined with sight word recognition in order to build a well-rounded reading foundation.

2.4.3 Substitution Errors

According to Cameron (2012), in reading English substitution errors occur when a reader replaces one word or word component with another while reading a text. These errors can result from various factors, including misinterpretation of the text, confusion with similar-sounding or similar-looking words, or difficulties in decoding unfamiliar words. Seymour et al. (2003) notes that substitution errors can affect reading comprehension and lead to misunderstanding of the intended.

According to Cameron (2012) substitution errors can occur in different forms such as when readers replace one phoneme (sound) in a word with another, resulting in a mispronunciation or a different word. For example, a reader may substitute “t” with “b” as follows; "Cat" (Correct) "Cab" (Phonemic substitution error) thus bringing a totally different meaning in the sentence. The reading ability and therefore the literacy level of a learner may be therefore greatly affected if the learner makes consistent substitution errors. Seymour et al. (2003) posits that substitution errors can be minimised or even eliminated through the use of appropriate phonemic teaching strategies such as regular reading practice, phonics instruction, sight word recognition, and context clues.

2.4.4 Consonant Cluster Reduction

According to Cameron (2012) consonant cluster reduction refers to a phonological process where one or more consonants in a group or cluster of consonants are omitted or simplified when pronouncing or reading words. Cameron further defines consonant clusters as sequences of two or more consonant sounds that appear together within a word. These consonant clusters have proven to be challenging to articulate, especially for learners or individuals with speech or reading difficulties. These difficulties in English arise because words often contain consonant clusters at the beginning, middle, or end of the word. In an attempt to make reading and pronunciation easy readers may commit consonant cluster reduction errors particularly for those who are less familiar with the language or have difficulty with complex blends. Examples of consonant reduction errors are blue" - /blu:/ (Correct pronunciation) reduced pronunciation: /bu:/ - in this case the "l" consonant is omitted. "Strong" - /strɒŋ/ (Correct pronunciation) reduced pronunciation: /strɒŋ/ or /strɒn/ - The "g" consonant is omitted or weakened. "Splash" - /splæʃ/ (Correct pronunciation) reduced pronunciation: /spæʃ/ - The "l" consonant is omitted.

It is worth noting that Consonant cluster reduction is a natural part of language development and occurs in various languages, not just English (Gambrell, Morrow & Pressley, 2007). Therefore, in reading English, readers may encounter this phenomenon when trying to pronounce unfamiliar or challenging words. In order to overcome the challenge, these learners should be made to be aware of these reduction patterns, as they can affect reading accuracy and comprehension. Gambrell, Morrow & Pressley,

(2007) adds that with practice, exposure to various words, and phonics instruction, learners can improve their ability to handle consonant clusters and accurately pronounce words in English.

2.4.5 Epenthesis Errors

Epenthesis errors in reading occur when a reader inserts an extra sound or phoneme into a word that is not present in the correct pronunciation (Mauti et al., 2023). Mauti et al. (2023) notes that this a phonological process that can lead to mispronunciation and difficulties in decoding words accurately especially among early readers or individuals with reading difficulties, as they may struggle with the complexities of certain word patterns. The extra sound or phoneme that is added through epenthesis is typically either a vowel or a consonant, and it can alter the pronunciation of the word. Mauti et al. (2023) further notes the various reasons for occurrence of epenthesis errors, such as difficulty in blending sounds together, misinterpreting word boundaries, or trying to make an unfamiliar word fit a familiar pattern. Examples of epenthesis errors are: while reading the word "spaghetti" - /spə'gɛti/ (Correct pronunciation) an extra schwa sound /ə/ is inserted between "p" and "h," to read /spə'gɛti/. Making it difficult to pronounce the word correctly. Similarly, the word "athlete" - /'æθlit/ (Correct pronunciation) Epenthesis error: /'æθəlɪt/ - An extra schwa sound /ə/ is inserted between "θ" and "l," resulting in a mispronunciation of the word. According to Manyak (2008), Epenthesis errors are frequent among L2 learners but can be easily addressed if English Language teachers use phonics instruction, and exposure to various word patterns, word blending exercises and phonemic awareness activities to help learners become more proficient in decoding words accurately.

2.4.6 Difficulties with Multi-Syllabic Sounds

These refer to challenges that readers face when encountering words with multiple syllables. Multi-syllabic words are words that have more than one vowel sound. According to Cameron (2012), such long and more sophisticated words can pose specific difficulties for some readers, especially those who are still developing their reading skills or have reading difficulties like dyslexia. Readers normally face a variety of difficulties that could be classified as follows:

Decoding challenges: These are challenges in breaking down multi-syllabic words into individual syllables and decode the sounds of each syllable. Pronunciation errors: Mispronunciations can occur when readers are unsure of the correct stress or emphasis on different syllables within the word. Skipping syllables: Some readers might skip or omit syllables while reading, leading to incomplete or incorrect pronunciation of the word and at times different meaning or no sensible meaning in the word. Reversals or transpositions: This refers to confusion with the order of syllables which may result in reading errors, where syllables are reversed or transposed within the word. Difficulty blending sounds: Blending multiple syllables together smoothly can be challenging for some readers, impacting fluency and overall comprehension. This may further lead to poor pronunciation and thus wrong meaning of the words.

Barca, Ellis and Burani (2007) reported that multi syllabic errors could be addressed if the right strategies are applied in teaching. Among these instructional techniques identified are: syllable segmentation, stress and emphasis, phonics instruction, syllable blending exercises, sight word recognition, vocabulary building and context clues (Barca, Ellis, & Burani, 2007).

2.4.7 Blending Errors

These are errors encountered by readers due to challenges in combining individual sounds or phonemes to form complete words. Blending is a critical skill in early reading development, as it allows readers to decode and understand words by smoothly combining the sounds represented by individual letters or letter combinations (Cameron, 2012). Cameron identifies some common ways in which blending errors occur in reading English words such as:

Difficulty in blending phonemes: Readers may struggle to blend the individual sounds or phonemes within a word to create the complete word. For example, in the word "cat," blending the sounds /k/ /æ/ /t/ to form the word "cat" might be challenging for some readers. Stumbling during blending: Some readers may hesitate or stumble while blending sounds together leading to slow reading and reduced fluency. Elongating sounds:

Readers might elongate or emphasize individual sounds too much thus making it difficult to smoothly blend them together to form the word. Skipping sounds: Instead of blending all the sounds, some readers may skip or omit certain phonemes, leading to inaccurate word pronunciation. Reversing sounds: Readers may reverse the order of sounds within a word, resulting in mispronunciations. For example, blending the sounds /b/ /æ/ /d/ to form "dab" but saying "bad" instead. Difficulty with consonant blends: Consonant blends are two or more consonants that appear together in a word without any vowel sounds between them. Readers might find blending consonant blends challenging, especially if they are less familiar with these combinations. Struggling with digraphs: Digraphs are two letters that represent a single sound, such as "th," "sh," or "ch." Some readers may have challenges blending these digraphs together to produce the intended sound.

According to Barca, Ellis, & Burani (2007), blending challenges can be minimised by application of the following strategies in English Literacy instruction: Phonics instruction, multisensory approaches, word segmentation, gradual progression and word family practice.

Globally, the area of errors in reading has been studied though not conclusive. Massengill & Sundberg (2006) noted that reading English Language is a complex skill as requires a child to be able to analyse spoken words identify the sounds in the words and link them to the letters representing the sounds thus the crucial need for phonemic awareness (Ehri, 2005; Massengill & Sundberg, 2006). Edwards & Taub (2016) noted that among elementary African American students phonemic blending appeared to be more complex than phonemic segmentation in that learners made more blending errors. The authors further reported that blending sounds was more effective technique in improving comprehension than phonemic segmenting.

In Indonesia Rokhman et al. (2020) carried out a research focusing on correlation of phonemic awareness and word processing among English for Foreign Learners (EFL) students. The study utilized phoneme identification, blending and segmentation skills. The findings of the study revealed that learners had more challenges in phoneme identification and those students who were able to identify phonemes performed better

in both phoneme segmentation and blending. This implies that the ability to identify phonemes had a strong positive correlation with word processing skills.

According Fachrunnisa and Nuraeni (2022) English pronunciation is a very complex sound system among Indonesia EFL students because the pronunciation of words does not correspond to their orthography (Bassetti et al., 2022). In addition, the writing does not correspond to the writer's speech. Another study in Indonesia further reported that EFL students exhibit three distinct errors in articulating English sounds (Ambalegin, 2022). First, students tend to pronounce words based on their writing, such as small /smɔ: l/, which leads to substitution of the English phonemes with other that are similar in pronunciation to their native Language. Further substitution is exhibited when the students use their L1 consonant and vowel sound system to pronounce English words. Ambalegin (2022) further explains this as a result of lack of skills on phonemic blending and letter sound correspondence caused by L1 interference.

In South Africa, Le Roux et al. (2017) investigated effects of vowel perception and production intervention on phonemic awareness (PA) and literacy skills of Setswana first language (L1) learners who were using English as (L2) learners in Grade Three. The study reported that learners had low level of phonemic awareness as well as literacy skills. The study further investigated the effect on intervention and noted that learners' literacy skills improved significantly. A critical analysis showed that learners had challenges that resulted in sound deletion, substitution of sounds as well as skipping sounds. This implies difficulties in blending sounds thus the use of blending was considered one of the most effective strategy in the intervention process.

In Kenya little and inconclusive research has been done on phonemic awareness. Gathigia and Njoroge (2018) did a study of assessment of phonemic awareness among grade one pupils in Mathira Sub County, Nyeri County. The authors reported that learners had low levels of phonemic awareness with 58 (35%) of the learners being identified as having phonemically awareness, 74 (45%) of the learners being identified as demonstrating emerging phonemic awareness while 32 (20%) were lacking phonemic awareness.

Analysis of the difficulties experienced by the learners indicated that learners had challenges with letter / sound correspondence, consonant displacement, consonant displacement pronunciation problem which was manifested in various ways. For example, the learners had problems segmenting words with the voiceless palato-alveolar fricative sound /ʃ/ (she), the voiced dental fricative /ð/ (that), the voiceless dental fricative /θ/ (three) and the voiced palato-alveolar affricate /dʒ/ (job) in the following words in the Yopp-Singer Test of Phoneme Segmentation. The problem emanates from a situation where an English consonant sound does not occur in the speaker's L1 as a phoneme. The speaker therefore pronounces the consonant that is nearest to the target sound in terms of the place or manner of articulation. Letter substitution was also found for instance with the word 'dog' being pronounced as 'tog'.

The study reports that in this case the learners' substituted the voiced consonant with the voiceless consonant that has a similar place and manner of articulation. Other errors that were noted included pre-nasalization of consonants and vowel displacement (Gathigia & Njoroge, 2018).

Although this study highlighted the level of phonemic awareness, it did not address the causes of such low levels in terms of phonemic strategies. The study also lacks content in that it did address all the phonetic skills that are required in order to improve on English literacy among the learners. The study further did not establish the influence of the phonemic awareness on literacy levels which are addressed by this study. In this study errors made by grade three pupils in reading the words in the Yopp Singer test were identified by the researcher while administering the test. The teachers were also required to state the errors made by their learners. This helped in explaining the literacy level as well as the relationship between learners' phonemic awareness and literacy level.

2.5 Kiambu and Kimbeere Phoneme Inventories

Both Kiambu and Kimbeere consonant and vowel systems were highlighted and put into perspective in a view to explain and accommodate the pupils phonological and

morphological differences in respective sound systems which are critical and affects English language literacy. This is because the sampled pupils from the location of the study were native speakers of the two distinct languages. According to Mutahi (1977) there are 19 consonants Kiambu. Classification of the consonants is on the basis of the state of glottis, manner and place of articulation. In the diagram below, sounds on the right are voiced and the ones on the left are voiceless. Kiambu sounds are described as shown in Table 2.

Table 2: Consonant Sounds in Kiambu

	Bilabial	Labial dental	Dental	Alveolar	Palatal	Velar
stop				t		k
fricative		v	ð		ʃ	ɣ
nasal	m			n	ɲ	ŋ
Pre-nasal	^m b	ⁿ v	ⁿ ð	ⁿ d	ⁿ ʃ	ⁿ g
liquid				r		
glide	w				J	

Table 3: Kiambu Words, Orthography and Transcription

IPA symbols	Orthography	Example	Transcription	Gloss
T	T,t	Tora	/t ɔra/	sort
k	K,k	tengera kĩthukĩ kĩruru	/tengera / /keðuke / /keruru/	run stamp shade
v	V,v	vamwe vangi	/vamwε/ /va ⁿ gi/	together bhang
ð	TH,th	thika thura	/ ðika/ / ðura /	burry choose
ⁿ ð	NTH,nth	ntha nthenge	/ ⁿ ða/ / ⁿ ðε ⁿ gε /	mercy he goat
ʃ	C,c	cumbi cora	/ʃu ^m bi/ /ʃɔra/	salt draw
ɣ	G,g	tiva gatangĩ	/tiva/ / ɣata ⁿ gi/	sneeze small tank
m	M,m	mago magego	/maɣɔ/ /maɣεɣɔ /	honey combs teeth
n	N,n	nĩrenda naiga	/ nerε ⁿ da/ / naiɣa /	i want to i have kept
ɲ	NY,ny	nyau nyaki	/ɲau/ / ɲaki /	cat grass
ŋ	NG',ng'	ng'ano ng'ondu	/ ɲano/ / ɲɔ ⁿ du /	wheat sheep
^m b	MB,mb	mbogo ĩthambie	/ ^m bɔɣɔ / /eða ^m biε/	buffalo wash

ⁿ v	NV,nv	nvuria nviti	/ ⁿ vuria/ / ⁿ viti/	rhino hyena
ⁿ d	ND,nd	nderi ndogo	/ ⁿ dɛri/ / ⁿ dɔŋɔ/	vulture smoke
ⁿ ʃ	NJ,nj	nja njaga	/ ⁿ ja/ / ⁿ jaɣa/	homestead naked
ⁿ g	NG,ng	ngui ngwa	/ ⁿ gui/ / ⁿ gwa/	dog thunder storm
r	R,r	Rĩkia ritho	/rekia/ /riðɔ/	finish eye
w	W,w	wega wendo	/weɣa/ /we ⁿ dɔ/	goodness love
j	Y,y	yonthe yaku	/jɔ ⁿ ðɛ/ /jaku/	all yours

