A Comparative Assessment of Grade One Learners' Initial Reading Achievements Between Speakers and Non-Speakers of the Language of Instruction in Multilingual Classes Vis-à-vis Monolingual Classes of Lusaka and Katete Districts of Zambia

by

Sitwe Benson Mkandawire

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DECLARATION

I, Sitwe Benson Mkandawire, assert that this thesis:

(a) Represents my original work.

(b) Has not previously been submitted for a degree or any other qualification at this institution or any other university in the world.

(c) Does not include any published work or materials from other scholars without thorough acknowledgement.

Signature:

Date: 10th September 2022

APPROVAL

This thesis by Sitwe Benson Mkandawire was approved as fulfilling the requirements for the award of the degree of Doctor of Philosophy in Literacy and Language Education by the University of Zambia and Inland Norway University of Applied Sciences.

External Examiner

Name: Dr. Thokozani.E. Kunkeyani (PhD)

Signature: ....PP............................   Date: ....5 | 10 | 22....

Internal Examiner 1

Name: Dr. Geoffrey K. Tambulukani (PhD)

Signature: ....   Date: 5/10/22...
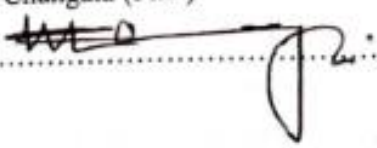
Internal Examiner 2

Name: Prof. Innocent M. Mulenga (PhD)

Signature: ....   Date: 5ᵗʰ October 2022

Chairperson of the Board of Examiners

Name: Dr. M. Changala (PhD)

Signature: ....   Date: 06/10/22

Principal Supervisor:

Name: Prof. Peter C. Manchishi (PhD)

Signature: ......Mall.....................   Date: 05/10/2022

Co-Supervisor:

Name: Dr. Joseph M. Mwansa (PhD)

Signature: ....   Date: 05/10/2022

ABSTRACT

This study compared learners' initial reading achievements in letter knowledge, phonics and decoding skills on their entry and at the end of Grade One in Nyanja language of Lusaka and Katete districts. Speakers and non-speakers of the language of instruction in multilingual classes vis-à-vis monolingual were assessed and their results compared. A pre-test was given on entry into Grade One to determine pupils' initial understanding of the assessment items and to ascertain the knowledge level at which they were, when starting Grade One. A post-test was administered to determine how many pupils learned reading skills (letter knowledge, phonics and decoding skills) between the pre-test and post-test in Grade One. The study also sought to establish the pedagogical strategies that Grade One teachers were using to help non-speakers of the language of literacy instruction in multilingual classes to learn. The study further looked at the views of teachers about teaching multilingual classes and addressed the phonics instructional approaches for teaching reading in monolingual and multilingual classes.

The study was guided by the philosophy of pragmatism ingrained in both positivism and post-positivism paradigms where the mixed-method research approach particularly the Concurrent Embedded Research Design was used. Pre-test and post-tests question papers were the quantitative data collection instruments, while interviews, lesson observation and focus group discussions were qualitative means through which data was collected. The Statistical Package for Social Sciences (SPSS) and Stata software were used to analyse quantitative data where both descriptive and inferential statistics were generated. Qualitative data was analysed through data coding and thematic analysis. The population was all Grade One pupils, teachers and schools that offered Grade One classes with traits of either multilingualism and monolingualism in Lusaka and Katete districts of Zambia. Typical case sampling of purposive sampling and simple random sampling were used in this study. The sample size was four hundred and eleven (411) participants comprising three hundred and seventy-five (375) learners and thirty-six (36) in-service teachers sampled from ten (10) schools; five (5) monolingual classes and another five (5) multilingual classes. The study was guided by the theory of binaries, the three-language orientation and the translanguaging theory.

Findings on the first research question showed that 16.2% of the learners that were unable to read on entry into Grade One, completed the first grade able to read three-syllable words in Nyanja while 83.8% of learners that were unable to read on entry into Grade

One, completed Grade One unable to read three-syllable words in Nyanja. This meant that while there was evidence of learning in Grade One, very few learners (60 learners out of 370) broke through to reading by the end of Grade One. Furthermore, 80.4% of non-speakers of the language of instruction (Nyanja) and 81% of speakers of the language of instruction (Nyanja) in multilingual classes, completed Grade One unable to read three-syllable words. However, 15.3% of non-speakers of the language of instruction started Grade One unable to read but completed this first grade able to read three-syllable words. Similarly, 17.7% of speakers of the language of instruction started the first grade unable to read but completed Grade One able to read three-syllable words. The Mann-Whitney U Test statistics for differences in performance between speakers and non-speakers of the language of instruction showed that there was no significant difference in performance between the two groups of learners. This means that, while speakers of the language of instruction may have had an advantage in learning by following instructions, their overall performance was not statistically significant to those that were not familiar with the language of instruction. This implies that the language of literacy instruction when teaching phonics and decoding skills in schools of Lusaka was not a major factor. Multilingual classes of Lusaka performed (17.1%) slightly better in comparison to monolingual classes of Katete (14.6%) in reading three-syllable words. However, the test statistics showed that there was no significant difference in performance between monolingual and multilingual classes.

Findings on research question two about instructional strategies that teachers in multilingual classes were using to help non-speakers of the language of instruction learn included translanguaging, remedial work, use of improvised bilingual materials, use of visual and practical instructional materials, use of guardians and parents, use of peers or fellow learners and teachers in the school as resources for multilingual classes.

Findings on research question three showed that multilingual classes were difficult to teach. Some teachers felt that more languages could be used in classes for teaching, learning and assessments, while others believed that assessments of diverse learners can be in one designated official language. Other teachers believed that both Nyanja and English can be used at the same time in classes as main languages. Some teachers believed that multilingual classes should not be overcrowded and that a class teacher needed to create a favourable environment for all languages available in class to thrive.

On the fourth research question, the findings of the study revealed that multiple phonics instruction approaches and literacy teaching approaches were observed. These included synthetic phonics, analytic phonics, embedded phonics, multisensory approach, look and say, syllabic method, the New Break Through to Literacy (NBTL) approach and aspects of general mixed instructional methods.

The study recommended that the Ministry of Education should allow translanguaging practices during teaching and assessment so that learners can be free to interact with others in class using multiple languages. The Teaching Service Commission of Zambia should be deploying early grade teachers to places where they are familiar with the language of literacy instruction so that they are not burdened by the language. The Ministry of Education should diversify phonics or literacy teaching strategies so that teachers are not just confined to pre-scripted literacy lessons which use synthetic phonics. Teachers in primary schools should make a deliberate effort in understanding what the policy demands and what is involved in each of the big five key competencies.

Keywords: reading, literacy, monolingualism, multilingualism, reading achievements, policy, speakers and non-speakers of the language of instruction.

DEDICATION

This thesis is dedicated to my parents (Mailet Kaluba and Henry Mkandawire), my wife (Cholwe M. Mwankuma) and Children (Gavin Sitwe Mkandawire, Uhanya Meznar Mkandawire and Evelyn Mkandawire) for their inspiration, spiritual and moral support.

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ABBREVIATIONS

CDC	Curriculum Development Center
CORI	Concept Oriented Reading
DEBS	District Education Board Secretary
EGRA	Early Grade Reading Assessment
FL	First Language
GRZ	Government of the Republic of Zambia
J-PAL	Abdul Latif Jameel Poverty Action Lab
LoI	Language of Instruction
MoE	Ministry of Education
MoGE	Ministry of General Education
MoI	Media of Instruction
MT	Mother Tongue
NBTL	New Breakthrough to Literacy
NICHHD	National Institute of Child Health and Human Development
NLF	National Literacy Framework
PA	Phonemic Awareness
PIRSLS	Progress in International Reading Study
PISA	Programme for International Student Assessment
PLP	Primary Literacy Programme
PRATHAM	Prudent Reasonable Attractive Trustworthy Helpful Ambitious Magnificent

PRP   Primary Reading Programme

ROC   Read on Course

SACMEQ   Southern African Consortium for Monitoring Education Quality

SITE   Step into English

TaRL   Teaching at the Right Level

UNICEF   United Nations International Children's Emergency Fund

USAID   United States Agency for International Development

VVOB   Flemish Association for Development Cooperation and Technical Assistance

ZAELA   Zambia Assessment of Early Literacy Abilities

ZECF   Zambia Education Curriculum Framework

ZL   Zambian Languages

CHAPTER ONE: INTRODUCTION

1.0 Overview

This chapter introduces the reader to the topic and the problem that was researched on in this study. The background to the study, statement of the problem, research objectives and questions are presented in this chapter. The significance, delimitation, limitation of the study and key terms have also been explained.