Table 4: A Description of Kiambu Vowels and Orthography

IPA symbol	Orthography	Example	Transcription	Gloss
i	i	ĩgai irio	/ɛɣai/ /iriɔ/	inheritance food
i:	ii	kiimba ciira	/ki: ^m ba / /ci:ra/	a dead body case
e	ĩ	kĩraoko ĩme	/kɛraɔkɔ / /emɛ/	morning dew
e:	ĩĩ	mĩĩrĩga rĩĩtwa	/me:reɣa/ /re:twa/	clans name
	e	metho meri	/mɛðɔ/ /mɛri/	eyes ship
:	ee	mweere eetaga	/mwɛ:rɛ/ /ɛ:tɣa/	millet he/she calls
a	a	andũ ngano	/a ⁿ dɔ/ / ⁿ gano /	people narrative
a:	aa	maraa thaavu	/mara:a/ /nða:vu/	prostitutes gold
u	u	nguru nduru	/ ⁿ guru/ / ⁿ duru/	tortoise squirrel
u:	uu	kuuma tuura	/ku:ma/ /tu:ra/	getting out painful
o	ũ	rũgendo ndũngĩvota	/roɣɛ ⁿ dɔ / / ⁿ dɔ ⁿ gevɔta /	journey not able
o:	ũũ	rũũo ĩtũũra	/ro:ɔ/ /eto:ra/	skin village
ɔ	o	ngombo	/ ⁿ gɔ ^m bɔ/	servant

		ĩkoro	/ekɔrɔ/	peeling
ɔ:	oo	kigongoona	/keyɔ ⁿ gɔ:na /	altar
		kĩvooto	/kevɔ:tɔ/	justice

According to Mutahi (1977) Kiambu has a fourteen vowel system; seven short vowels and seven long vowels. The vowel system is presented in Table 5

Table 5: Vowel System in Kiambu

	Front	Back
High	/i/ / i:/ high- front unrounded vowel	/u/ /u:/ high- back rounded vowel
mid-high	/e/ /e:/ mid- high front unrounded vowel	/o/ /o:/ mid-high back rounded vowel
mid-low	/ɛ/ /ɛ:/ mid-low front rounded vowel	/ɔ/ /ɔ:/ mid- low back rounded vowel
Low	/a/ /a:/ low- front unrounded vowel	

Table 6: Kimbeere Words, Orthography and Transcription

IPA Symbols	Orthograph	Consonant Description	Example	Transcription	Gloss
/ t /	T,t	voiceless alveolar stop	tara	/ tara /	sort
/ k /	K,k	voiceless velar stop	athimũra	/aðimora/	sneeze
/ m /	M,m	voiced bilabial nasal	kumbavu	/ku ^m bavu/	stupid
			menthori	/ me ⁿ ðori	tears
			marwaya	/	prostitute
/ n /	N,n	voiced alveolar nasal	nthinwa	/ ⁿ ðinwa/	monkey
/ ⁿ y/	NY,ny	voiced palatal nasal	ndeda	/ ⁿ deda /	i want
			yanyi	/ ⁿ ya ⁿ yi /	vegetables
/ŋ/	NG ^ʔ ,ng ^ʔ	voiced velar nasal	njaki	/ ⁿ ʒaki/	grass
			ng ^ʔ ombe	/ ⁿ go ^m bɛ/	cow
			ng ^ʔ ondu	/ ⁿ go ⁿ du/	sheep
/ r /	R,r	voiced alveolar trill	ngaria	/ ⁿ garia /	run
			rũkũ	/roko/	a piece of wood
/ v /	V,v	voiced labial dental fricative	vao	/ vao /	their place
			vaka	/vaka/	smear
/ ð /	TH,th	voiced interdental fricative	kĩthima	/ keðima /	a well
			thamba	/ða ^m ba/	wash
/ʃ/	C,c	voiceless palatal alveolar fricative	caria	/ʃaria/	search
			coka	/ʃɔka/	come back
/ ɣ /	G,g	voiced velar fricative	gĩkoma	/ɣekɔma /	devilish
			gĩko	/ɣekɔ/	dirt

^m b/	MB,mb	Voiced Pre-nasalised bilabial stop		mbiti mbaka	/ ^m biti/ / ^m baka/	hyena cat
/ ⁿ ð/	NTH,nth	Voiced nasalised interdental fricative	pre-	nthegere nthia	/ ⁿ ðɛɣɛɣɛ/ / ⁿ ðia /	mongose antelope
/ ⁿ d /	ND,nd	Voiced nasalised alveolar stop	pre-	nduka ndamĩ	/ ⁿ duka / / ⁿ dame/	shop torn cloth
/ ⁿ ɟ /	NJ,nj	Voiced nasalised palatal stop	pre-	njogu njovo	/ ⁿ ɟɔɣu / / ⁿ ɟ ɔvɔ /	elephant rafter
/ ⁿ g/	NG,ng	Voiced nasalised velar stop	pre-	ngai ngoro	/ ⁿ gai / / ⁿ gɔrɔ /	God Heart
/w /	W,w	voiced labiovelar glide		witikio wĩra	/ wɪtɪkiɔ/ /wera/	faith work
/j /	Y,y	voiced palatal glide		yũra yao	/ jɔrɔ / /jao/	famine theirs

According to Mberia (1993), Kimbeere consonant system consists of 18 sounds. Among them are two grides and five pre-nasalised sounds. Mberia posits that glides are formed phonologically when vowels or syllabic consonants change into semi vowels. In Kimbeere /w/ is formed when /o/ is followed by front vowels. /j/ is formed when /e/ is followed by a short vowel. The formation of glides is important in this study because pupils were found to transfer their formation from their native languages to English during reading for example pupils read the words judge as ‘njudge’ Examples of Kimbeere words, orthography and transcription is shown in Table 7.

Table 7: Kimbeere Vowels and Orthography

Orthography	IPA Symbol	Vowel description	Example	Transcription	Gloss
I,i	/ i /	short high front vowel	kima ita	/ kima / /ita/	mash kill
II,ii	/ i: /	long high front vowel	ciira tiirĩka	/ ci:ra / /ti:reka /	case lean against
ĩ ,ĩ	/ e /	short mid-high front vowel	ĩtua nthĩ	/ etua / / ⁿ the/	decision earth
ĩĩ,ĩĩ	/ e: /	long mid-high front vowel	tĩĩria rĩĩtwa	/te:ria / /re:twa /	Postpone name
E,e	/ ɛ /	short mid-low front vowel	mentho tene	/menðɔ / / tɛnɛ/	Eyes long ago

EĒ,ee	/ɛ:/	long mid-low front vowel	eene maveeni	/ɛ:nɛ/ /mavɛ:ni/	owners lies
A,a	/a/	short low front vowel	aka njoka	/aka/ /ˈɲɔka/	women snake
AA,aa	/a:/	long low front vowel	kaana naagũkanirie	/ka:na /na:ɣokaniri ɛ/	deny i warned you
U,u	/u/	short high back vowel	nguo ĩvu	/ˈɲguɔ/ /evu/	cloth stomach
UU,uu	/u:/	long high back vowel	kuura cuuma	/ku:ra/ /ʃu:ma/	to rain metal
Ũ,ũ	/o/	short mid-high back vowel	/ĩkũmi/ Mũgwanja	/ekomi/ /mogwaˈɲa/	ten seven
ŨŨ,ũũ	/o:/	long mid-high back vowel	atũũrire tũũra	/ato:rire/ /to:ra/	he/she lived live
O,o	/ɔ/	short mid-low back vowel	/mũndũ/ /ĩtũrũra/	/moˈdo/ /etorora/	a peson pour
OO,oo	/ɔ:/	long mid-low back vowel	kũgoooca ĩgongoona	/koɣɔ:ʃa/ /eɣɔˈɲo:na/	to praise sacrifice

Kimbeere has fourteen vowels. Seven short and their corresponding long vowels. The length of a vowel in Kimbeere brings about differences in the meaning of the same word. Kimbeere orthography for both long and short vowel sounds, the International Phonetic Alphabet (IPA) symbols and vowel description based on tongue-body features is provided in Table 7.

2.6 Theoretical Model

This study was guided by Ehri's (1995) model of phases of reading sight words. The model of reading sight words as presented by Ehri, lays the linguistic basis of word segmentation, sound blending, manipulation of phonemes, decoding and making complete connections of letters and their sounds which guides the choice of the model as an appropriate theory to ground this study. Ehri (1995) outlines the progression of the four phases making the reading model as follows:

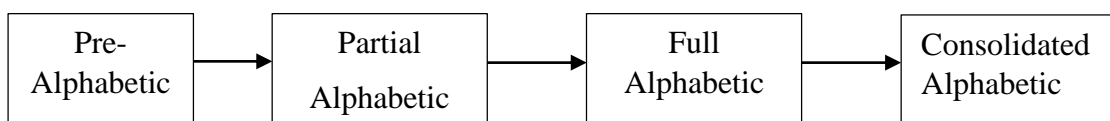


Figure 1: Ehri's (1995) Reading Model

During the Pre-alphabetic phase, early readers read sight words by establishing connections between selected visual attributes of words, their pronunciations and their phonological storage in memory. This, Ehri called visual cue reading. Ehri (1995) observed that during the pre-alphabetic phase, readers read by remembering visual cues accompanying print of items they found in their environment.

According to Ehri (1995) during the Pre-alphabetic phase, connections do not involve ties between letters and sounds because readers are not held to specific pronunciations of the printed words. This lack of correspondence at the phonemic level but equivalence at the semantic level indicates that at this phase, the connections formed in lexical memory are between salient visual cues and meaning of words.

During the partial-alphabetic phase beginners had easier time remembering how to read words where salient cues were provided linking letters to sounds. Readers at partial alphabetic phase used phonetic cues to read. For example, in reading the word cat readers might detect initial /c/ and final /t/ in speech and recognise that the letters they see, 'C' and 'N', symbolise this sounds. Connections and recognitions are made possible by the fact that the names of these letters contain the relevant sounds. The reason why the connections formed are partial rather than complete is that readers lack full knowledge of the spelling system particularly in vowels and also how to segment speech into phonemic units Ehri (1995).

During the full alphabetic phase, readers read sight words by forming complete connections between letters seen in the written forms of words and phonemes detected in their pronunciations. This is because readers understand how most graphemes symbolize phonemes in the conventional spelling system. (Venezky, 2011). Perfetti (2014) argues that in applying this knowledge to form connections for sight words, spellings become amalgamated or bonded to pronunciations of words in memory for example in learning to read the word 'spoon,' full phase readers would recognize how the five letters (s, p, o, o, n) correspond to the four phonemes /s/-/p/-/u: /- /n/ including how OO symbolizes /u: /.

This knowledge helps full phase readers to segment, blend and manipulate sounds and make representations which are sufficiently complete. This way they are able to distinguish easily among similarly spelt words. This knowledge enables full phase readers to fully connect spellings to pronunciations in remembering how to read sight words and this makes it perhaps the most important phase in reading development as the greatest advantage to word reading and most linguistic connections occur during this phase.

During the consolidated alphabetic phase readers consolidate letter patterns that recur across different words. Repeated experience in reading a letter sequence that symbolizes the same phoneme blend across different words and yields a consolidated unit. Consolidation allows readers to operate with multi-letter units that may be morphemes, syllables, or sub syllabic units such as onset and rimes. These letter patterns become part of a reader's generalized knowledge of the spelling system. Ehri (1995) observed that readers at this phase may process exceptional letters as part of a consolidated spelling pattern if that spelling occurs in different words, for example, '-ALK' '-IGHT', and '-PIN'.

During this phase, letter patterns that recur across different words become consolidated for example, '-EST' might emerge as a consolidated unit in a reader's memory from its occurrence in several sight words known by the reader for example 'nest', 'pest', 'rest', 'test', 'vest', 'west' 'crest'. Repeated experience in reading a letter sequence that symbolizes the same phoneme blend across different words and yields a consolidated unit. Consolidation allows readers to operate with multi-letter units that may be morphemes, syllables, or sub syllabic units such as onset and onset and rimes.

These letter patterns become part of a reader's generalized knowledge of the spelling system. Consequently, if a reader knew units such as 'EST', 'TION', 'IN' and 'ENG' as consolidated units, the task of learning longer sight words such as 'question' and 'interesting' would be easier. There is evidence that words containing more familiar letter patterns are read more accurately by learners than words containing unfamiliar patterns even when the words are constructed out of the same grapheme-phoneme correspondences (Treiman, Goswami & Bruck, 1990).

This study adopted the model in order to classify the pupils according to their four Literacy levels; Pre-Alphabetic, Partial Alphabetic, Full Alphabetic and Consolidated Alphabetic literacy levels. This model helped the study to relate the four literacy levels with the pupils' level of phonemic awareness in order to determine the influence of phonemic awareness on English literacy level.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Location of the Study

This study was undertaken in Embu County in Kenya. Embu County is large metropolitan areas with urban centres inhabited by the local Embu and the Mbeere sub-tribes with a population of 608,599 persons according to the National census of the year 2019. The County borders Kirinyaga County to the west, Kitui to the east, Tharaka Nithi to the north and Machakos to the south. This area was chosen based on performance in the KNEC's national MLP assessment results for the pupils released in 2019 that showed that the pupils performed dismally in listening, speaking, reading and writing skills which are core English literacy skills. The KNEC's national MLP assessment results for the pupils released in 2019 show that they performed dismally in listening, speaking, reading and writing skills which are core English literacy skills.

3.2 Research Design

The study sought to collect both qualitative and quantitative data thus mixed survey methods were used. These included the cross sectional research design and quasi experimental design. Israel (2013) posits that a cross sectional survey employs descriptive strategies to gather information through interviews, questionnaires or focus group discussions to sampled respondents to obtain necessary data for evaluation of current variables without necessarily controlling them or manipulating the conditions. The cross sectional survey design was therefore used to collect qualitative data from English teachers using questionnaires. The quasi experimental design was used to test the literacy level of the learners by administering the Yopp-Singer phoneme segmentation test. This was found appropriate as the data to be collected was quantitative. Pupils were assessed on their literacy abilities and their performance measured on a scale of 100.

3.3 Population

The study used 386 public primary schools, 9976 grade three pupils and 426 English teachers in Embu County (County Director of Education, 2023) as the target population. The pupils were targeted in this study because at this grade, they had received English language instruction on orthography and phonology for a minimum of five years (pre-

primary one to Grade Three) and were therefore expected to be well proficient in reading and exhibit high English phonemic and literacy level (Aghababian & Nazir, 2000).

3.4 Sampling Procedure and Sample Size

The study used stratified sampling, purposive and simple random sampling techniques. The County was divided in to five regions consisting of the five Sub Counties; Embu North, Embu West, Embu East, Mbeere North and Mbeere South which constituted the strata. Further the schools were categorized into Urban Day, Urban Boarding, Rural Day and Rural Boarding schools. The pupils and the teachers were categorised into male and female. These strata were used to ensure uniform sample distributions across the County from which approximately equal proportion of the schools were identified randomly. Out of the selected schools simple random sampling using snow ball technique was used to select the pupils while Grade Three English teachers were purposively selected as participants.

According to Israel (2013) any target population which is more than 50,000 is said to be infinite and the sample size is calculated using the formula:

$$n_o = \frac{Z^2(p(1-p))}{e^2} \dots\dots\dots 1$$

Where n_o is the sample size for infinite population size, Z is the abscissa of the normal curve for a given confidence interval (1.96) for 95% confidence interval, p is the estimated fraction of the population with a given attribute usually 0.5, and e is the confidence interval expressed as a decimal (0.05).

$$n_o = \frac{1.96^2(0.5)0.5}{0.0025} = 385$$

For a finite population (<50,000) the sample size is calculated using the sample size for infinite population and the finite population size using the formula:

$$n = \frac{n_o}{1 + \frac{(n_o-1)}{N}} \dots\dots\dots 2$$

Where N is the population size and n is the required (finite) sample size. In this study, the pupils' appropriate sample size was found to be 371. However, to cater for non-response a sample size of 380 pupils was selected. The schools' population was found to be comprised of 295 rural and 91 urban schools. According to Zikmund, Babin, Carr, and Griffin (2013) for a population with less than 4 attributes a sample size of 10% is adequate. The school population had only four categories that can be classified as urban day, urban boarding, rural day, and rural boarding using only one attribute that is school type. The school sample was selected to ensure at least 10% representation. A sample size of 40 schools comprising of 30 rural and 10 urban schools was thus selected. To ensure equal representation of the schools 10 pupils were randomly selected from each school. The teacher sample composed all the grade three English Language teachers in the selected schools. This gave a teacher sample size of 78. A summary of the sample is presented in Table 8

Table 8: Population and Sample Sizes

Population	Population Size	Sample Size	Percentage
Pupils	9976	380	3.8%
Schools	386	40	10.4%
Teachers	426	78	18.3%

3.5 Research Instruments

The study used the Yopp-Singer test and questionnaires as research instruments (Appendix II and III). The Yopp-Singer test was initially designed for kindergarten children who spoke English in 1995 and was revised for classroom usage in 1998. The test identifies whether a learner can differentiate the phonemes within spoken words in utterances. The test is also used to measure phonemic awareness progress among grade one and other older children (Yopp, 1995). Yopp conducted a factor analysis to determine the Yopp-Singer test validity with kindergarten children drawn from California school district and discovered that the test measured at 0.95 on Cronbach's scale and was found to be reliable. This meant that the test could be used accordingly to assess and make decisions about individuals Jensen, (1980).

Longitudinal test conducted by Yopp, (1988) to determine construct validity of the test for seven years by keeping records on the same pupil reading achievement each year starting from kindergarten confirms that the phonemic awareness test is a valid measure of the readers' literacy achievement hence its use in this study.

Orodho (2012) asserts that questionnaires are appropriate as they allow a researcher to gather information from vast population of respondents who can read and write. The researcher therefore collected views from teachers using questionnaires on phonemic awareness strategies used in teaching English in Grade Three, the errors made by pupils in pronunciation and phonemic tests and the techniques used in implementing the phonemic awareness strategies during instruction.

3.6 Data Collection Procedures

The researcher arranged for specific days with school head teachers to obtain permission and plan for data collection visits to the schools selected. The visits were carried outside school hours such as break and lunch or in other cases after school hours depending on the agreement between the school management and the researcher. Ten students were first isolated into girls and boys. By picking papers labelled yes or no, 5 girls and 5 boys were identified to participate in the study. The selected pupils were explained on what was expected of them during the test by the researcher as follows: *Together, we will play a word game today. Kindly tell me the specific sounds you hear in order from all the words I will mention. If I mention "cat," you should give the sounds "/c/-/a/-/t/" in their order. (Administrator: Mention the sounds in words and not the letters) if you are ready, we can try some.*

Each pupil was given a list of 22 regular words with continuous sounds. Word familiarity and feature analysis were the two factors considered for selection of words included in the test. The pupils were expected to segment the given words in a time frame of 5 to 10 minutes per learner (Yopp, 1998). The researcher kept the assessment playful and game like for example by asking a question such as; who can tell me all the sounds you hear in the word 'hot'? If the pupil responded correctly, the researcher flashed 'thumb up' followed by a positive remark like 'that's right', or 'well done' then he/she was clapped for once by other learners. If the pupil responded wrongly, a 'thumb

down' was flashed and the pupil was corrected. The researcher further noted down the kind of errors made by the pupil in combining the phonemes and pronouncing the words.

If a pupil responded with partial segmentation for example ('/h/-/ot/') instead of '/h /,-/o/, -/t/.' the researcher recorded the response as given, then, told the learner that he/she was close and that he only separated some of the sounds he would then show the learner the correct way of segmentation. The researcher circled the numbers of all the correct answers. If a pupil restated the word, the researcher insisted on separation of the sounds saying, 'yes the word is 'hot' now give me the sounds that make the word if the pupil continued to restate the word, the researcher recorded the response as stated. Each test was marked and scores for each pupil recorded.

Correct responses were only those that involved articulation of each phoneme in the target word. If the learners mentioned the letter names in words instead of sounds the researcher insisted on sounds if they continued mentioning letters in words instead of sounds the researcher recorded the responses as they were. The pupils were graded as wrong segmentation (0 marks), partial segmentation (1 mark) and correct segmentation (2 marks) for each word. The pupils' total marks were converted to percentage.

A total of 76 questionnaires were issued to the teachers by the researcher during the pre-arranged visits as two teachers were found to be absent during the visits. In order to ensure that data from teachers was collected from all the sub counties in Embu County, (see Appendix V) the researcher distributed 15 questionnaires to each of the 5 sub counties in Embu County except Mbeere south sub county where 16 questionnaires were issued to teachers due to the sub county's vastness. The questionnaires gathered information on influence of letter-sound correspondence on literacy among the pupils, reading and pronunciation errors made by the pupils when reading regular sight words, the strategies that teachers use to teach phonemic awareness and how such strategies were implemented in Grade Three English language literacy instructions. The questionnaires were gathered by the researcher from the teachers after two weeks.

3.7 Data Analysis

The data collected was both qualitatively and quantitatively analysed. A total of 22 regular words were phonemically segmented by the pupils. Based on the words segmented, the study categorized the learners into three categories namely: *those who were phonemically aware, those demonstrating emerging phonemic awareness and those lacking phonemic awareness* (Yopp, 1995). The maximum score per item was 3 and therefore the total maximum score for the test was 66. The marks awarded to the learners were then converted to percentage for comparison and interpretation. Pronunciation and reading errors pupils made while reading the regular sight words in the Yopp-Test and those from teachers' questionnaires were used by the researcher as the basis to appropriately determine reading literacy level. Teachers' questionnaires were analysed for their views on types of phonemic errors made by the learners in reading, the phonemic strategies that teachers used in teaching phonemic skills, how they implemented the phonemic strategies and how letter sound correspondence affected pupils English language literacy. The teacher responses were read interpreted and coded to indicate the number of teachers giving similar responses on a particular item. The data was then presented in tables and charts.

3.8 Ethical Considerations

The Researcher obtained a research permit and an introductory letter from National Commission for Science, Technology and Innovation (NACOSTI) and the Board of Postgraduate Studies of Chuka University respectively. Permission was sought from Embu County Director of Education, The County Governor and Embu County Commissioner to carry out research within Embu County. The researcher held group discussions with the sampled teachers and pupils to explain to them about the study and create a conducive atmosphere where they participated and asked questions. He then gave them enough time to make decision on their participation freely.

The researcher was ethical and courteous while interviewing the sampled teachers by only asking them questions relevant to the study. The researcher observed and upheld ethical provisions in the children act of 2001 (revised edition 2012), chapter 141 of the constitution of Kenya (2010) and signed the school visitors' book before carrying out research throughout the study period.

Due to the sensitivity of the information that was collected, respondents were advised not to give information that could have revealed their identities. The respondents were not coerced to give out information m, they were not comfortable revealing and had leeway to stop their participation even midway as they may have deemed fit. The researcher upheld the virtues of openness and honesty throughout the research period and strictly observed the schedules agreed upon with respondents and schools.

CHAPTER FOUR

RESULTS ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Response Rate

In this study the sample size comprised 40 public primary schools, 78 teachers and 380 pupils. Non response refers to either failure to participate by a participant or non-return of a filled questionnaire. In this study, teachers whose questionnaire were not duly filled as well as those who were absent during the issuance of questionnaires were deemed non responsive. The sample for the pupils was selected at the date and time of the survey thus there was no non response due to absence. However, pupils who did not answer appropriately or never answered any of the questions were deemed non responsive. Six (6) pupils out of 380 accounting for 1.5% of the sample did not respond to any of the questions but kept quiet. Out of 78 teachers two (2) were absent while other three (3) did not return the filled questionnaires thus they were deemed unresponsive. Therefore, the total number of dully filled questionnaires was 73 (93.6%) while the response rate for pupils was 98.5.0%. These responsive rates were above the minimum recommended response rate of 85% (Israel, 2013) thus the sample was deemed to be representative of the population.

4.2 Demographic Information of the Respondents

The teachers sample consisted of 41(56.2%) females and 32(43.8%) males. The teacher age ranged from 26 years to 54 with a mean age of 42 years while their experience in teaching Grade Three English ranged 1 to 17 years. In order to ascertain whether teachers were qualified to deliver the curriculum content they were required to indicate their education level. It was noted that all English teachers had professional training in teacher education however at different levels. A vast majority of the teachers 53(72.6%) had a Primary Teacher Education Certificate, 9(12.3%) had diploma in Early Childhood Education and the rest 9(12.3%) had Bachelor's Degree in Education while 48(65.7%) had attended an extra training on teaching languages referred to as *Tusome* Early Literacy training. This implies that the English teachers were equipped with adequate pedagogical approaches and English Language content to teach Grade Three pupils.

The pupils' demographic information recorded included the age, gender, type of school attended (public boarding or public day), the location of the school (whether rural or urban). The pupils' participants consisted of 198 (52.1%) boys and 182 (47.9%) girls with age varying from 9 to 12 years with a mean age of 10.4 years. The schools were categorised into four: urban boarding, urban day, rural boarding and rural day schools as shown in Table 9.

Table 9: School Categories

School Category	Number of Schools	Percentage
Urban Boarding	3	7.5%
Urban Day	7	17.5%
Rural Boarding	6	15.0%
Rural Day	24	60.0%

As shown in Table 9, rural day schools composed of the vast majority at (60.0%), urban day schools at 17.5%, rural boarding at 15.0% while urban boarding schools were the least with 7.5%. Schools from different categories were brought on board to ensure an even representation of the sample.

4.3 English Language Phonemic Awareness Level

This was measured using the performance in the Yopp-Singer phoneme segmentation test, voicing errors, consonant pre-nasalisation, Consonant displacement and pronunciation errors made by the pupils during the segmentation and reading of the English words in the Yopp Singer test. The grading of the pupils' performance was done by awarding designated marks to the pupils per word as indicated in Table 10.

Table 10: Marks for the Yopp-Singer Test

Response Grade	Marks
Correct Segmentation per word	3
Partially Correct Segmentation per word	1
Wrong Segmentation or No response per word	0

As shown in Table 10 a pupil who did correct segmentation by segmenting a particular word into all its phonemes and pronouncing all correctly was awarded a score of 3, while the one who did some of the segments correctly was deemed to have done partial segmentation and awarded 1 mark. Pupils who segmented all the words wrongly or did

not answer were awarded zero marks. The overall performance of the pupils was measured by converting the marks scored into percentage. The maximum score per item was three (3) thus; the possible maximum score for test was 66. The results are presented in Table 11.

Table 11: Pupils Performance in Yopp Singer Test

S/No	Word	Correct Segmentation		Partial Correct Segmentation		Wrong Segmentation		No Response	
		N	P	N	P	N	P	N	P
1	dog	83	22.2%	138	36.9%	145	38.8%	8	2.1%
2	keep	61	16.3%	156	41.7%	152	40.6%	5	1.3%
3	fine	44	11.8%	167	44.7%	150	40.1%	13	3.5%
4	no	34	9.1%	103	27.5%	209	55.9%	28	7.5%
5	she	71	19.0%	171	45.7%	128	34.2%	4	1.1%
6	wave	63	16.8%	88	23.5%	190	50.8%	33	8.8%
7	grew	58	15.5%	96	25.7%	180	48.1%	40	10.7%
8	that	91	24.3%	88	23.5%	144	38.5%	51	13.6%
9	red	88	23.5%	98	26.2%	156	41.7%	32	8.6%
10	me	49	13.1%	190	50.8%	126	33.7%	9	2.4%
11	sat	105	28.1%	77	20.6%	178	47.6%	14	3.7%
12	lay	39	10.4%	67	17.9%	201	53.7%	67	17.9%
13	race	77	20.6%	84	22.5%	191	51.1%	22	5.9%
14	zoo	70	18.7%	95	25.4%	185	49.5%	24	6.4%
15	three	82	21.9%	55	14.7%	177	47.3%	60	16.0%
16	job	93	24.9%	31	8.3%	204	54.5%	46	12.3%
17	in	134	35.8%	104	27.8%	126	33.7%	10	2.7%
18	ice	98	26.2%	109	29.1%	155	41.4%	12	3.2%
19	at	89	23.8%	123	32.9%	158	42.2%	4	1.1%
20	top	93	24.9%	119	31.8%	141	37.7%	21	5.6%
21	by	40	10.7%	122	32.6%	211	56.4%	1	0.3%
22	do	81	21.7%	140	37.4%	149	39.8%	4	1.1%
Averages		74.7	20.0%	110.05	29.4%	166.18	44.4%	23.09	6.2%

The results presented in Table 11 indicate that on average the number of pupils who were able to segment the words correctly were only 75 (20.0%), 110 (29.4%) did partial segmentation, 166(44.4%) did wrong segmentation while 23(6.2%) did no segmentation at all but kept quiet. The results show that only 20.0% of the pupils had adequate phonemic awareness as they could fully segment the words in to phonemes. It was inferred that Grade 3 pupils in Embu County have low levels of phonemic awareness. The results are similar to the results obtained from the National Performance of the MLP Grade 3 examination of 2019

4.3.1 Pupils' Categorization Based on Phonemic Level

In order to get an in-depth understanding of the phonemic awareness level the total performance per pupil was calculated and used to categorise the pupils into three level of phonemic awareness. The test consisted of 22 items each with a maximum score 3 (Table 4.2) thus a maximum test score of 66. The marks for each learner were converted to percentage and the pupils classified such that those who scored 75% and above were phonemically aware, those who scored between 40% and 74% classified as displaying emerging phonemic awareness while those who scored less than 40% were classified as having inadequate level of phonemic awareness. The results are presented in Figure 2.