1.1 Background

Research studies involving reading, the teaching of reading, literacy and language have traditionally considered the historical and contextual factors surrounding the study under consideration. Simwinga (2006) noted that the historical and socio-cultural factors of the study help in understanding the shape and the contextual environment of the research. In this study, it is imperative that readers understand trending issues on reading, the teaching of reading instruction, reading achievements and language policy issues that have a bearing on the present study.

1.1.1 Defining Reading

Crowder (1982) defined reading as the decoding of letters, sounds, words and sentences (word recognition) with or without attaching meaning to them. This is the narrow view of reading that was adopted in this study. Kamhi and Catts (2012, p.3) observed that "some researchers prefer restricting the definition of reading to just the decoding component as a narrow view of reading as it delineates a restricted set of processes to be examined." Perfetti (1986) contended that one advantage of the narrow view of reading is that it provides a finite set of items and processes for educators to assess. The study of reading should be restricted to the decoding process that embraces the narrow view that may provide solutions to the reading crisis around the world (Kamhi, 2009). The development of the narrow view of reading is justifiable and "the basic argument was that it is possible to eliminate reading failure if reading is defined narrowly as decoding abilities" (Kamhi & Catts, 2012, p.4). Furthermore, "the narrow view of reading promotes the broader view of comprehension that recognises its complexity" (p.4; Catts, 2009).

Reading is a process of constructing meaning through decoding, word recognition and comprehension. Kamhi and Catts (2012, p.3) stated that "word recognition involves a well-

defined scope of knowledge such as letters, sounds, words and processes (decoding) that can be systematically taught." In contrast to reading, "comprehension is not a skill with a well-defined scope of knowledge: it is a complex of high-level mental processes that includes thinking, reasoning, imagining and interpreting" (p.3). This view of comprehension as a segment of reading resembles the definition of reading by Gates (1949, p.3) who stated that "reading is a complex organisation of patterns of higher mental processes that can and should embrace all types of thinking, evaluating, judging, imagining, reasoning and problem-solving." This is a broad view of reading that emphasises higher-level thinking and mental processes, which led to the development of the theory of reading, theory of inferencing and the theory of schemata (Perfetti, 1986; Kamhi, 2009). These discussions about the broader view of reading led to the development of the simple view of reading theory (Gough & Tunmer, 1986; Hoover & Gough, 1990). The simple view of reading claim that "reading consists of two components: decoding and linguistic comprehension. Decoding refers to word recognition processes that transform print into words. Linguistic comprehension (such as listening comprehension) is defined as the process by which words, sentences and discourses are interpreted" (Kamhi & Catts, 2012, p.3; Gough & Tunmer, 1986). Leipzig (2001, p.1) further noted that "reading is a multifaceted process involving word recognition, comprehension, fluency and motivation". In addition, "reading is making meaning from print. It requires that we: (i) Identify the words in print – a process called word recognition, (ii) Construct an understanding from them – a process called comprehension and (iii) Coordinate identifying words and making meaning so that reading is automatic and accurate – an achievement called fluency" (p.1). Chall (1983, p.12) reported that "reading is a complex cognitive process that changes as it develops through a hierarchy of stages". These views and definitions of what reading is, impinge on the current study as it explores initial reading achievements in early grade classes among speakers and non-speakers of the language of instruction (Nyanja). It is also important to understand that the concept of what reading is or involves has been explained by various scholars and institutions. Among the common definitions related to this study are the following: "Reading is the process of looking at a series of written symbols and getting meaning from them. When we read, we use our eyes to receive written symbols (letters, punctuation marks and spaces) and we use our brain to convert them into words, sentences and paragraphs that communicate something to us." Furthermore, Bora (2019, p. 1) stated that "reading is a complex cognitive process of decoding

symbols to derive meaning. It is a process of going through written information or a piece of work to get information or to understand the content of the message. Additional and contextual meaning of reading is extracted from site, which reported that "reading is a complex cognitive process of decoding symbols to construct or derive meaning (reading comprehension). It is a means of language acquisition, of communication and of sharing information and ideas." The same site reported that "at the most basic level, reading is the recognition of words; from simple recognition of the individual letters and how these letters form a particular word to what each word means not just on an individual level, but as part of a text."

The definitions of what reading is as presented above remind readers that there are multiple meanings of reading. Despite the multiplicity of definitions of reading, the current study adopted the narrow view of reading as it stresses on decoding or word recognition that can measure letter knowledge, sounds, words and phrases at decoding level with or without meaning. The rationale for adopting the narrow view of reading in this study was that early grade class teachers in Zambia spent substantial amount of time in helping children to learn the code so that learners are equipped with decoding skills, listening and reading sounds and words as they are constructed and read. In other words, this study viewed reading from the lens of learners' letter knowledge, phonics and decoding. The study also addresses matters on the teaching of reading in multilingual classes and monolingual classes as an alternative explanation to the results obtained from the assessment in objective one. The next subsection provides the importance of reading skills in the education of children and in social life.

1.1.2   The Importance of Reading in Children's Education

The significance of reading skills in modern society cannot be over emphasised. In their publication, "The Voice of Evidence in Reading Research," McCardle and Chhabra (2004, p.3) indicated that:

> The ability to read is both necessary and crucial for children's academic success. The importance of success in reading for lifelong achievement must not be underestimated; how well a child learns to read may determine future opportunities, including not only career possibilities but also, his or her ability to accomplish the basic activities of daily life such as reading a newspaper, obtaining a driver's license, identification card and paying bills.

The importance of reading in education has been studied, analysed and evaluated by multiple scholars across disciplines. What can be stated without much contradiction is that if children do not learn to decode or read in early years and grades, they would have difficulties succeeding in education and later in life (Lyons, 2001). It is impossible for an illiterate learner to accomplish meaningful and desirable results in academic subjects at school. Furthermore, failure to learn to read by learners in schools reflects an educational and public health hazard for a country. "Children who do not learn to read have a much harder time succeeding in school and in the workplace, which, in turn, affects emotional health, economic and social security and overall wellbeing" (*Hearing on Measuring Success: Using Assessments and Accountability to Raise Student Achievements, 2001)*. Sweet (2004, p.13) reported that "it goes without saying that failure to learn to read places children's future and lives at risk for highly deleterious outcomes." This is further supported by Olson (1977) who contended that "the acquisition of initial reading skills by early grade learners is one of the most important abilities as it is a precursor to learner's academic success in all subjects at school". "A child's success in school and throughout life depends in large part on the ability to read" *(Early Reading Strategy: The Report of the Expert Panel on Early Reading in Ontario, 2003, p.1).* In practice, the inability of Zambian children to read is an indication that they will have difficulties succeeding in other subject areas at school. Reading skills need to be developed early in children for them to succeed well in education. The reading skill is also important in the social lives of Zambians and other literates because it helps them better their lives. Silavwe et al., (2019) reported that functional literacy is the application of reading and writing skills in people's social lives. Silavwe et al., furthermore noted that;

> the daily activities that constitute the application of functional literacy include tasks such as reading street signs, reading maps, writing a grocery budget, reading newspapers, reading labels on medicine bottles, reading the Bible verses, writing letters, filling in forms, applying for jobs, practicing the language skills verbally and in written form, reading for pleasure and purposive writing (p. 3).

Silavwe et al.'s quotation suggests that knowing how to read and write is important for Zambians as they will have multiple sources of information through spoken and written form; when casting a vote, they can read on candidates they want to vote for, literate farmers and agriculturalists may have better yield as they would follow instructions on field chemical bottles, mothers may have a health family by following medical writings and prescriptions. These points signify that having literate Zambian citizens may improve their social lives.

Newman, Copple and Bredekamp (2000) observed that the development of reading skills is more active and prominent in early childhood years especially those in early grades because that is the period when children's memories are highly active. It is in early grades where teachers are expected to teach all the components of reading as their curriculum demands such as phonemic awareness and phonics (McCardle & Chhabra, 2004). It is ascertained through research that comprehensive teaching of these skills produces effective reading achievements among learners in early grades.