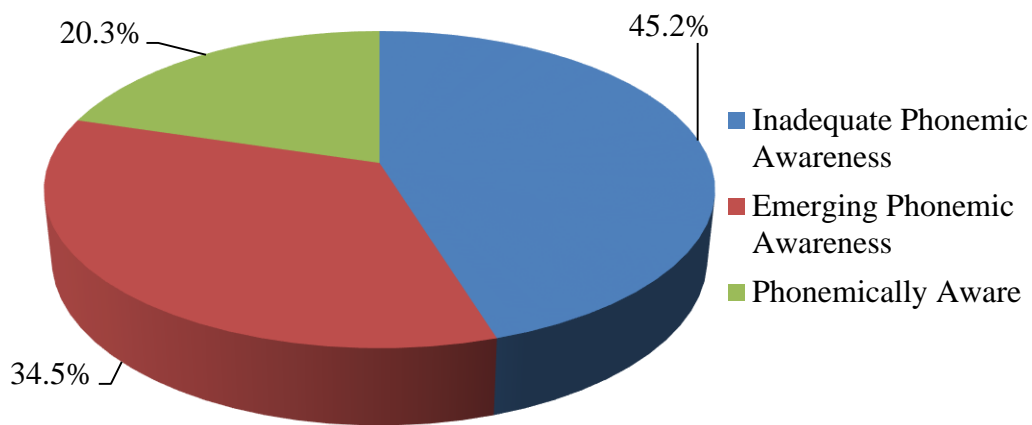


Figure 2: Pupils Performance Categories

The results in Figure 2 show that a small percentage of pupils were phonemically aware (20.3%), 34.5% had emerging phonemic awareness while the highest percentage of 45.2% had inadequate phonemic awareness. This implies that the pupils did not have adequate skills in phoneme segmentation which is crucial in reading and pronunciation. This implies that the learners were not adequately exposed to phonemic awareness activities in schools. Supporting these findings are the findings reported by Ball and Blachman (1991) who reported that exposing children to phonemic awareness activities in early stages of learning accelerates their phonological skills and therefore their reading abilities.

The ability of a learner to carry out phoneme segmentation requires that the learner to have skills in letter sound correspondence so as to attach letters correctly to their specific sounds. The results thus imply that learners did not have adequate letter sound correspondence knowledge. This was supported by the findings from the English teachers who noted that the performance of their learners in English Literacy was poor due to poor letter sound correspondence. This was evidenced during the Yopp Singer test as some pupils were able to segment the words into phonemes but could not attach the right sound to the letter. For example, while segmenting the word 'dog' some learners pronounced the sound /d/ as /t/ while others had problems with /r/ and /l/ while segmenting the word 'red'. This implies that learner had proper segmentation skills but had problems with pronunciation of phonemes which could be attributed to mother tongue interference. English being L2 to most learners in Embu county, learners are likely to substitute the consonant sounds that seem difficult for them with others that are seemingly easy from their L1 language which was mainly Kiembu or Kimbeere.

Similar findings were reported by Cameron (2012) who noted that when L1 learners are instructed in English as a L2 poor letter sound correspondence, Substitution errors, and Consonant cluster reduction are the most common errors that learners make.

Letter confusion was also noted in a few cases where learners did right segmentation but pronounced the sounds poorly by substituting them with letters of similar shapes. For instance, a number of pupils confused the sound /p/ in the word keep with /b/ while a few confused /d/ in b in the word 'by' and 'do'. This indicates that such pupils had not mastered letter shapes thus they had poor letter sound correspondence. These findings concur with the indication by some teachers that letter confusion was common among some learners especially those who were quite low in literacy attainment. ." Burani & Arduino (2004) also reported that letter confusion may be a challenge to learners for letters that look alike such as "a" and "o," "r" and "n," or "u" and "v."

4.3.2 Phonemic Awareness in Different School Types

In order to establish whether the school category had an effect on levels of phonemic awareness among pupils, the performance of pupils in the Yopp Singer Test was done based on the different school categories: rural day, rural boarding, urban day and urban

boarding. The marks scored by each pupil were first converted to percentages for ease of comparison and the pupils grouped by the school categories. The mean performance per school category was determined by calculating the average mark for all the learners in each school category.

In order to compare the level of phonemic awareness among the four categories of schools, the average scores were compared to establish whether there were any statistically significant differences in performance between the different school categories. The comparison between the means was done using the One Way Analysis of Variance technique using the analysis software Statistical Package for Social Sciences (SPSS) version 22. First the data was analysed using descriptive statistics to find the mean and standard deviation. The results are presented in Table 12

Table 12: Descriptive Analysis

Category of School	N	Mean	Std. Deviation	Std. Error	Descriptive Marks scored		Minimum	Maximum
					95% Confidence Interval for Mean Lower Bound	Upper Bound		
Rural Day	227	45.7357	19.57877	1.29949	43.1750	48.2963	4.00	93.00
Rural Boarding	54	48.8889	21.32822	2.90240	43.0674	54.7104	20.00	90.00
Urban day	62	62.2419	20.16220	2.56060	57.1217	67.3622	22.00	95.00
Urban Boarding	30	62.7667	22.87550	4.17648	54.2248	71.3085	21.00	95.00
Total	373	50.3056	21.31782	1.10379	48.1352	52.4761	4.00	95.00

The findings presented in Table 12 show that rural day schools had the lowest performance with a mean score of 45.7% (SD=19.6) followed by Rural boarding schools with a mean of 48.9% (SD=21.3). Urban boarding schools generally performed better scoring a mean of 62.8% (SD=22.9) while Urban day had an average score of 62.4% (SD=20.1).

The results show that pupils in urban schools generally had higher level of phonemic awareness as compared to rural. However, the variation of performance within groups as indicated by the standard deviations was fairly same. This implies that the variation was due to pupil factors such as the preparedness and ability to learn English literacy

which were not investigated but are deemed to be uniformly distributed across the three four groups.

However, it should be noted that the higher performance in some group may occur by chance. In order to establish whether this difference was by chance or not, the One Way Analysis of Variance (ANOVA) technique was used to determine whether there were any significant differences in the performance between any categories. The findings are displayed in Table 13

Table 13: One Way ANOVA for Different Groups

	ANOVA Marks scored				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18340.946	3	6113.649	14.968	.000
Within Groups	150714.212	369	408.440		
Total	169055.158	372			

The results presented in Table 13 show there was a statistically significant difference at $p < 0.5$ $F(3,369) = 14.968$, ($p < 0.0005$) in performance in phonemic awareness between some of the groups without specifying which ones. This implies that it was not by chance that pupils in a particular school category performed better than the other. Consequently, it can be inferred that school category had an effect on the level of phonemic awareness of the learners. In order to explain the variation in performance with school categories the Turkey's HSD test for multiple comparisons was done to establish which school categories had significant differences in performance. The findings are displayed in Table 14.

Table 14: Turkey's HSD Test

Multiple Comparisons	
Dependent Variable:	Marks Scored
Turkey HSD	

(I) Type of School	(J) Type of School	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Rural Day	Rural Boarding	-3.15321	3.05990	.732	-11.0501	4.7437
	Urban day	-16.50625*	2.89604	.000	-23.9803	-9.0322
Rural Boarding	Urban Boarding	-17.03098*	3.92606	.000	-27.1633	-6.8987
	Rural Day	3.15321	3.05990	.732	-4.7437	11.0501
Urban day	Urban Boarding	-13.87778*	4.60199	.015	-25.7545	-2.0011
	Rural Day	16.50625*	2.89604	.000	9.0322	23.9803
Urban Boarding	Rural Boarding	13.35305*	3.76184	.002	3.6446	23.0615
	Urban Boarding	-.52473	4.49471	.999	-12.1246	11.0751
Urban Boarding	Rural Day	17.03098*	3.92606	.000	6.8987	27.1633
	Rural Boarding	13.87778*	4.60199	.015	2.0011	25.7545
	Urban day	.52473	4.49471	.999	-11.0751	12.1246

*. The mean difference is significant at 0.05 level.

The comparison between groups as presented in Table 14 shows that there was no significant difference in the performance between Rural days' schools and Urban day schools ($p=0.732$, 95% C.I = -11.0501, 4.7437). Similarly, there was no significant difference in performance between Urban Day and Urban Boarding ($p=0.999$, 95% C.I = -11.0751, 12.1246). There existed statistically significant differences between rural day schools' performance and urban day schools ($p<0.0005$, 95% C.I = -23.9803, -9.0322) as well between rural day and urban boarding schools ($p<0.0005$, 95% C.I = -27.1633, -6.8987). Statistically significant differences in phonemic awareness level was also found between rural boarding schools and urban day ($p=0.002$, 95% C.I = -23.0615, -3.6446) as well as Rural Boarding and Urban Boarding schools ($p=0.015$, 95% C.I = -25.7545, -2.0011). In general, the results show that the urban schools had significantly higher levels of phonemic awareness than rural schools. This could be attributed to a number of a factor. First, urban schools are located in cosmopolitan environment and the majority of the learners lived in the urban centers. The medium of communication in urban centers was mainly Swahili or English as compared to rural schools where first L1 was either Kiambu or Kimbeere. This therefore shows that a number of pupils in urban schools could have English as their L1 and this promoted the ease of being

phonemically aware. These findings are supported by Cummins (2007) who noted that native speakers of English take about two years in developing literacy skills as compared to their peers using English language as a L2 or foreign language, who take as long as six years to acquire the same skills. In this context, rural schools would find it difficult to acquire phonemic awareness skills than their counter parts in urban schools.

Pupils in urban schools are more exposed to English speaking at home than learners in the rural areas where English Language is always a L2. Early exposure to English makes learners develop some phonemic awareness even before formal schooling starts. This enables such pupils understand the language with much ease. On the other hand rural school learners learn native language phonemes which interfere with the learning English phonemes thus slow rate of learning. Lewis-Moreno (2007) findings agree with this sentiment as they indicated that while English speaking learners can read and comprehend English language in about 3 years it takes as long as a decade for English language learners to achieve the same. This Lewis-Moreno explains that it is because reading in children starts developing way before formal reading instruction in school.

According to Canadian Literacy and Language Research Network (2007), a beginning phase of literacy in reading is coupled by a two-year-old learner's recognition of words, sounds and at times learning to write some text and occurs as early as the second year of life. In this case pupils from urban schools are likely to be brought in from the urban neighbourhood thus they start learning English early before joining school while rural learners start learning English once they formally join schools thus late exposure. This argument is further supported by Whitehurst and Lonigan (2001) who opined that the fundamental literacy competencies learned during preschool years lay a foundation for continuation in learning language literacy at later stages of life. Consequently, it is more difficult to internalize L2 than one's native language. Since the development of emergent literacy occurs without formal instruction, family interaction plays a key role and therefore home language becomes the child's L1. In addition, Whitehurst and Lonigan (2001) noted that since the development of emergent literacy occurs without formal instruction, family interaction plays a key role and therefore home language becomes the child's L1. Consequently, children from families that interact in English

may therefore develop English literacy with ease. This explains why children in urban schools had higher levels of phonemic awareness than the rural children.

On the other hand, higher performance in urban schools could be explained by the school setting. Urban schools being cosmopolitan in nature mainly use English as a medium of communication within the school. This gives learners more practice in learning spoken English, which in turn enhances phonemic awareness. Similar sentiments were made by Whitehurst and Lonigan (2001) when he reported that schools that use English as a medium of communication are likely have higher learning rates in English literacy. English being a L2 among a vast population of the learners who lack means of exposure or interaction with English speakers in school find it more difficult for such learners to internalize the English phonemes, which may in turn affect their literacy level in English.

4.4 Level of English Language Literacy

This was measured by determining the performance of the pupils in reading and pronunciation of the same words that were used in the Yopp Singer test. The words were broken down into pronunciation segments as follows.

Table 15: Pronunciation Segments for Yopp Singer Words

Word	Segment	Word	Segment
dog	do-g	sat	sa-t
keep	kee-p	lay	la-y
fine	fi-ne	race	ra-ce
no	no	zoo	z-oo
she	sh-e	three	th-ree
wave	wa-ve	job	jo-b
grew	g-roo	in	In
that	tha-t	ace	i-ce
red	re-d	at	At
me	me	top	to-p
sat	sa-t	by	By
wave	wa-ve	do	d-oo
grew	g-roo		

The pupils were assessed on how they pronounced the different segments and each segment awarded one(1) mark for correct reading while those who kept quiet or did not read a particular word scored a (0) zero in reading that particular word. The total number

of pronunciation segments was 39 thus a learner scored out of 39 and the marks were converted to percentage.

The pupils were classified into four Literacy level classes: Pre-alphabetic group which comprised of those who scored less than 30%, Partial Alphabetic were the ones who scored between 30% and 49%, Full Alphabetic were the ones who scored between 50% and 69% while those who scored 70% and above were in the Consolidated Alphabetic phase.. The results are presented in Figure 3.

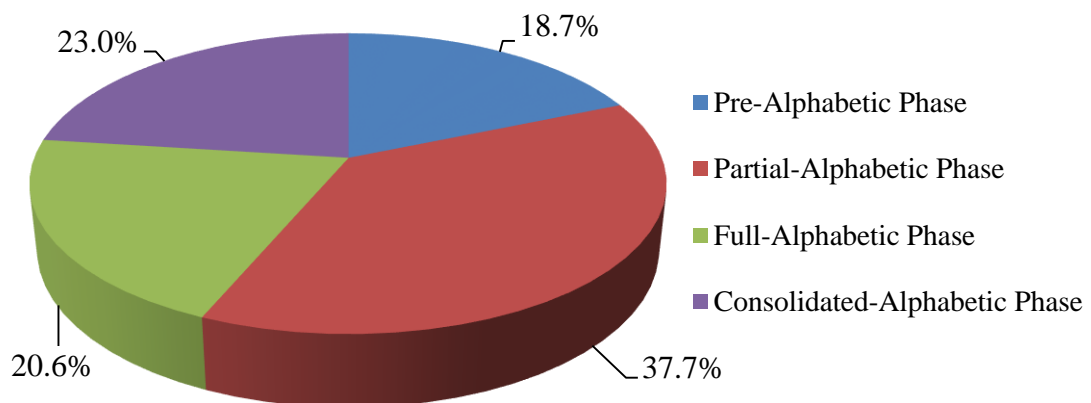


Figure 3: Pupils Literacy Level

The results presented in Figure 3 show that the level of English reading literacy among Grade Three pupils was low with only 23.0% having attained consolidated alphabetic phase which is the class considered to have adequate phonemic awareness. This finding concur with the findings of the report of the Presidential Working Party on Education Reform (PWPER) in 2023 which found out that there was a serious concern about foundational learning in Kenya where learners had low level of literacy at EYE tier (page 35). Those approaching adequate phonemic awareness (Full Alphabetic awareness) were 20.6% with a considerably large percentage (37.7%) being in the Partial Alphabetic phase while a considerable percentage (18.7%) were in the Pre-Alphabetic phase. In order to further explain the results were analysed as per school categories. The results are displayed in Figure 4

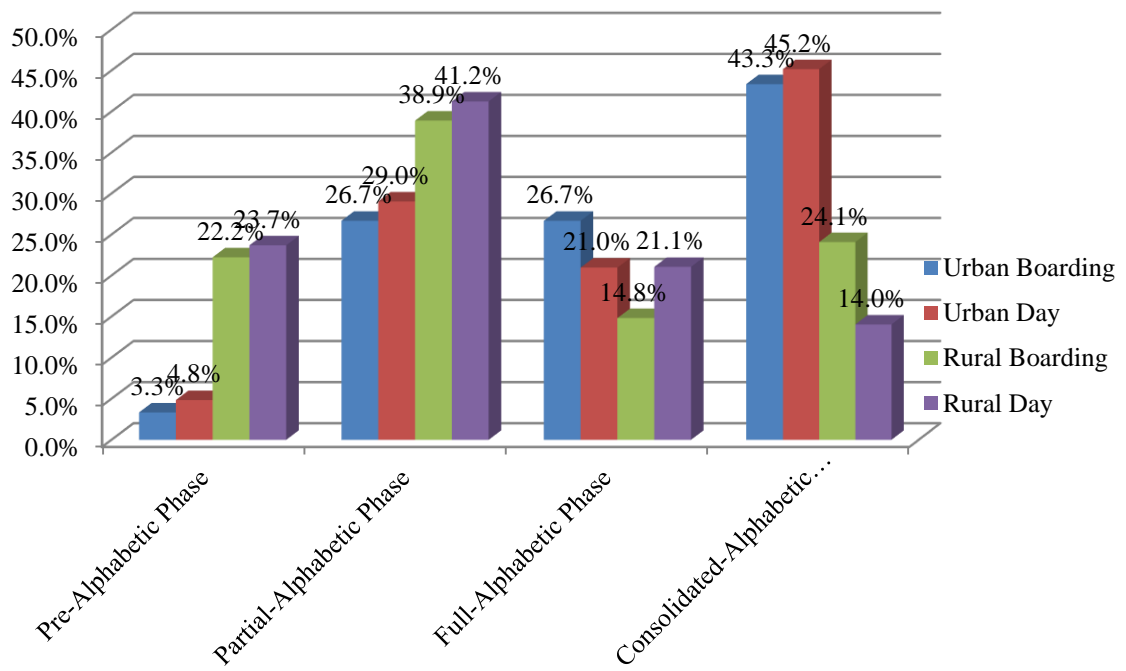


Figure 4: Literacy Level per School Category

The results presented in Figure 4 show comparisons between literacy levels for the different categories of schools. The results show that a huge number of pupils who were classified as pre-alphabetic phase were from rural schools with 23.7% of rural day learners and 22.2% of rural boarding schools. In contrast, only 3.3% and 4.8% of the pupils from urban, boarding and urban day schools respectively were in the pre-Alphabetic phase. On the other end, a vast majority of pupils who had attained the consolidated alphabetic phase were from the urban day schools consisting of 45.2% and urban boarding schools at 43.3%. This clearly indicates that urban schools performed better in literacy than rural schools. This implies that school category had influence on the literacy level of the pupils. In order to confirm that the differences in the literacy level between the various categories of schools existed and not by chance the mean scores for the different categories of schools were compared using ANOVA. The analysis included descriptive statistics to find out the mean scores and standard deviations for the different categories. The results are displayed in Table 16.

Table 16: Descriptive Statistics for literacy Level

Literacy Level Score	Descriptives							
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Rural Day	228	44.2412	17.21306	1.13996	41.9950	46.4875	15.00	91.00
Rural Boarding	54	48.8889	22.25128	3.02802	42.8155	54.9623	22.00	98.00
Urban Day	62	61.2097	20.24452	2.57106	56.0685	66.3508	22.00	98.00
Urban Boarding	19	65.5789	21.75448	4.99082	55.0936	76.0643	28.00	94.00
Total	363	48.9477	20.12708	1.05640	46.8702	51.0251	15.00	98.00

The results in Table 16 show that Urban boarding schools had the highest mean score of 65.6% (SD=21.1) followed closely by urban day schools with average score of 61.2% (SD=20.2). At distance third was rural boarding schools with a mean score of 48.9% (SD=22.2) while the lowest scoring group was rural day schools with a mean score of 44.2(SD=17.2).This implies that learners in urban schools performed better in literacy than those in rural schools. The standard deviations for all the groups were almost the same implying that the variation in literacy levels was uniform across the school categories thus it can be inferred that within the same school variations in literacy could be due to student factors that were not the subject of the current study however, in order to confirm that the higher performance was not by chance a comparison of the mean scores was also done using ANOVA. The findings are displayed in Table 17.

Table 17: Literacy Level Comparison between Groups

	Literacy Level Score				
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	19628.034	3	6542.678	18.492	.000
Within Groups	127017.972	359	353.811		
Total	146646.006	362			

The results in Table 17 show that there was a statistically significant difference in Literacy levels at $p < 0.5$, $F(3,359) = 18.492$, ($p < 0.0005$) between some groups thus the difference in performance in reading between groups was not by chance. However, the results do not indicate which groups had significant differences. In order to identify

the schools categories with significant differences in literacy levels, Post Hoc Tests using Turkey HSD technique were done to show comparison between groups. The results are presented in Table 18.

Table 18: Turkey's HSD Test between Specific Groups

Multiple Comparisons						
Dependent Variable: Literacy Level Score						
Turkey HSD						
(I) School Category	(J) School Category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Rural Day	Rural Boarding	-4.64766	2.84673	.362	-11.9954	2.7000
	Urban Day	-16.96845*	2.69415	.000	-23.9223	-10.0146
	Urban Boarding	-21.33772*	4.49148	.000	-32.9307	-9.7447
Rural Boarding	Rural Day	4.64766	2.84673	.362	-2.7000	11.9954
	Urban Day	-12.32079*	3.50124	.003	-21.3578	-3.2837
	Urban Boarding	-16.69006*	5.01734	.005	-29.6403	-3.7398
Urban Day	Rural Day	16.96845*	2.69415	.000	10.0146	23.9223
	Rural Boarding	12.32079*	3.50124	.003	3.2837	21.3578
	Urban Boarding	-4.36927	4.93237	.812	-17.1002	8.3617
Urban Boarding	Rural Day	21.33772*	4.49148	.000	9.7447	32.9307
	Rural Boarding	16.69006*	5.01734	.005	3.7398	29.6403
	Urban Day	4.36927	4.93237	.812	-8.3617	17.1002

*. The mean difference is significant at the 0.05 level.

The comparison between groups as presented in Table 18 shows that there was no significant difference in the performance between rural days schools and urban day schools ($p=0.362$, 95% C.I = -11.9954, 2.7000). Similarly there was no significant difference in performance between urban day and urban Boarding schools ($p=0.812$, 95% C.I = -17.1002, 8.3617). There existed statistically significant differences between rural day schools literacy level performance and urban day schools ($p<0.0005$, 95% C.I = -23.9223, -10.0146) as well as between rural day and urban boarding schools ($p<0.0005$, 95% C.I = -32.9307, -9.7447). Statistically significant differences in literacy levels were also found between rural boarding schools and urban day ($p=0.003$, 95% C.I = -21.3578, -3.2837) as well as rural boarding and urban boarding schools ($p=0.005$, 95% C.I = -29.6403, -3.7398).

The findings reported in Table 18 show that urban schools performed better in literacy than rural schools. This could be explained by a number of factors. Urban schools population of pupils were mainly from the urban centres such as Embu town, Runjenjes,

Kianjokoma, Kiritiri, Siakago and Karaba among others. These urban centres are mainly cosmopolitan and therefore most pupils L1 would have been either English or Swahili and not the native language. Such pupils are exposed to English speaking even before enrolling into formal school thus better understanding of the English Language. Such pupils are said to have their emergent literature in English right from home and hence have no difficulties in mastering literacy skills. Similar sentiments were made by Hawken, Johnston and McDonnell (2005) who noted that emergent literature develops through exposure early before school age. Hawken, Johnston and McDonnell (2005) further reported that the five components of emergent literacy: Awareness on phonological tasks, automatic letter naming, writing, phonological memory and alphabet knowledge, are the fundamental determinants of literacy development among children. This implies that children from urban schools who have been exposed to English at home as medium of language grasp literacy skills with ease as compared to those who learn English in school as L2.

On the other hand, urban boarding population consists of children from all parts of the Country and therefore are multi-ethnic. Due to this blend the schools mainly use English as a means of communication rather than any native language. This exposes pupils to free practice thus improving the level of their literacy. These findings are similar to the findings of Dixon, et al. (2012). Dixon found out that students who did not use their native Australian languages often as a medium of their social interaction and communication were able to learn English faster and overcome native language interference during pronunciation of English syllables. The findings by Chapman, (2003) also support the findings of this study. Chapman asserted that Phonological skills that are acquired during a child's early stages positively influence the development of language literacy at later stages of life. Such skills help learners decode written words thus enhancing fluency in reading and writing. This explains why urban schools performed better in literacy than rural schools.

The low performance by rural boarding and rural day schools could be explained by a number of factors. Firstly, rural schools were located in regions where the local dialect was either Kiambu or Kimbeere. The students' L1 was therefore their mother tongue, which interfered with their learning of English language. It therefore would take them

more time to internalize English phonological skills than their counter parts in urban setting. This was evidenced by the errors made in reading in which substitution of English sounds with sounds from the native language was common as identified by the researcher during the administration of the Yopp Singer test. Teachers also reported substitution as one of the errors common among the learners. Cummins (2007), in his study comparing literacy level in English language for English natives and English foreign language users in USA, he says that native speakers of English takes about two years in developing literacy skills compared to their peers using English language as a L2 or foreign language, who take as long as six years to acquire the same skills. In this case, English being a L2 for the rural schools and in most cases L1 for urban schools made the literacy level for rural schools to be low.

On the other hand, a rural school mainly consists of local learners from the school surrounding areas who normally speak the same native language. Owing to this, the medium of communication in a school would mainly be mother tongue. This reduced the time of exposure to the learners in English language practice through speech thus challenges in learning English literacy. These findings are supported by the findings of Lewis-Moreno (2007) who reported that, while English speaking learners can read and comprehend English language in about 3 years it takes as long as a decade for non-English language learners to achieve the same.

Whitehurst and Lonigan (2001) opined that these fundamental literacy competencies learned during preschool years lay a foundation for continuation in learning language literacy at later stages of life. Based on this context, rural learners have fundamental literacy competencies in their native language which serves to interfere with learning English. Thus, it is more difficult to internalize English literacy skills. In contrast, urban learners in most cases may have been exposed to English language and learned the fundamental literacy skills or emerging literature in English making it so easy to learn English Language.

Whitehurst and Lonigan (2001) further notes that children from families that interact in English may therefore develop English literacy with ease. Similarly, schools that use

English as a medium of communication are likely have higher learning rates in English literacy. This explains why there is statistically significant difference in English literacy level between the urban school population and the rural school population although the learners were at the same grade.

According to Dixon, et al. (2012), Australian speaking students who did not use their native Australian languages often as a medium of their social interaction and communication were able to learn English faster and overcome native language interference during pronunciation of English syllables as compared to their counter parts who used their native languages as their means of communication in their social life. In this study, urban boarding schools were found to perform the best in literacy. This is because the learners spend most of their time in school where the medium of communication was English. This effectively barred them from using their native languages as a medium of social interaction thus they were able to learn English faster than their rural counter parts.