Unlike human spoken language which is acquired naturally, reading and writing skills are not naturally acquired (Lyon, 1998). The human brain is designed to speak language, it is not naturally wired to read and write. Honig, Diamond and Gutlohn (2018, p. 4) contended that "the left hemisphere of the brain is associated with speech, language processing and reading". This means that reading and writing skills must be taught artificially to humans for them to develop, they must be practiced. Learning to read proficiently requires deliberate and systematic effort both on the part of novice readers and their teachers (National Reading Panel, 2000). As a result, depending on the quality of reading instructions offered and the learners' innate predispositions (Pennington & Olson, 2005), some beginning readers attain proficiency effortlessly, while others face significant challenges along the way (National Research Council, 1998).

1.1.3 Multilingualism in Zambia

Zambia has a long history of multilingualism due to the presence of seventy-three (73) languages and dialects (Chibamba, 2020; Mwanza & Manchishi, 2019; Mwansa, 2017; Tambulukani and Bus, 2011). These languages are used in specific regions of the country as shown in Figure 1 and most of them are used within an ethnic or tribal group.
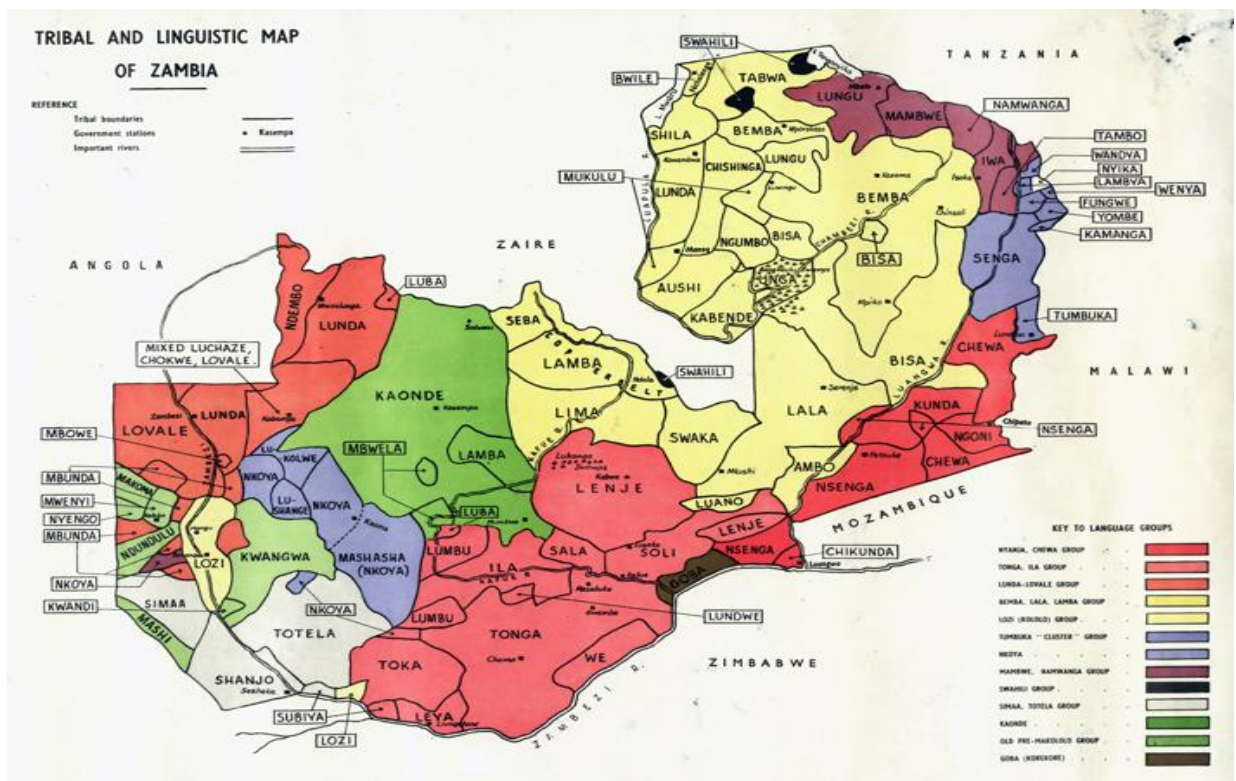
Figure 1: Linguistic and Tribal Map of Zambia

Source: https://www.google.com/url?ATribal_Linguistic_map_Zambia.jpgandpsig=images

The presence of multiple languages in Zambia has for long created culturally and linguistically diverse communities that have influenced the presence of multiple languages in some schools (Iversen & Mkandawire, 2020). This is more pronounced for communities and schools located in cosmopolitan environments such as Lusaka, Livingstone, Kitwe and Solwezi where more than one Zambian language is used (Mwanza, 2012).

Out of all the Zambian languages, the state selected seven (Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga) and begun to elevate them in 1927 to the status of regional official languages across the ten provinces (Linehan, 2004; Manchishi, 2004; Simwinga, 2004). The elevation of some Zambian languages was first officiated by the British Colonial Administration following some recommendations of the Phelps-Stock Commission report of 1925 (Simwinga, 2014). Four indigenous Zambian languages (Bemba, Lozi, Nyanja and Tonga) were declared official by the British Colonial administration in 1927 and these were to be used as media of instruction in the first few years of children's education in specific regions of Zambia. Some of these languages such as Lozi and Bemba were already being used in schools as media of

instruction. The use of mother-tongue-based instruction in schools was started by missionaries before 1900 and the languages they used continued as media of instruction during the British South African Company (BSAC) and colonial era (Manchishi, 2004). Three more languages (Kaonde, Lunda and Luvale) were added to the regional official languages in 1980s and these languages are from North-western Province of Zambia. The addition of the three languages was necessary due to the conflict and rivalry that erupted between the Lunda and the Luvale ethnic groups of Zambezi District (Muzata, 2015). These conflicts started in 1940s and they are on and off mainly caused by prime agricultural land and the wars of Ulamba, where the Luvale people frequently raided Lunda settlements for slaves (Vail, 1989). In the last three to four decades, Zambia have had the seven regional official languages that have been used in education and other spheres for various purposes. In the case of education, these regional official languages have played a critical role in informing policy decisions in Zambia.

1.1.4   Language Policy and Multilingual Education in Zambia

Despite the presence of multilingualism and transitional education programmes in the seven regional official languages, the language-in-education policy of Zambian supports monoglossic language ideologies and "forced assimilation society" (Iversen & Mkandawire, 2020; McNelly, 2019; Ochoa, 1995). The regional official languages are assimilating minority languages in early grade classes (indigenous regional language hegemony). By fifth grade, there is a shift to "English language hegemony" where English assimilates all indigenous Zambian languages from Grade Five to college and university levels. Mustapha (2014, p. 84) noted that "linguistic hegemony has been identified and defined as what is achieved when dominant groups create a consensus by convincing others to accept their language norms and used as standard or paradigmatic". Linguistic hegemony is premised on the competition of languages where some languages are perceived to be more important, valuable and held in higher esteem than others. Dominant languages with popular cultures take a lead and minority ethnic languages are socially and systematically assimilated. Policymakers and scholars that propagate "languages in competition" (Simwinga, 2014), also support monoglossic language ideologies even when their communities are immensely diverse. Such thinking believes in monolingual language ideologies and views multilingualism as a problem (Ruiz, 1984).

The language policy of Zambia that was being studied reflect linguistic hegemony. For instance, instruction in early grade classes of Zambia (grades 1 to 4) is expected to be in one of the seven regional official languages (Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga) as media of instruction (Ministry of Education, Science, Vocational Training and Early Education [MoESVTEE], 2013; 2014). Instruction in English language as media of instruction begin in Grade 5 and runs up to university level, and mother tongue instruction is abandoned but run as a subject (MOESVTEE, 2014; 2017). This practice is what Lambert (1974) called subtractive bilingualism and Baker (2011) called a weak form of bilingual education. The child's bilingualism is moving away from the ultimate attainment of fluent bilingualism (English and one of the Zambian languages) to the ultimate attainment of monolingualism (English language only) (García & Sylvan, 2011).

The rationale for providing instruction in a mother tongue is premised on the philosophy that children's learning is expedited with limited trouble in a language well known to them (Benzies, 1940; García, Sylvan & Witt, 2011). Mother tongue instruction provide undue advantage to learners and its absence might make children suffer in their education (Mwansa, 2017). While the philosophy of teaching in a mother tongue influenced the development of the Primary Reading Programme (PRP) and the Primary Literacy Programme (PLP) of Zambia (MoESVTEE, 2013; Tambulukani, 2001; Chileshe et al., 2018), the decision to settle for the seven regional languages as media of instruction in specific regions of Zambia was ill informed (Banda & Mwanza, 2017; Muzata, 2019). Additionally, while the seven regional official languages served multiple learners that were familiar with the language, it also disadvantaged minority learners whose mother tongue or familiar language was not the regional language. For many learners, the language of instruction policy for early grade classes in Zambia does not function as intended. Although the regional official languages are familiar and understandable by several learners in rural provinces, most minority language learners in urban settings do not understand the regional language of instruction and, therefore, such a language burdens the minority groups in education (Banda & Mwanza, 2017; Muzata, 2019). This means that the "familiar" language of instruction, referring to one of the seven regional official languages, is not necessarily familiar to diverse learners.

The idea that one regional language would address the needs and aspirations of all learners in the province is premised on the "one size fits all" philosophy, which does not work well in some cases. Despite the presence of much literature about diversity, policymakers and technocrats still think that one language or one approach to teaching regardless of learners' background is beneficial to all learners and that those that fail are deficient in their ability to think and learn. This is what McNelly (2018) described as deficit thinking, as it is founded on monoglossic language ideologies that view multilingualism as a problem rather than a resource (Ruiz, 1984).

Deficit thinkers further describe linguistically and culturally diverse learners with varied backgrounds, low social-economic status, who belong to a minority ethnic or racial group, or do not have proficiency in the dominant language as deficient in their ability to think and learn and that they are mentally inferior, slower to learn the majority language and have split identities (McNelly, 2018; Ruíz, 1984). These labels are forms of deficit thinking founded on insufficient evidence and serving to defend monoglossic language ideologies by exercising what the researcher called "diversity-blind thinking" and contrasted it with "diversity-powered consciousness." Diversity-blind thinking is denial that differences exist in communities that reflect the societal ethos, values and practices in schools and communities. Diversity-blind thinkers hold the notion that bilingual and multilingual learners have split-identity, cultural dislocation, low self-esteem, alienation, emotional vulnerability, poor self-image and language anxiety which are mere stereotypes and veneer founded on "diversity-blind thinking" serving monolingual language practices (McNelly, 2018; Baker, 2011; Knight & Pearl, 1999). These arguments and fear that multilingualism may cause more conflict, antagonism, contribute to poverty, cause learner low test scores in school, prevent learners from integrating into majority society and have less social and vocational capital (McNelly, 2018, p.7), are all tools used to suppress multilingualism. They have driven countries to support language assimilation policies and move away from a pluralistic society where inclusiveness and diversity are at the center (Baker, 2011; Darder, 2011).

1.1.5 The Literacy Situation in Zambia

The literacy situation in Zambia calls for a major concern from all stakeholders. From 1964, when Zambia got political independence to date, studies conducted at different times have consistently shown that most learners leave primary school struggling to read and write at

appropriate grade levels. Additionally, others fail to decode alphabetic letters, sounds, words and read basic sentences appropriately at various grade levels (USAID/Zambia, 2018; Chipili, 2016; Sampa, 2015; Mwanza-Kabaghe, 2015; Tambulukani and Bus, 2012; Examinations Council of Zambia, 2012; Southern African Consortium for Monitoring Education Quality SACMEQ III, 2010; The Grade 5 National Assessment Survey, 2008; 2006; Williams, 2002; National Reading Committee, 1997; SACMEQ, 1995). These studies showed how low reading was for specific grades studied. For example, Luangala (2011) reported that learners were reading at three grade levels below their own. In other words, a Grade 5 pupil in class preferred to read a Grade 2 book and a Grade 6 learner, read a Grade 3 textbook. Furthermore, the Southern Africa Consortium for Monitoring Educational Quality reported that only 3% of learners in Grade 6 were reading at desirable levels, meaning that they were reading at their grade levels. The national reading committee (NRC) stated that about 70% of Grade Sevens were leaving primary school unable to read and write. Multiple once-off and recurring challenges have contributed to the low reading levels among primary school learners in Zambia.

The low performance in reading since independence as noted in the studies cited was triggered by diverse factors. Soon after independence, low reading levels was attributed to the English only medium of instruction policy adopted after independence in 1966. Recent studies revealed more perennial factors that have been there for some time. The collective factors contributing to love literacy levels includes socioeconomic factors (poverty), familial or environmental factors, the teacher factor, teacher trainers' factor, school factor, policy and political will, material factor, instructional or teaching factors, hasty implementation, limited time for teaching reading, high enrolments, neurological factors (brain metabolism), teacher recruitment policy, learner factor and the language factor. To supplement on these factors, Chipili (2016, p.33) noted that reading is hampered by "…learners lack of knowledge on letter sound relationship in both upper case and lower case in a given sequence. Teaching and learning materials are not adequate. In class, learners shared a copy in the ratio of 1 to 5." Other factors cited were that;

> Teachers also noted that *some head teachers are not supporting the teaching of PLP*. They have left PLP in the hands of the grade teachers as the owners of the programme…. *Time management for teaching literacy* was also not adequate. Teachers explained that one hour was not enough to explain all the teaching activities allocated. And all the five concepts of PLP to be taught in one hour, was a big challenge. *High enrolment* has also contributed to deficient performance of the learners. The teachers explained that with so

many learners, it was difficult to identify individual needs of the learners and help them. It was also noted that *most of the teachers who are not Tonga speaking use either Bemba or Nyanja during teaching*, but when it comes to writing on the board, they use Chitonga, making the teaching of literacy complicated to a learner (p. 34).

Learners' lack of letter knowledge, phonological awareness and phonics may be caused by multiple factors (Cardenas-Hagan, 2020). Honig, Diamond and Gutlohn (2018, p. 3) reported that the sources of reading failure in early grade learners may be caused by "neurological factors (brain metabolism), familiar factors (environment), Socioeconomic factors (poverty) and Instructional factors (teaching)". The factors cited in this section contributes to low literacy levels among early grade learners in Zambia and they have been discussed in subsequent subsections that follow.

1.1.5.1 Socioeconomic Factors

Socioeconomic status and poverty adversely impact on reading, academic success, education, literacy and language development among learners. Studies in Zambia and globally, have revealed that poverty contributes to the disparities in reading and language development among diverse learners with varied socioeconomic status (Kamocha, 2012; Kang'ombe, 2013; Kaunda, 2019; Kasonde & Changala, 2019; Honig, Diamond & Gutlohn, 2018). "Research has consistently demonstrated that poverty levels are associated with a decrease in phonological awareness, vocabulary and syntax throughout the various stages of development" (Issues of Poverty in Reading and Language Development, 2019, p.1). The socioeconomic factor is centred on two concerns. First, the lack of basic home necessities such as food, clothing and stable home may significantly affect reading outcomes for children. This may include parental emotional distress and family wrangles that may have devastating effects on children. The second concern addresses parental involvement in their children's education. Parents and guardians are expected to help their children in education by providing school necessities, supply books at home and make the environment rich in literature, read and tell them stories, help them with homework and support them emotionally with encouraging words (Kang'ombe, 2013; Kaunda, 2019). Low socioeconomic status families have multiple decisions to make with their little resources on whether to buy school necessities or home basic needs such as food and this, in turn, affects children's educational outcomes because most parents settle for food and shelter. This situation is slightly different from families with high socioeconomic status and average families that can

balance and supply home needs and school requirements. Children from such families have undue advantage to succeed in reading and education faster than their counterparts.

1.1.5.2 The Teacher Factor

The teacher is one of the primary factors in the development of reading and writing skills in early grade learners. When the teacher factor is not given much attention, literacy skills are likely to be low and the education in turmoil (Kafata, 2016; Kamalata, 2016). Teachers have contributed to the low reading levels in Zambia on several fronts: First, most teachers lack content and pedagogical knowledge on reading due to lack of specialisation in literacy and language (Ndhlovu et al., 2021; Mambwe, 2021; Moono et al., 2019). They exhibit inadequate letter knowledge, phonological awareness, phonics and orthography of the languages they teach. Second, most teachers are not adequately trained in literacy instruction and, therefore, they teach whatever works for them. Third, some teachers have defective interpretation of the policy coupled with negative attitudes towards the new literacy programme. This has devastating effects on programme implementation and its success. Resistance to change and unwillingness to learn new trends and practices have all been reported in previous studies to contribute to poor curriculum implementation. Finally, teachers' lack of improvisation, failure to understand the nature, procedures and execution of literacy lessons have all contributed to low literacy levels in Zambia (Mwandya, 2021; Pali, 2020; Kafata, 2016; Kamalata, 2016).