4.5 Phonemic Awareness and Language Literacy

In order investigate the influence of phonemic awareness on English literacy level among the grade 3 pupils, the literacy level scores as measured during the pronunciation segments were converted to percentages. The data was then analysed using the Pearson Moment Correlation Coefficient with phonemic awareness as the independent variable and the Literacy level as the dependent variable. The Pearson correlation coefficient was used to measure the nature and the strength of the relationship between the two

variables. The results are presented in Figure 4

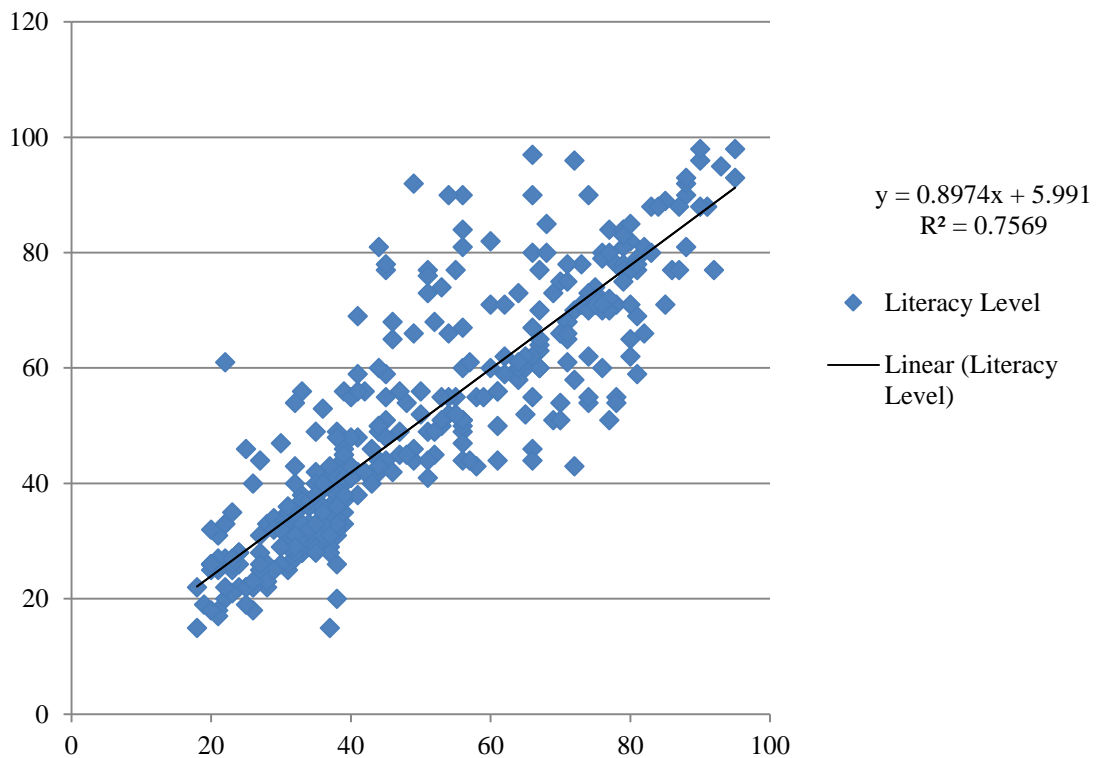


Figure 5: Phonemic and Literacy Level Correlation Analysis

The results presented in Figure 5 show that phonemic awareness had linear relationship with Literacy level as represented by the Equation 4.1

$$y = 0.897x + 5.991 \dots\dots\dots 4.1$$

This implied that a change in phonemic awareness skills would lead to a proportionate change in levels of Literacy. From the equation, the graph of phonemic awareness against literacy level has a positive slope implying an increase in levels of phonemic awareness would lead to an increase in literacy level. An examination of the graph shows a $R^2=0.76$. This implies that phonemic awareness could explain 76% of the level of English Literacy among pupils. In other words, an increase in phonemic awareness by 100% would lead to an increase in the literacy level of a learner by 76%. This explains why the urban schools had higher scores in phonemic awareness as well as in literacy level. Phonemic awareness aims at the description and analysis of phonemes arising from utterances and conversations in words that are spoken. Having phonemic awareness thus means having the ability to break or analyse words into their respective

phonemes. This implies that a pupil who can segment a word into its phonemes is likely to read it correctly thus high literacy level. Supporting this opinion, are the sentiments by Adams(1990) who noted that phonemic awareness determines a child's success on the first day of schooling and is taken to be the clearest single indicator of success or failure a learner will experience in reading and writing. Supporting this Ball & Blachman (1991) reported that exposing children to phonemic awareness activities accelerates children reading and writing achievements. Children in urban schools had been exposed to phonemic awareness at home through regular speaking in English or in schools as medium of communication as compared to the children in the rural setting. In effect, their phonemic awareness was way higher thus higher level of literacy in English.

Learners with inadequate phonemic awareness normally have challenges in segmenting words into their respective sound structures, which are arguably the phonemes. These phonemes are the building blocks with which words are constructed through sounds. Consequently, such learners will have problems pronouncing such words if the sounds are not known to them. Teaching phonemic awareness is therefore a fundamental strategy in improving English literacy. In order to reduce the effect of L1 in L2 learning phonemic awareness is an important technique it enables learners to improve on letter sound correspondence which is critical in reading literacy and pronunciation. In addition for a learner to be able to pronounce English words correctly one must be able to segment each word into its phonemes in the word "cat," the phonemic segmentation process would involve breaking it down into its three phonemes: /k/ - /æ/ - /t/. Supporting this, Scott (2009) noted that by isolating these sounds, the reader can then match each phoneme to its corresponding letter or letters in the word.

Students learning English as L2 are often faced with challenges in reading new words. To help resolve these challenges, learners process the words by segmentation of phonemes sounds. The knowledge of segmentation is therefore a crucial skill to reading literacy. Ehri & Roberts (2006) asserted that Phonemic segmentation is particularly useful when encountering new or unfamiliar words, as it enables readers to sound out the word by blending the individual phonemes together. This blending process helps

readers decode the word and understand its meaning. In this study, teachers indicated that phonemic segmentation was a challenge as learner made errors of substitution and poor letter sound correspondence. This explains why phonemic awareness is strongly related to literacy level.

Phonemic awareness strategies aim at making it easier to recognize letters and sounds and attach a meaning without deep thinking. Phoneme manipulation is a phonemic strategy that gives learners the skills and knowledge to change, add, or delete phonemes to create new words or variations of existing words. When learners are able to do phonemic manipulation with ease then they can easily recognize new words and read them by deleting, adding or replacing phonemes from already known words. For example, replacing /c/ from the word 'cat' with /b/ to form the word 'bat'. Such a learner will be able to read the word 'bat' easily as long as the word 'cat' is familiar and has the ability to replace the sounds as indicated. These arguments are in agreement with Daly, Chafouleas & Skinner (2005) report that phoneme manipulation enables a learner to recognize, re-arrange, add, delete or substitute alphabetical letters orally in order to read and write.

Phonemic isolation is another phonemic strategy that is basic to reading skills and fluency. For example, if we consider the word "cat", phonemic isolation would require separating the phonemes and sounding them as follows: /k/ sound for "c", /æ/ sound for "a", and /t/ sound for "t". It is an essential pre-reading skill that lays the foundation for more advanced phonemic awareness skills. By isolating and identifying individual phonemes in words, learners become more aware of the sounds that make up spoken language. In support of phonemic isolation as a strategy, McCarthy (2008) noted that phonemic isolation helps learners develop phonics skills, where they later connect these individual sounds to their corresponding letters or letter combinations in written language.

4.6 Phonemic Awareness Strategies Used by Teachers

The study sought to identify the phonemic awareness strategies used by teachers to achieve English language literacy among learners. The teachers were required to state the strategies without indicating the frequency with which they applied each strategy.

Further, the teachers were requested to explain the techniques they used in implementing the strategies. The data was analysed thematically by reading the information given by teachers and interpreting it to identify the specific strategy. The data was also coded to indicate the frequency of use of each strategy in terms of the number of teachers that used the strategy. The results are displayed in Table 19.

Table 19: Frequency of Use of Phonemic Awareness Strategies

Phonemic Awareness Strategies	No of Teachers	Percentage
Use of phonemic segmentation	51	69.9%
Use of phonemic blending	48	65.8%
Phonemic manipulation	23	31.5%
Phonemic isolation	36	49.3%
Minimal pairs	12	16.4%

The results in Table 19 show that teachers used five different phonemic awareness strategies in teaching English literacy. These were; Use of phonemic segmentation, Use of phonemic blending, Phonemic manipulation, Phonemic isolation and minimal pairs.

4.6.1 Phonemic Segmentation

The application of phonemic segmentation was the most frequently used strategy with 51 teachers (69.9%) indicating that they used this method. This implies that over 30% of the teachers did not use segmentation in their English Literacy lessons. Phonemic segmentation being a basic tool for teaching English needs to be used frequently in order to give learners basic knowledge of letter sound correspondence. Phonemic segmentation is particularly useful when encountering new or unfamiliar words, as it enables readers to sound out the word by blending the individual phonemes together. Inadequate application of this technique leads to poor understanding of new words leading to low literacy level. These findings are in agreement with the findings of Scott (2009). According to Scott (2009) this phonemic segmentation is an essential skill for developing phonics skills, as it allows readers to connect individual phonemes to their corresponding graphemes (letter- sound combinations) in written English language. The teachers further reported application of different teaching methods to enhance phonemic segmentation. The most commonly used techniques were sound tapping, use of phoneme segmentation games, and segmentation songs and chants. Other techniques that were rarely used were sound and picture cards and the segmentation Elkonin boxes.

This shows that although not all teachers used phonemic segmentation, those who used it applied a variety of techniques in delivery.

4.6.2 Phonemic Blending

The results in Table 19 show that phonemic segmentation was the second most frequently used phonemic awareness strategy with 48(65.8%) of the teachers indicating that they used phonemic segmentation. This shows that there were pupils who were not taught about phonemic blending or were inadequately taught. Phonemic blending being a basic skill is particularly essential in the early stages of reading when learners are acquiring phonics skills. It plays a key role in enabling learners to sound out unfamiliar words, pronounce them correctly, and understand their meanings based on their knowledge of individual phonemes and their corresponding graphemes (letters- sound combinations). Lack of phonemic blending skills is therefore a major cause of learners' poor performance in literacy as it may lead to blending errors such as stumbling, skipping sounds, elongating sounds, reversing or even difficulties with consonant blending. The inadequate use of phonemic blending as demonstrated by teachers is a key cause of the poor literacy.

The findings of this study concur with Barca, Ellis, and Burani (2007), who reported children with inadequate blending skills, may not read new words fluently due to their inability to join sounds to form words. Massengill and Sundberg (2006) also noted that reading English Language is a complex skill as requires a child to be able to analyse spoken words identify the sounds in the words and link them to the letters representing the sounds. This confirms the importance of blending skills in improving English literacy.

Teachers further indicated that they used a number of techniques in teaching phonemic blending. The most commonly used technique was echo reading where the teacher sounded the words as pupils repeated after the teacher in a chorus manner. A number of teachers also reported the use of songs and chants in form of games in teaching blends. However, most teachers reported inadequate use of techniques requiring physical objects such as phoneme cubes or tokens, picture cards and other visual aids. This could be attributed to inadequacy of such teaching and learning materials in

schools. Generally, it can be inferred that there was inadequate use of phonemic blending strategy in enhancing phonemic awareness which led partly to the low level of phonemic awareness and therefore poor performance of pupils in English literacy in Embu County.

4.6.3 Phonemic Isolation

Phonemic isolation was the second most frequently used phonemic awareness strategy with 36 (49.3%) of the teachers reporting that they used this strategy in teaching phonemes. Phonemic isolation is a skill in phonemic awareness, which is the ability to hear and manipulate individual sounds (phonemes) in spoken words. As phonetic awareness strategy phonemic isolation assists learners in recognizing and identifying specific phonemes within words. Consequently, if pupils lack phonemic isolation skills they are likely not to differentiate between similar sounds in words. It is therefore of great importance that teachers frequently use phonemic isolation to improve learners' literacy.

It was noted that more than 50% of the teachers did not use phonemic isolation strategy thus the low level of phonemic awareness and therefore poor literacy level. These findings are supported by McCarthy (2008). In his study McCarthy noted in phonemic isolation one seeks to equip learners with vital pre-reading skills that lays the foundation for more advanced phonemic awareness skills. By isolating and identifying individual phonemes in words, learners become more aware of the sounds that make up spoken language. This heightened phonemic awareness helps learners develop phonics skills, where they later connect these individual sounds to their corresponding letters or letter combinations in written language. This implies that phonemic isolation must be taught before other advanced skills such as phonemic manipulation to provide prior knowledge. The failure or inadequate use of phonemic isolation by teachers can be deemed to be a key contributor to the low phonemic awareness among pupils in Embu County.

On techniques used in teaching phonemic isolation, teachers indicated that they mainly used oral activities in small groups to help pupils distinguish between sounds in words. A teacher further explained that such small groups were made to be like play groups

and therefore a competition like game seemed more effective than other methods. Another method use in this strategy was auditory discrimination. This involved teachers engaging learners in trying to state whether words are same or different in a play like manner. For example say "sit" and repeat the same "sit" and then ask pupils whether the words are the same without writing them to represent the same sound. In other cases, the teacher would pronounce "cat" and "bat" and ask pupils to indicate whether the words are the same or different. The use of only two techniques in teaching phonemic isolation shows that teachers in Embu County did not appreciate its importance in the literacy development of the learners' thus the English literacy level was low.

4.6.4 Phonemic Manipulation

Phonemic manipulation was applied by 23 (31.5%) of the teachers as indicated in Table 19. This implies that a vast majority of the learners were not exposed to this important phonemic awareness skill thus the low levels of phonemic awareness reported in this study. Phonemic manipulation is an advanced phonemic awareness strategy that helps learners to develop strong phonemic awareness skills which are fundamental for reading and spelling. Phonemic manipulation requires that learners be able to segment and isolate sounds first so as to be able to manipulate them in words. Due to its advanced nature and prior knowledge on basic phonemic awareness, most teachers who did not use phonemic segmentation, blending and isolation may not teach manipulation thus the low percentage of use of phonemic manipulation. Learners who have acquired this skill are able to create new words from words they are familiar with by deleting, adding or substituting some sounds with others. Supporting this, Daly Chafouleas & Skinner (2005) noted that phonemic manipulation helps readers understand the relationship between sounds and letters, enabling them to decode and encode words more effectively. This ability to decode and encode helps learners read words easily and acquire fluency in reading and writing.