Teachers handling early grade learners should know how levels of linguistic analysis such as phonology, morphology, syntax and semantics help them guide their learners with a well-informed mind. Studies such as those by Kombe (2017) and Chunga (2013) cited teachers as a factor that contribute to low literacy levels in Zambia. The literacy skill is a determiner for academic success across subject areas in schools and, therefore, must be given adequate attention. Some teachers were implementing the new literacy programme without orientation or training on how to implement them. Furthermore, teachers that have had no training in primary education were reported teaching literacy in early grade classes. The absence of teacher autonomy via use of pre-scripted literacy lessons was reported to be a contributing factor to low literacy levels as teachers were reported to have limited preparations for literacy lessons.

1.1.5.3 Teacher Educators

Teacher educators in colleges of education and universities need to do more practical class work based on literacy instruction and assessment to guide teachers on what they will be expected to do when they go to teach in early grade classes. Some teacher educators in reading instruction are not professionally qualified to guide reading teachers and therefore, their teaching in class is misplaced. Mutolwa (2019) reported that lecturers teaching literacy and language in colleges of education were not fully prepared to prepare effective and practical teachers of reading or literacy and language education. Lecturers that were trained in secondary education were spotted preparing literacy teachers in some colleges of education and universities, which is an anomaly. Such teacher educators do not go much into classroom practices to demonstrate how certain literacy aspects are expected to be taught. Darling-Hammond (2014) noted that the development of a nation is partly shaped by the strength of their education system and the strength of any education system depends on strengthening teacher preparation as a grail of education. Many times, colleges of education lack appropriate materials that can be used for preparing teachers of literacy instruction.

1.1.5.4 Teaching Materials

Inadequate and lack of teaching and learning materials has been one of the perennial contributors to low literacy levels in Zambia. Most schools countrywide have had insufficient instructional materials equivalent to every learner in early grade classes and this has negatively impacted on literacy performance in Zambia. Mwanza (2019), Mutale (2016), Mbewe (2015), Mwanza-Kabaghe, Mubanga, Matafwali, Kasonde-Ngandu and Bus (2015) noted that the absence of adequate instructional materials adversely affects the teaching of reading skills across schools. Chileshe, Mkandawire and Tambulukani (2018) indicated that primary schools in Zambia lack sufficient materials to aid the acquisition of reading and writing skills and this adversely impacts the reading outcomes for learners.

1.1.5.5 Instructional Methods

"Research suggests that using ineffective teaching methods along with instructional strategies that are without enough research evidence limit student mastery of essential skills and new concepts" (Honig, Diamond & Gutlohn, 2018, p. 3). Chipili (2016) reported that learners failed to associate letters with their corresponding sounds in Tonga language, in Chibombo District.

She cited lack of knowledge of phonemic awareness as a factor that contributed to low literacy levels. Several teachers in schools lack an understanding of what instructional methods are and what reading programmes look like in their classrooms. This explains the presence of mixed reading methods raging from those recommended under the Primary Reading Programme to those of the primary literacy programme. Undoubtedly, teachers in schools need training and refresher courses on reading or literacy instruction if Zambia is to see improvements in literacy across primary school learners (Mutolwa, 2019; Ndhlovu, 2017). Outdated instructional methods and inadequate teacher education are among the contributing reasons for poor learner performance in Zambia. Although the choice of instructional methods is affected by several factors such as policy position, level of learners, teacher competencies, number of learners in class and availability of resources, teachers need to be well informed about instructional methods. "In education, particularly in the teaching of reading, the choice of instructional methods has over the years been heavily influenced by many factors, not only teachers' own frontline experiences about what works, but also politics, economics and the popular wisdom of the day" (National Reading Panel, 2001, p. 1).

1.1.5.6 Familial or Environmental Factors
Familial factors address issues of family support and providing a rich literacy environment in the home while environmental factors are about providing rich literacy support settings both at home and in the school set up. "A literacy-rich environment provides opportunities for engaging in emergent literacy behaviours in a meaningful and authentic way. The set-up of the environment allows educators to facilitate development of key oral language and emergent literacy skills" (Guo, Justice, Kaderavek & McGinty, 2012, p. 309). A literacy-rich environment demonstrates how literacy is useful in everyday life by allowing children to interact with print/texts independently and with educators. This helps to consolidate children's understanding of the functionality of literacy and thus, how it is useful in everyday life (Fellowes & Oakley, 2014; Kaunda, 2019; Gerde, Goetsch & Bingham, 2016). Families that have time and resources to support their children by reading to them, supply of literature in the home, engaging them in multiple tasks, helping with homework, teaching them to read and other educational aspects create a strong literacy foundation for their children.

1.1.5.7 Hasty Implementation of the Reading Programme

The implementation of the current Primary Literacy Programme of the National Literacy Framework was reported to have been rushed without putting in place all the necessary factors for effective implementation. Teachers were not adequately trained, materials were not ready and most educational officials at district level were not well informed about the nature and package of the National Literacy Programme at the time it was being implemented (Chileshe et al., 2018). Poor orientation or involvement of key implementers of the curriculum is one of the critical indicators of failure of curriculum implementation (Mwanza & Mkandawire, 2020; Mulenga & Lubasi, 2019). The Primary Literacy Programme's failure to prepare teachers and make available all the required teaching and learning materials for effective implementation was one of the critical factors that led to its deterioration. Borrowed reading programmes such as the New Breakthrough to Literacy (NBTL) under the Primary Reading Programme (PRP) and the Primary Literacy Programme (PLP) from the Molteno project based in South Africa and America's National Reading Panel's report respectively, needed much rebranding and preparation for implementation. The absence of this leads to unpopular results in literacy as the case has been for Zambia (Sampa, 2015).

1.1.5. 8 Learner Factor

Learners' presence or absence in schools has long been associated with high or low academic achievements (Balfanz & Byrnes, 2012; Lubeya, 2012; Consortium for Research on Educational Access, Transitions and Equity, 2011). Learner absenteeism in schools is one of the factors contributing to low literacy levels in Zambia. Kabanga and Mulauzi (2020, p.53)

> Identified ways in which absenteeism affected the teaching and learning processes including low performance, fostering indiscipline, insufficient comprehension of concepts and the difficulties experienced by teachers. Interventions to curb pupil absenteeism were ascertained by calling for parents, teachers and all stakeholders in education to make firm decisions to stop absenteeism among learners by avoiding early marriages, fostering collaboration and being flexible in time management.

The absence of reading habits among learners has also contributed to low literacy levels in Zambia. Pupils that already have reading skills fail to expand their knowledge by reading widely to attain a reading proficiency level equivalent to their grades due to laziness or disinterestedness in reading (aliteracy) and this has contributed to low reading levels (Kafusha, et al., 2021; Silavwe et al., 2019; Luangala, 2002).

1.1.5.9 Policy and Political Will on Literacy Improvement

In Zambia, there is a strong correlation between the political party in power and educational reforms. Each party that takes over the governance of Zambian affairs also influences curriculum reforms. When the Movement for Multiparty Democracy (MMD) started the Primary Reading Programme in 1998, they provided several teaching and learning materials at the launch of the programme in 1999 and some teachers handling early grade classes were trained. Soon after the programme started, the government did not replace worn out materials and new teachers were not adequately trained on the programme and this, partly, led to the decline of PRP (Tambulukani, 2001 and 2015; Sampa, 2015). The death of PRP was partly due to a lack of political will to produce materials and retrain teachers handling early grade classes. When the Patriotic Front (PF) Government came into power in 2011, they started working on a new reading programme called the Primary Literacy Programme that was launched in 2013. This programme was launched without putting in place necessities such as adequate teacher training and orientation of stakeholders, provision of teaching and learning materials was also absent at the launch. Soon after the launch, materials begun to be produced and some schools do not have sufficient teaching and learning materials up to date (Chileshe et al., 2018; Mbewe, 2015). While the policy had good intentions, the implementation and execution were poorly done and this will contribute to its fall. The lack or presence of political will is seen in planning, putting systems in place, making meaningful policies, having structures and implementation strategies in place and others. Political will is a serious factor as it hinges on all aspects of literacy ranging from quality of teachers, materials, teaching and learning facilities, policies, monitoring and evaluation. The absence of meaningful 'political will' may never produce meaningful reading results in Zambia.

1.1.5.10 School Factors

Chipili (2016) reported that some school authorities such as head teachers and in some cases heads of department, leave matters of literacy to class teachers. When a class teacher lacks literacy material, some school authorities rarely come in to help resolve the problem. Chipili recommends that school authorities should take a keen interest in addressing matters of reading skills because literacy is a precursor to a child's success in all subjects in later grades. School factors also including assigning of reading teachers and amount of time dedicated to reading instruction is abysmally limited.

1.1.5.11 Neurological and Cognitive Factors

Neurological factors are those associated with brain activity or brain metabolism, central nervous system, spinal cord and any shortcomings or failure in these parts due to injury, functional abnormalities, underdevelopment, genetic disorders, congenital abnormalities and defunct neural responses may have a bearing on diverse activities such as learning to read, cognition, executive functions and other activities (Li & Peppelenbosch, 2020; Thakur et al., 2016; Odegard et al., 2008; 1956). Multiple studies have "considered the possible association of reading difficulty with genetically determined neurological defect, with cerebral damage, with biochemical imbalance inhibiting synaptic transmission and with some form of maturational lag (Mackinnon, 1964, p.73). Cognitive type of reading difficulty is associated with dyslexia, alexia, while neurological factors in reading deficits are associated with brain damage, Alzheimer's disease (AD), Epilepsy, Multiple sclerosis, Parkinson's disease, cerebral palsy, and paralysis (Thakur et al., 2016). "Developmental dyslexia are associated with functional abnormalities within reading areas of the brain. For some children diagnosed with dyslexia, phonologically based remediation programmes rehabilitate brain function in key reading areas" (Odegard et al., 2008, p.1). While there are limited studies on neurological factors as a source of reading problems, there are multiple children that shown signs of brain metabolism and cognition problems that, in turn, have exhibited difficulties in them learning to read (Kaani, Mulenga & Mulubale, 2016).

1.1.5.12 Language of Literacy Instruction

Some studies carried out under the Primary Literacy Programme have revealed that the language of literacy instruction in Lusaka disadvantages non-speakers of language of literacy instruction.

Learners from the minority languages are reported to be disadvantaged in multilingual classes. A study based on the views of teachers by Muzata (2019, p.171) reported that the performance of non-speakers of the language of instruction was poor compared to that of learners that were speaking the language of literacy instruction. This argument was further amplified by Mwanza-Kabaghe et al., (2015) who carried out a study on the idea that Zambian preschools may be a boost for early literacy development. The scholars noted that the language of literacy instruction has a bearing on literacy development;

> There was no main effect of speaking Nyanja on reading and writing after one year of instruction. However, the interaction with Nyanja-speaking and basic skills at the start of Grade One was significant, which indicates that Nyanja speaking children benefited more from reading instruction in Grade One especially when they were proficient in basic literacy skills at the start of Grade One (p.5).

Tambulukani (2015) carried out a study under the Primary Reading Programme where he noted that linguistic diversity is one of the contributory factors to the reading problems in Zambia. He indicated that the performance of L1 learners and L2 learners depended on the language of instruction and the variable under assessment (p. 80). This study indicated that learners performed better when the language of play was used as medium of literacy instruction.

The government of Zambia and other stakeholders have made strides in addressing the problem of literacy levels in the country. However, there are some challenges such as the socioeconomic factors and poverty that may take decades and generations to be resolved. Although some families are helping their children with educational requirements and needs, most of them do not due to diverse factors. This means that the familial factors or environmental factors may equally take a prolonged period to be addressed as a major contributory factor to the development of reading in children. Despite the presence of long-term factors for improving reading in Zambia, some factors such as the teacher factor, teacher educators' factor, school factor, policy and political will, material factor, instructional or teaching factors, hasty implementation, limited time for teaching reading, high enrollments, reading teacher recruitment policy, learner factor and the language factor may require immediate attention. If the state can develop a focused reading plan where most perennial factors such as the supply of teaching and learning materials and well-trained specialised reading or literacy teachers are put

in place, literacy levels may immensely improve in the shortest possible time. This may demand that the government and other stakeholders consider looking at the diverse issues that have contributed to low literacy levels in three periods or phases: From 1964 to 1996, 1998 to 2013 and 2013 to date as highlighted below.

When indigenous natives took over the administration of Northern Rhodesia in 1964, the new government made several structural reforms and changes in the education sector and other spheres (Mwanakatwe, 1974). The reforms were necessary to mitigate the shortage of workforce, segregated education system, high expectation, from the local people and other inequalities (Masaiti, 2018; Simposya, n.d.). To address the challenges, the Zambian government developed strategic interventions embedded in development plans to help resolve the identified problems and these included;

> *Emergency Development Plan: 1ˢᵗ January – 31ˢᵗ December 1964, Transitional Development Plan: 1ˢᵗ January 1965 – 30ᵗʰ June 1966. First National Development Plan: 1ˢᵗ July 1966 – 30ᵗʰ June 1970. Second National Development Plan: January 1972- December 1976. An emergency development plan (EDP) was devised to supplement the existing colonial government Capital Development Plan (1961–1965) that was ending in 18 months' time, (Simposya, n.d., p. 132).*

The major reform that immensely contributed to the low literacy achievements in the first phase among pupils across primary schools of Zambia from 1966 to 1996 and subsequent years was the change in language policy. "From 1965 to 1996, English had been used as a medium of instruction and also as a language of initial literacy from the time the child starts Grade One" (Chipili, 2016, p.3; Lungu, 2006). When English language was declared the sole medium of instruction from Grade One to higher levels of education in 1966 (Simwinga, 2004), the following years recorded a massive drop in reading levels. Multiple factors contributed to this drop in literacy levels, which included the idea that pupils were not familiar with the language of instruction; teachers were ill-trained and limited resources (Linehan, 2004). The response by the government to the low literacy levels was to introduce teacher-training programmes, a reading programme and adjustments in reforms. For instance, the Zambia Primary Course (ZPC) was introduced in 1967, Zambia Teacher Education Course (ZATEC) and the Zambia Basic Education Course (ZBEC) were introduced in subsequent years to improve the quality and quantity of teachers in the teaching of English language. The 1977 reform allowed teachers in

early grades to code-switch to the learners' mother tongue for purposes of clarifying a point (MoE, 1977). In 1994, a book flood programme was introduced (Tambulukani, 2001) and it was meant to help learners develop reading skills. This reading programme and courses for teachers were partly launched to help improve literacy levels in the country. The fact that initial reading skills are taught in and through a language that is unfamiliar to most children is believed to be a major contributory factor to the poor performance in reading shown by many Zambian children (MoE, 1996).

The period between 1996 to 2013 reintroduced the colonial policy of using a familiar language as media of instruction in the first grade and English language took over thereafter. The use of a regional language or familiar language was to help learners acquire the mechanics of reading in a familiar language before they could receive instruction in a second language. The Ministry of Education policy document of 1996 states that the fundamental aim of the curriculum for lower and middle basic classes (Grade 1-7) is to enable pupils to read and write clearly, correctly and confidently in a Zambian Language and in English. The 1996 policy led to the pilot of the New Breakthrough to Literacy (NBTL) in 1998 that was part of the subsequent launch of the Primary Reading Programme (PRP) in 1999 (Chileshe et al., 2018; Tambulukani, 2001). The introduction of NBTL was preceded by an international conference in 1995 that culminated into the Primary Reading Programme. The PRP was made of five courses: New Breakthrough to Literacy (NBTL) offered in Grade One, Pathway 1 (PW1) equally offered in Grade One, Pathway 2 (PW2) was offered in Grade Two, Step into English (SITE) equally offered in Grade Two and Read on Course (ROC) offered to grades three to seven (Chileshe et al., 2018). The NBTL course of PRP programme adopted the language experience approach to teaching where learners were taught by using their own experiences of the language of instruction. For instance, after looking at a picture, a child would be asked to describe what was in the picture. The sentence uttered by learners would be used by the teacher to show the learners how to write it and later how to read it. Therefore, children can see what they can think about and can say, and what they say, they can write and can read (Madison, 1971). Analytic phonics was also used in teaching what was called the phoneme or sound of the day. It was analytic because children were shown a whole word which contained the phoneme or sound of the day. For instance, if the sound of the day was /t/, the teacher would pick a word in that language with an initial sound /t/ such as tamba or tenga. The teacher then proceeds with the rest of lesson about pronouncing

and writing the sound /t/. The NBTL also used collaborative learning using the sentence maker. The programme was rolled to the whole country in 2000 and ended officially in 2013 when a new programme was launched. The PRP was designed by the state to help improve reading skills among early grade learners. However, with time, the programme faced multiple challenges such as lack of teaching materials that were never replaced, some trained teachers were retired or died and above all, the one year of teaching in a Zambian familiar language was not enough. Therefore, the programme did not meet the intended objective (Kaani et al., 2016).