The inadequate application of phonemic manipulation could therefore be termed as one of the causes of low English phonemic awareness among learners. An investigation into the techniques used in phonemic manipulation instruction showed that teachers used a rich blend of activities and instructional techniques. One of the common ways used by teachers was creating word family exploration in which teachers reported that they

demonstrated the creation of new words from known words by using words that belong to the same family e.g. ‘cat’, ‘bat’, ‘rat’ where only one phoneme changes to create a new word. This was coupled with game like activities such as rhyming games which were used to create motivation to the pupils. For example, a teacher reported that she created a rhyming game that required learners to manipulate phonemes to create rhyming words. For example, "Tell me a word that rhymes with 'cat,' but starts with ‘h’ the group that created more words in a given time was declared the winner. Another teacher gave learners group work to create tongue twisters using phoneme manipulations.

4.6.5 Minimal Pairs

This was the least applied phonemic awareness strategy with only 12 (16.4%) indicating that teachers rarely used it. A number of teachers reported that they used minimal pairs alongside phonemic blending and phonemic manipulation to help learners recognize and internalize the effect of changing a single phoneme from a word in terms of meaning as well as pronunciation. This implies that a minimal pair was used mainly as a support technique to enhance other strategies. Cameron, (2012) also demonstrates the importance of minimal pairs by stating that in linguistics and phonetics, minimal pairs are used to demonstrate the phonemic contrast between two sounds and to show how a change in a single sound can create a distinction in meaning. The inadequate application of minimal pairs was also significant with only 16.4% of interviewed teachers using it. Teachers further indicated that they used gaming activities mainly to implement minimal pairs.

4.7 Errors Made by Learners in Reading

The study sought to investigate the kind of pronunciation errors made by the learners in reading simple English words so as to highlight the possible causes of the errors and recommend on specific strategies that can be applied to minimise the errors. Data on errors was collected first by the researcher by noting the common errors made by the pupils as they read the words in the Yopp Singer test. In order to validate this information on errors, the teachers were required to highlight the common errors made by their pupils during reading. The results are presented in Table 20.

Table 20: Errors in Pronunciation

Errors	No of Teachers	Percentage
Mispronunciation Errors	64	87.7%
Lack of Code Knowledge	55	75.3%
Letter Confusion	18	24.7%
Substitution Errors	41	56.2%
Consonant Cluster Reduction	33	45.2%
Epenthesis Errors	41	56.2%
Difficulties With Multi Syllabic Sounds	54	74.0%
Blending Difficulties	46	63.0%

The results presented in Table 20 shows that pupils made different forms of errors in reading. These are mispronunciation, lack of code knowledge, letter confusion, poor word recognition, substitution, consonant cluster reduction, epenthesis errors, difficulties in multi syllabic sounds and blending errors. However, some errors were more frequent than others as identified by the teachers.

4.7.1 Pronunciation Errors

This was the most frequent error with 64 (87.7%) of the teachers identified it as a common error made by pupils while reading. Similar results were noted by the researcher during administration of the Yopp Singer test. This implies that a vast majority of the pupils had not mastered well the English phonemes as shown by the low level of phonemic awareness level. For instance the researcher noted that during reading of the words of the Yopp test, a number of pupils made pronunciation errors such as pronouncing ‘v’ as ‘f’ ‘d’ as ‘nd’ ‘j’ as ‘nj’ and ‘b’ as ‘mb’. This could be attributed to inadequate phoneme-grapheme correspondence skills and mother tongue interference among the pupils.

When learners lack letter sound correspondence skills it is common to have mispronunciation of letters already known to them. The findings of this study are similar to the findings of Fachrunnisa and Nuraeni (2022) who noted that English pronunciation is a very complex sound system among Indonesia EFL students because the pronunciation of words does not correspond to their orthography. Similarly, English pronunciation does not correspond to the native language orthography for most of the pupils and therefore pupils who had not acquired adequate phonemic awareness made mispronunciation errors due to mother tongue interference.

4.7.2 Lack of Code Knowledge

This was the second most common type of error noted by teachers with 55 (75.3%) of the teachers reporting it. The same was identified by the researcher during interview with pupils. The researcher further noted that learners had challenges in reading r-controlled vowels. Confirming this was a statement by one of the teachers that some pupils mentioned letters in words instead of sounds and vice versa combinations indicating that they had incomplete knowledge of the complete phonetic code. This was also noted during reading. For example pupils failed to recognize that 'th' =/th/ despite the fact that they understood t=/t/ and h=/h/ others made errors in reading words such as 'that' which was read and segmented as /t/ /h/ /a/ /t/. The findings are supported by Ambalegin (2022) who noted that as a result of lack of skills on phonemic blending and letter sound correspondence caused by L1 interference learners usually have difficulties blending consonant sounds.

4.7.3 Difficulties with Multi syllabic sounds

This type of error was reported by 54(74.0%) of the teachers. Teachers added that pupils were able to read shorter words accurately with one or two syllables yet they struggled to read words made up of three or more syllables. However, this could not be identified from the pupils as the Yopp Singer test items had no multi-syllabic words. Similar findings were reported by Barca, Ellis, and Burani (2007) who noted that advanced phonemic awareness techniques such as phonemic manipulation are required for a learner to read multi-syllabic words with ease and fluently. On the other hand, Cameron (2012) explains that when dealing with long and more sophisticated words learners face decoding challenges, mispronunciation, Skipping syllables, reversals or transpositions as well as blending the many phonemes that make up the words.

4.7.4 Blending Difficulties

This refers to the errors encountered when a learner is unable to connect identified sounds or phonemes and link them to form words. A relatively large number 46(63.0%) of teachers indicated that blending errors were common among learners. The researcher also noted difficulties in blending from some learners during the Yopp-Singer test on reading. This could be due to low blending skills as was evidenced by low scores in

phonemic awareness. The researcher further noted that learners committed blending errors sound omission, sound elongation and stumbling. Similar findings were reported by Massengill and Sundberg (2006). According to Massengill and Sundberg (2006), inadequate blending skills may lead to poor pronunciation and slow reading due to inability to link letters and sounds effectively especially combination of consonant sounds.

4.7.5 Substitution Errors

These errors occur when readers replace one phoneme (sound) in a word with another, resulting in a mispronunciation or a different word. A total of 41(56.2%) of the teachers reported that their pupils made substitution errors. In addition, the researcher noted that some pupils substituted sound /d/ with sound /t/ in dog leading to poor pronunciation and completely different meaning. This could be attributed to the inadequate use of phonemic awareness strategies in teaching as well as L1 interference among the pupils. Seymour et al. (2003) supports this by noting that substitution errors can be minimised or even eliminated through the use of appropriate phonemic teaching strategies such as regular reading practice, phonics instruction, sight word recognition, and context clues.

4.7.6 Epenthesis Errors

These are errors that occur when learners seem to add non existing vowel between consonants during reading. These errors were reported by 41(56.2%) of the teachers. The errors were also noted in the reading exercise during administration of the Yopp Singer test. For example, some pupils added the sound /e/ in reading the word “three” to sound “the-ree”. Similarly while reading the word “grew,” some learners added the sound /u/ to sound like “gu-rew”. This could be attributed to inadequate phonemic blending and segmentation skills. English being a L2 for most learners in Embu County this was a common challenge due to L1 phonemic awareness and the differences between Embu Language phonemes and English phonemes. In a similar study, Mauti et al. (2023) noted that Epenthesis Errors can lead to mispronunciation and difficulties in decoding words accurately especially among early readers or individuals with reading difficulties, as they may struggle with the complexities of certain word patterns. Manyak (2008) also supports this argument by noting that epenthesis errors are frequent among L2 learners but can easily be addressed if English language teachers use phonics

instruction, and expose pupils to various word patterns, word blending exercises and phonemic awareness activities in order to help learners become more proficient in decoding words accurately

4.7.7 Consonant Cluster Reduction

Consonant clusters reduction was noticed and reported by 33(45.2%) of the teachers. Consonant cluster reduction refers to a phonological process where one or more consonants in a group or cluster of consonants are omitted or simplified when pronouncing or reading words. This was also noted during the oral reading in the Yopp Singer test. For instance, it was noted that a number of pupils omitted the consonant /t/ in the word “three” and read the word as “thee.” This could be attributed to lack of adequate skills in phonemic blending and manipulation. It should be noted that English being a L2 in Embu County, most learners had difficulties combining and decoding consonant clusters which do not exist in their native dialects. Supporting this, Gambrell, Morrow and Pressley (2007) asserted that in reading English, readers may encounter this phenomenon when trying to pronounce unfamiliar or challenging words.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Findings.

The study investigated the level of phonemic awareness of the pupils. It was found that the number of pupils who were able to segment the words correctly were only 75 (20.0%), 110 (29.4%) did partial segmentation, 166(44.4%) did wrong segmentation while 23(6.2%) did no segmentation at all but kept quiet. It was also found out that only 20.3% of the pupils could be classified as phonemically aware, 34.5% had emerging phonemic awareness while the highest percentage of 45.2% had inadequate phonemic awareness. It was inferred that Grade 3 pupils in Embu County have low level of phonemic awareness.

The study further sought to establish the differences in phonemic awareness between different school categories. Rural day schools had the lowest performance with a mean score of 45.7% (SD=19.6) followed by rural boarding schools with a mean of 48.9 %.(SD=21.3). Urban schools generally performed better with Urban boarding schools scoring a mean of 62.8% (SD=22.9) while Urban days schools had an average score of 62.4% (SD=20.1).

There was no significant difference in the performance between Rural days schools and Urban day schools ($p=0.732$, 95% C.I =-11.0501, 4.7437). Similarly there was no significant difference in performance in Urban Day and Urban Boarding schools ($p=0.999$, 95% C.I =-11.0751, 12.1246). There existed statistically significant differences between rural day schools performance and Urban day schools ($p<0.0005$, 95% C.I =-23.9803, -9.0322) as well between rural day and urban boarding schools ($p<0.0005$, 95% C.I =-27.1633, -6.8987). Statistically significant differences in phonemic awareness level was also found between rural boarding schools and urban Day ($p=0.002$, 95% C.I =-23.0615, -3.6446) as well as rural boarding and urban boarding schools ($p=0.015$, 95% C.I =-25.7545, -2.0011). In general the results show that the urban schools had significantly higher level of phonemic awareness than rural schools.

The study also investigated the levels of literacy in reading. It was found out that the level of English reading literacy among Grade Three pupils was low with only 23.0% of the sample having attained consolidated alphabetic phase which was the class considered having adequate phonemic awareness. Pupils reading at full alphabetic phase stood at 20.6% with a considerably large percentage of pupils (37.7%) reading at partial alphabetic phase. The study found that 18.7% of the sampled pupils read at pre-alphabetic phase.

Further, it was noted that a huge number of pupils who were classified as pre-alphabetic phase readers were from rural schools. This consisted of 23.7% of rural day pupils and 22.2% of rural boarding schools. In contrast, only 3.3% and 4.8% of the pupils from urban boarding and urban day schools respectively were reading at pre-alphabetic phase. On the other end, a vast majority of pupils who were reading at consolidated alphabetic phase were from urban boarding schools consisting of 43.3% of the urban boarding and 45.2% of the urban day schools.

Comparison between the different categories of schools showed that Urban boarding schools had the highest mean score of 65.6% (SD=21.1) followed closely by urban day schools with an average score of 61.2% (SD=20.2). At distance third, was rural boarding schools with a mean score of 48.9% (SD=22.2) while the lowest scoring group was rural day schools with a mean score of 44.2(SD=17.2). ANOVA results showed that there was no significant difference in the performance between rural days schools and Urban day schools ($p=0.362$, 95% C.I = -11.9954, 2.7000). Similarly there was no significant difference in performance between urban day and urban boarding ($p=0.812$, 95% C.I = -17.1002, 8.3617). There existed statistically significant differences between rural day schools literacy level performance and urban day schools ($p<0.0005$, 95% C.I = -23.9223, -10.0146) as well as between rural day and urban boarding schools ($p<0.0005$, 95% C.I = -32.9307, -9.7447). Statistically significant differences in literacy level was also found between rural boarding schools and urban day ($p=0.003$, 95% C.I = -21.3578, -3.2837) as well as rural boarding and urban boarding schools ($p=0.005$, 95% C.I = -29.6403, -3.7398).

Correlation analysis between phonemic awareness scores and literacy level scores indicated that there was a strong positive correlation between the two variables ($R^2=0.76$). This implies that phonemic awareness could explain 76% of the level of English Literacy among the pupils. Therefore, phonemic awareness has a strong influence on the level of literacy.

The strategies used in enhancing phonemic awareness were identified by teachers their frequency was rated as the number of teachers reporting each. Phonemic segmentation was the most frequently used with 51 (69.9%) teachers followed by phonemic blending with 48(65.8%). Phonemic isolation was third with 36 (49.3%) followed by phonemic manipulation with 23 (31.5%) while at the distance last was the use of minimal pairs with 12 (16.4%).

The study also identified common errors committed by the pupils during reading. The errors were identified by teachers with the most common reported error being Mispronunciation errors. The error was reported by 64 (87.7%) teachers. At second in frequency was Lack of code knowledge error which was reported by 55 (75.3%) teachers. At third in frequency were errors in difficulties with multi syllabic words which were reported by 54 (74.0%) teachers. Both epenthesis and substitution errors were reported by 41 (56.2%) teachers followed by Consonant cluster reduction which was reported by 33 (45.2%) teachers. Letter confusion was the least common error with 18 (24.7%) teachers reporting it.

5.2 Conclusions

The study concludes that Grade Three pupils in Embu County have low level of phonemic awareness. Secondly, the study comes to the conclusion that the level of English reading literacy among the pupils was below expectation. Thirdly, the study concludes that pupils in urban schools have significantly higher level of phonemic awareness than pupils in rural schools. Finally, the study concludes that the teachers' adoption of phonemic awareness strategies in teaching English language literacy in public primary schools in Embu County is inadequate.