Following the launch of the Primary Literacy Programme (PLP) in 2013, PRP was discontinued. The new PLP was supposed to serve the same purpose as PRP of equipping learners with arsenal for developing reading skills in Zambian languages and English (MoESVTEE, 2013). "Due to poor reading in primary schools as demonstrated by different studies, the Zambian Government has undertaken policy changes in an effort to uplift the reading levels among learners" (Chipili, 2016, p.6). The policy directions were that familiar Zambian languages were to be used as medium of instruction from grades 1 to 4 and English would start from Grade 5 upwards (MoEVTEE, 2013). English language was offered as an oral course subject in Grade 2 while in grades 3 and 4, English was offered as a subject again where literacy was taught to transition learners into English language (Chileshe et al., 2018; Sampa, 2016).

The PLP adopted the synthetic phonics approach where individual phonemes were taught in isolation and then blended them to form syllables and words. In Nyanja, like the other regional official languages, the five vowels were taught first and then consonants were introduced according to their frequency of occurrence in each language. For instance, if the most frequently occurring consonant in Nyanja is /m/, this will be the first phoneme to be taught. When phonemic awareness was taught comprehensively, learners were introduced to phonics, then oral language fluency, followed by vocabulary and comprehension. These competencies were the hall mark of the PLP, and this was influenced by the American series of studies as reported in the (National Reading Panel, 2000). Recent studies have shown that the PLP is not equally improving the literacy levels in Zambia (USAID/Zambia, 2018). Major reasons cited for low performance in PLP are lack of materials, teachers were not well trained, and there was hasty implementation and limited time for literacy instruction. These factors led to the establishment of the catch-up programme in 2017 that was intended to help struggling learners to catch up with their peers using a principle called "teaching at the right level" (TaRL). "Teaching at the

Right Level' is a remedial teaching methodology that helps struggling learners at different levels to catch up with their peers in the mainstream class" (VVOB, 2017, p.19).

All these reading initiatives and interventions were alternative endeavours to respond to the low literacy levels that begun to be recorded soon after 1966 when English language was declared the sole medium of instruction from Grade One to university (Examinations Council of Zambia, 2012; Southern African Consortium for Monitoring Education Quality [SACMEQ] III, 2010; The Grade 5 National Assessment Survey, 2008; Williams, 2002; National Reading Committee, 1997; SACMEQ, 1995). Soon after 1966, literacy levels across primary schools in Zambia begun to significantly reduce and since then, the country has not recovered yet.

While literacy levels have been developing slowly in the country, the rate at which the population of Zambia is growing is escalating way more than the growth in literacy levels and this is a matter of concern (https://www.worldbank.org/en/country/zambia/overview). In future, Zambia may have a huge population that is unable to read and write. If the situation is left unattended to by the state, it might create a social, economic, security and public health problem for Zambia. The studies presented in Section 1.1.5 cited multiple factors contributing to low literacy levels in Zambia and among them was the factor of the language of instruction. Muzata (2015) noted that regional languages as media of instruction in schools disadvantaged learners from minority groups. His conclusion was based on the views of in-service teachers. Mwanza-Kabaghe (2015) based on executive functions (holding a pencil, concentrating, flipping books, self-monitoring, planning…) also concluded that the language of instruction was a factor contributing to low literacy levels. There are limited studies in Zambia carried out to establish whether the language of instruction affects the performance of learners from different language groups as far as the decoding and reading skills are concerned. Such a study is necessary for linguistically and culturally diverse classes to guide policy and instruction.

1.2   Statement of the Problem

Zambia has seventy-three languages and dialects (Chibesakunda & Mulenga, 2019; Banda & Jimaima, 2017; Simwinga, 2015; Tambulukani & Bus, 2011). Seven of these languages (Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga) were selected by the state and currently, have the status of regional official languages used in specific regions of Zambia for various purposes (Mwanza & Manchishi, 2019; Kafata, 2016; Mbewe, 2015; Simwinga, 2007). The Primary

Reading Programme and the Primary Literacy Programme of Zambia used the seven regional official languages as media of instruction in early grades of children's education (MoESVTEE, 2013; Ministry of Education [MoE], 2003). The rationale for settling on the seven regional languages was based on the premise that children's learning is expedited in a familiar or known language (García, Sylvan & Witt, 2011; Benzies, 1940). Therefore, the assumption was that a regional language would be familiar to learners in the region (MoESVTEE, 2013). However, several studies have shown that the regional official languages are not familiar to some learners; these languages are alien and contribute to low literacy levels in Zambia (Mwanza & Manchishi, 2019; Muzata, 2015; Matafwali & Bus, 2013; Kaani, 2006). Despite the efforts by the Zambian Government to improve literacy levels in the country by introducing reading programmes and interventions, reading achievement scores among learners in primary schools over the years have been low. Mutale (2016), Muzata (2015) and Mwanza-Kabaghe (2015) cited the language of literacy instruction as a factor contributing to low literacy levels in Zambia. Although the language factor was associated with low literacy levels, none of these studies tested reading achievements based on learners' language background in Lusaka and Katete. Hence, the need for this study that compared Grade One learners' reading achievements between speakers and non-speakers of the language of instruction in multilingual classes of Lusaka District vis-a-vis monolingual classes of Katete District. Stated as a question, the problem under investigation was: Is there a difference in reading achievements between Grade One speakers and non-speakers of the language of instruction?

1.3   Purpose

The overriding aim of this study was to compare Grade One learners' reading achievements between speakers and non-speakers of the language of instruction (Nyanja) in multilingual classes of Lusaka District vis-a-vis monolingual classes of Katete District. The comparison of these learners was with the view of establishing whether the language of instruction advantages or disadvantages some learners in multilingual settings. The general reading achievements of learners in multilingual and monolingual classes collectively and in comparison with each other was also investigated. It is imperative to note that reading achievements as a dependent variable was the focus of the study while independent variables that had a bearing on learners' reading achievements such as the teaching of reading to multilingual learners, teachers' language beliefs

and phonics instruction approach were also studied as an alternative explanation to learners' reading achievements.

1.4   Research Objectives
The study sought to achieve the following objectives:

(i)   to compare Grade One speakers and non-speakers of the language of instruction in terms of progress in reading achievements after one year of instruction.

(ii)   to assess the instructional strategies teachers used in multilingual classes to help non-speakers of the language of instruction learn in multilingual classes.

(iii)   to establish teachers' views on teaching literacy to learners in multilingual settings.

(iv)   to assess the phonics instruction approaches used by Grade One teachers in monolingual and multilingual settings.

1.5   Research Questions
The study pursued the following research questions:

(i)   What were the reading achievements of Grade One learners among the following categories of pupils?

(a) Overall learning progress of all learners in pre-test and post-test.

(b) Compare the reading achievements of speakers to non-speakers of the language of instruction in the pre-test and post-test.

(c) Compare the reading achievements of multilingual to monolingual classes in the pre-test and post-test.

(ii)   What instructional strategies did teachers in multilingual classes use to help non-speakers of the language of instruction learn reading in Grade One?

(iii)   What were the views of teachers about teaching learners in multilingual settings?

(iv)   Which phonics instruction approaches did Grade One teachers use to teach reading in both monolingual and multilingual classes?

1.6   Significance of the Study
Policymakers may use the findings of this study to help them reformulate and improve literacy programmes in Zambia as the study provided valuable information on what prevails in multilingual classes. The study may also be useful in helping literacy teachers to reflect on the appropriate methodologies to use when teaching reading skills in multilingual classes. Both the

local and international community may also use this study to reflect on ways of managing multilingual classes.

1.7   Delimitation

Verma (2006) observed that delimitation in research refer to choices made by the researcher regarding the boundaries that a particular study covers. The current study took place in selected primary schools of Lusaka and Katete districts of Zambia. Therefore, the results of this study may not be generalised to all multilingual and monolingual schools in Zambia or any part of the world as the factors surrounding classes in the targeted research sites may be different from other places.