5.3 Recommendations

The following recommendations are made:

- i. English teachers in Embu County need to enhance their use of phonemic awareness skills in order to improve the pupils' phonemic awareness and literacy level.
- ii. Ministry of education and the county government need to improve on provision of teaching and learning aids for teaching phonemic awareness skills at EYE level.
- iii. Ministry of education to organize refresher courses for training primary school teachers on phonemic awareness strategies.
- iv. KNEC should develop a framework for assessing the reading phases that pupils fall in at Grade Three and other EYE grades using Ehri's (1995) reading development model in order to identify and address gaps in literacy.
- v. The government of Kenya through the ministry of education to build a solid pedagogical English literacy foundation among primary school teacher trainees in teacher training colleges to adequately equip them with strategies and approaches in English language phonemic awareness methodologies.
- vi. EYE teachers should regularly assess Pupils classified as lacking and those demonstrating emerging phonemic awareness using a combination of phonemic awareness strategies and assessments in order to check their literacy progress.

5.4 Suggestions for Further Studies

The current study investigated the phonemic awareness levels, level of literacy, errors in pronunciation and English language phonemic awareness strategies used by teachers without establishing the impacts of each strategy and the challenges faced by teachers. There is therefore a gap in literature on how the phonemic awareness skills and strategies can improve literacy level. There is therefore a need for the following studies:

- i. A quasi-experimental study that will highlight the effectiveness of different English language phonemic awareness strategies in literacy acquisition among learners at EYE tier of CBC.
- ii. A study to investigate the factors that affect the teachers' use of phonemic awareness strategies in English literacy instruction.

- iii. A study to establish the effects of Kiambu and Kimbeere phonemic awareness on English language phonemic skills acquisition.

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APPENDICES

Appendix I: Introduction Letter

Chuka University
P.O Box 109-60400
Chuka.

Dear Sir/Madam,

RE: MASTER OF ARTS IN ENGLISH LANGUAGE AND LINGUISTICS

I am a student at Chuka University. As one of the requirements for my course, i must carry out research in my area of specialization and submit a report. My research topic is ” **Influence of Phonemic Awareness on English Language Literacy among Grade Three Pupils in Public Primary Schools in Embu County, Kenya**” To accomplish my research, i will administer a phoneme segmentation test to the pupils and interview their English teachers. I kindly request you to take part in the research by allowing me to administer the phoneme test to the pupils as well as interviewing their English teachers on the topic. The information you give shall be treated confidentially and will be used for the purpose of this study only.

I will not require your personal details such as your name.

Thank you in advance

Njiru Francis Njagi

Appendix II: Yopp-Singer Test of Phoneme Segmentation

Section (A) background information

Age.....

Gender.....

Type of public school attended.....

Location of the instructional school.....

Section (B) test instructions

Pupil's Code Date Score

Directions: *Together, we will play a word game today. Kindly tell me the specific sounds you hear in order from all the words I will mention. If i mention "cat," you should give the sounds "/c/-/a/-/t/" in their order. (Administrator: Mention the sounds in words and not the letters) if you are ready, we can try some .*

Administrator: (Be sure to say the sounds, not the letters, in the word). Let's try a few together.

Practice items: (Assist the child in segmenting these items as necessary.) 'ride', 'go', 'man'.

Test items: (Circle those items that the student correctly segments; incorrect responses may be recorded on the blank line following the item.)

1. dog		12. lay	
2. keep		13. race	
3. fine		14. zoo	
4. no		15. three	
5. she		16. job	
6. wave		17. in	
7. grew		18. ice	
8. that		19. at	
9. red		20. top	
10. me		21. by	
11. sat		22. do	

Appendix III: Answer Key for Yopp- Singer Test

1. dog	/d/ - / ɒ / - /g/	3	12. lay	/l/-/eɪ/	2
2. keep	/k/ - / i: / - /p/	3	13. race	/r/- / eɪ / - /s/	3
3. fine	/f/-/ aɪ /-/n/	3	14. zoo	/z/- /u:/	2
4. no	/n/- / əʊ /	2	15. three	/ θ / - /r/ - /i:/	3
5. she	/ʃ/- /i:/	2	16. job	/ dʒ / - / ɒ / - /b/	3
6. wave	/w/ - / eɪ / - /v/	3	17. in	/ɪ/ - /n/	2
7. grew	/g/- /r/- /u:/	3	18. ice	/ aɪ /-/s/	2
8. that	/ θ / - / æ / - /t/	3	19. at	/ ə / - /t /	2
9. red	/r/- /e/- /d/	3	20. top	/t/- / ɒ / - /p/	3
10. me	/m/- /i:/	2	21. by	/b/-/ aɪ /	2
11. sat	/s/ - / æ / - /t/	3	22. do	/d/- /u:/	2

Appendix IV: Questionnaire for Teachers

Section A: Background Information:

Age: Gender:

Education level: Professional qualification:

Tusome early literacy training : (a) Trained (b) Not trained

Experience in teaching Grade Three English:

Section B: Instructions

Kindly respond to each question provided by writing your responses on the spaces provided.

1. How does letter - sound correspondence in English language influence your pupils English language literacy?

.....
.....
.....

2 what pronunciation and reading errors do your pupils make while reading regular sight words in English?

.....
.....
.....

3 How are the game-like activities helpful in teaching English language phonemic awareness to your pupils?

.....
.....
.....

4 (a) what phonemic awareness strategies do you use to achieve English language literacy among your pupils ?

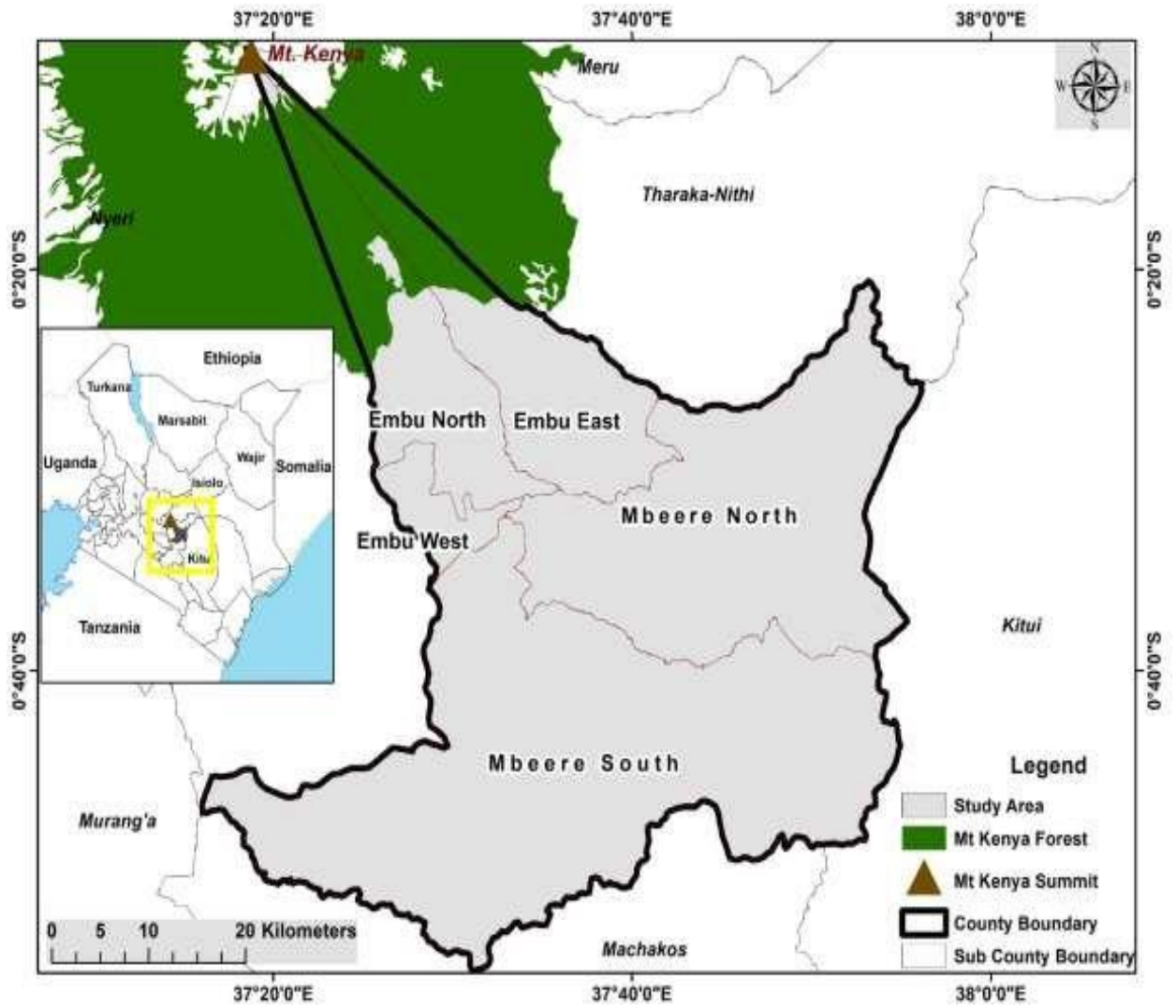
.....
.....
.....

(b) How do you implement each of the strategies you have named in 4(a) during English language literacy instruction in Grade Three?

.....
.....
.....

Thank you for filling the questionnaire

Appendix V: Map of Embu County



Source : Embu County Integrated Development Plan 2013

Appendix VI: Chuka University Ethics Review Letter



CHUKA UNIVERSITY
Knowledge is Wealth (*Sapientia divitia est*) Akili ni Mali
CHUKA UNIVERSITY INSTITUTION ETHICS COMMITTEE
Telephones: 0612304004 P.O. Box 109 - 60400
Fax line: 020 2310302 Chuka
1st March 2022

REF: CUIERC/ NACOSTI 216
TO: NJIRU FRANCIS NJAGI .

Dear Sir/madam

RE: Influence of Phonemic Awareness on English Language Literacy among Grade Three Public Primary School Pupils in Embu County, Kenya

This is to inform you that *Chuka University IERC* has reviewed and approved your above research proposal. Your application approval number is *NACOSTI/NBC/AC-0812* .The approval period is 1st March 2022 to 1st March 2023

This approval is subject to compliance with the following requirements;

- i. Only approved documents including (informed consents, study instruments, MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by *Chuka University IERC*..
- iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to *Chuka University IERC* within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to *Chuka University IERC* within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to *Chuka University IERC*.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely


Dr. Benjamin Kanga




SECRETARY CHUKA UNIVERSITY

Appendix VII: NACOSTI Permit

REPUBLIC OF KENYA
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **183069** Date of Issue: **16/March/2022**

RESEARCH LICENSE




This is to Certify that Mr. FRANCIS NJAGI NJIRU of Chuka University, has been licensed to conduct research in Embu on the topic: **INFLUENCE OF PHONEMIC AWARENESS ON ENGLISH LANGUAGE LITERACY AMONG GRADE THREE PUBLIC PRIMARY SCHOOL PUPILS IN EMBU COUNTY, KENYA** for the period ending : **16/March/2023**.

License No: **NACOSTI/P/22/16377**

Applicant Identification Number: **183069**

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix VIII: Embu County Director Authorization



MINISTRY OF EDUCATION

State Department of Early Learning and Basic Education

Telegrams: "Provedu". Embu
Telephone: Embu 31711
Fax: 30956
E-mail: cde.embu@yahoo.com
When replying please quote:

OFFICE OF THE
COUNTY DIRECTOR OF EDUCATION
EMBU COUNTY
P o Box 123-60100
EMBU

Ref: EBC/GA/32/1/Vol. IV/54

Date: 18 March 2022

Francis Njagi Njiru
CHUKA UNIVERSITY

RE: RESEARCH AUTHORIZATION

Reference is made to your letter dated 16th March, 2022.

This office acknowledges receipt of your research authorization to carry out research on "Influence of phonemic awareness on English language literacy among grade three public Primary School pupils in Embu County, Kenya" for a period ending 16th March, 2023.

This office has no objection and therefore wishes you success in this undertaking and requests prospective participants/respondents to accord you cooperation or support you may require.

GRACE MUGU
For: County Director of Education
EMBU COUNTY

Copy to:

The Principal Secretary, MOE-NAIROBI
The Secretary/CEO, NACOSTI – NAIROBI
The County Commissioner – EMBU COUNTY
The Sub-county Directors of Education – EMBU COUNTY



Appendix IX: Embu County Commissioner Authorization



**OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT**

Telephone: Embu0202310839
FAX 30040
Email: ccembu@gmail.com
When replying please quote ref and date

County Commissioner
Embu County
P.O. Box 3 - 60100
EMBU.

Ref:No.EBU/CC/ADM/3/37 VOL.III/(178)

24th March, 2022

Deputy County Commissioners
EMBU COUNTY.

RE: RESEARCH AUTHORIZATION

Please be informed that **Francis Njagi Njiru** of Licence No. **NACOSTI P/22/116377**, has been authorized to carry out research in your Sub County for the period ending **16th March, 2023**.

The research is based on **"Influence of Phonemic Awareness on English language Literacy among Grade Three Public Primary School pupils Embu County, Kenya"**.

Kindly accord him the necessary assistance.


M. M. NGINGA
For: COUNTY COMMISSIONER
EMBU COUNTY.

Copy to:

Francis Njagi Niru

Appendix X: Embu County Governor Authorization

EMBU COUNTY GOVERNMENT



OFFICE OF THE COUNTY SECRETARY AND HEAD OF PUBLIC SERVICE

Mobile: +254 771 304 003/+254 703 192 924
Address: P. O. Box 36 – 60100 Embu Town House

Tel: 068-2231174/2231175
Email: csembucounty@gmail.com

Ref: EC/CS/GEN/VOL.III/134

Date: 28th March, 2022

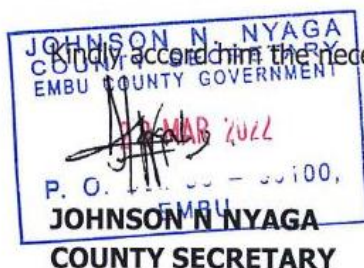
TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION

Reference is made to a letter from NACOSTI dated 16th March, 2022.

This is to acknowledge receipt of a request to conduct research on **"Influence of Phonemic Awareness on English Language Literacy among Grade Three Public Primary School Pupils in Embu County, Kenya"** of Francis Njagi Njiru from Chuka University. The request has been **approved**.

Kindly accord him the necessary assistance.



JOHNSON N NYAGA
COUNTY SECRETARY