1.8   Limitations of the Study

Nataraj, Chari, Richardson and Willis (2013) defined limitation as shortcomings, conditions and influences which the researcher cannot control in their research. In this study, which was comparing technical reading achievements made by Grade One learners at the beginning and at the end of the year, there were limitations recorded. These included:

(a) The researcher did not have control over the attrition rate of learners such as transfers or movement from one school to another, even if such learners took part in a pre-test at the beginning of the year. This, eventually, reduced the number of pupils participating in the study. The researcher had to delete all the data related to pupils that did not take the post-test for various reasons so that comparison of data sets was for leaners that were available in both assessment items.

(b) The researcher did not have control over teacher expertise, qualifications and teaching experiences for the ten Grade One class teachers whose classes were tested from both monolingual and multilingual classes. This factor may have advantaged or disadvantaged certain schools with their respective locations in the results.

(c) It was also difficult for the researcher to control pupil absenteeism in targeted classes and this affected the number of pupil participants in the study.

(d) Some children refused to take part in either a pre-test or post-test even after their guardians, the government, the school authorities and class teachers allowed them to. These were excluded from the study. This move coupled with other factors such as

absenteeism and transfers affected the number of learners that took part in the study from the 475 in the pre-test to 375 in the post-test.

(e) The weakness of this study on objective one lies in the nature of the data collected following the binary theory with a focus on the presence or absence dichotomy of reading skills in learners. Data were collected in a binary manner where learners were graded as either they knew reading/decoding or they did not. For instance, assessment one on the data collection tool (test paper) checked on learners' knowledge of vowels (letter knowledge) on entry and at the end of Grade One. The recording was based on either complete knowledge of the assessment item or variable or not. This means that for a learner to be marked correct they should have read or recognised all the vowels or assessment items given and in the absence of this, they were marked unable to read. In this case, it was either a pupil knew the vowels in Nyanja language, or they did not. Data collection, analysis and presentation was all binary in nature. The weakness with this study is that it did not account for learners with partial knowledge of assessment items. For instance, learners that only identified one, two or three vowels and failed in two or three vowels, were classified under 'did not know vowels.' While it is true that they did not know all the vowels, the few vowels they identified could provide an indication of their progress in comparison to learners that did not make any progress at all. The study only focused on complete knowledge of each type of assessment item as a measurement variable.

1.9 Operationalisation of Terms and Concepts

The meaning and interpretation of the terms and concepts in this section are as used in this thesis. The dictionaries and other literature may provide other alternative meanings.

Reading: Decoding or word recognition (letter knowledge, letter names, sounds, words) of the alphabet, phonics, syllables, words (phonological awareness). Decoding may mean reading with or without attaching meaning to it. This was the focus of all assessment items.

Literacy: The knowledge of reading symbols or a text.

Letter knowledge: Knowing either names of letters of Nyanja alphabet or their sounds or both.

Phonics: The relationship between letters and letter combination (graphemes) in written language and the individual sounds (phonemes) in spoken language and how to use these relationships to read and spell words.

Phonological awareness: An umbrella term that includes the awareness of the large parts of spoken language such as words, syllables, onsets, and rimes-as well as the smallest parts of spoken language, phonemes; /s/, /p/, /b/.

Reading achievements: Refer to gains exhibited by learners in recognising letters of the alphabet with their corresponding sounds, blending sounds into syllables, decoding two, three and complex words from written symbols or text.

Multilingual class: This is a class where three or more languages are spoken by learners in the same class.

Reading skills: Abilities that learners exhibit in recognising letters of the alphabet with their corresponding sounds, blending sounds into syllables, decoding two, three and complex words from written symbols or text to comprehensible oral language.

Strategies for teaching reading: These are specific ways that teachers use in multilingual classes to help their students grasp the teaching point. They may be convention methods of teaching phonics or other strategies they think might help them.

Monolingual class: a class where one language is used among pupils in class and when playing outside the school.

Complete knowledge: knowing all aspects of assessed items. For example, knowing all vowels and all consonants in Nyanja, read all one syllable words such as ma, pa, ta, za.

Words: Means reading a meaningful or non-meaningful word (non-words or pseudo words).

Decoding Skill: Knowledge of blending sounds into syllables, syllables into words, words into sentences and reading them with or without attaching meaning to what is read.

1.10 Summary

This chapter has provided the background information needed to understand the nature of this study. The chapter has provided the statement of the problem, research questions and objectives and it has also highlighted the purpose of the study, limitation and delimitation of this study. The study was centered on comparing reading achievements for speakers and non-speakers of the language of instruction in multilingual classes vis-a-vis monolingual settings. Learners' reading achievements was the dependent variable that was being studied. Reading achievements may be affected by other independent variables such as instructional strategies, teachers' beliefs, materials, policy, and learner absenteeism. Some of these independent variables were equally investigated as alternative explanations to the presence or absence of learners' reading skills. The next chapter discusses the theoretical and conceptual framework governing this study.

CHAPTER TWO: THEORETICAL AND CONCEPTUAL FRAMEWORKS

2.0   Overview

The theoretical and conceptual frameworks are presented in this chapter with a view of outlining how existing theories related to early grade reading, guided the current study. The chapter is split into two major sections. Section 2.1 present theories that governed the current study, while Section 2.2 presents the conceptual framework.

2.1   Theoretical Framework

Adon, Husseni and Joe (2018, p. 438) observed that "a theoretical framework is a guide for a research, based on an existing theory in a field of inquiry that is related to a study". This view is supported by Maxwell (2005, p. 123) who stated that "a theoretical framework serves two purposes; firstly, it shows how a research fits into what is already known in relationship to existing theory and research. Secondly, it shows how research contributes to the topic in the field (its intellectual goals)." In other words, a theoretical framework uses existing ideologies and how they are used to help shape the research design and predict the possible expected outcome of the study. "The use of a theory can also help organise initial data analysis strategies and generalise the findings from a case study" (Yin, 2012, p. 9). Furthermore, a study guided by a theory is more organised and usually, there is no major boundary between theories in certain fields and major practices as they are linked. Jackson and Mazzei (2012, p. 5) contended that "putting philosophical concepts to work demand disrupting the theory and practice binary by decentring each and instead showing how they constitute or make one another". This study was guided by three main theories each addressing certain objectives with some covering multiple research objectives. Two of these theories (translanguaging and the three-language orientation) are closely related and they are both relevant to this study. The three theories are the binary theory, Translanguaging theory and the three-language orientation theory. As stated earlier, each of these theories guided certain research objectives as shown in Table 1.

Table 1: Theories Used for Each Research Objective

Theory	Research Objective	Usage
Binary Opposition Theory (Fogarty, 2005).	Objective 1: Reading Achievements	Collected binary data, analysed and presented it in binary form. It is either a pupil knew reading or they did not. It is either multilinguals perform better or not. It is either speakers perform better or not.
Translanguaging (Canagarajah, 2011)	Objectives 2 and 3: language practices in class	In both objectives, the focus was on practices where more than one language was used in class intentionally or not.
The Three Language Orientation Theory by Richard Ruiz (1984): Language as a problem, as a right and as a resource	Objectives 2, 3 and 4: Teachers' language views and how teachers taught learners and phonics instruction approaches	In *objective 2*, the focus was on how teachers in multilingual classes helped non-speakers of LoI learn reading skills. *Objective 3* looked at teachers' language ideologies that may affect what they do in their classes. *Objective 4,* the focus was on literacy or phonics instructional approaches in mono/multilingual classes.

2.1.1   The Binary Opposition Theory (Theory of Binaries)

The binary opposition theory states that some paired concepts and terms should be viewed using the lenses of other terms with opposite meanings where, the presence of one thing would mean the absence of the other. Smith (1996) reported that the binary opposition theory is a system of

language or thought by which two theoretical opposites are strictly defined and set off against one another. Fogarty (2005) reported that the binary opposition originated in Ferdinand de Saussurean structuralist theory where it was perceived as how the units of language have value or meaning, where each unit is defined in reciprocal determination with another term, as in binary code. Fogarty further noted that the binary opposition is not a contradictory relation but a structural, complementary one where the presence of one thing means the absence of the other.

How the Theory of Binaries was Used in This Study

The binary theory was used in this study in relation to learners' knowledge of reading on the assessed variables. Using this theory, it is either learners knew the sounds of letters of the alphabet or other assessed variables, or they did not. The presence of 'knowing to read' complements the absence of 'knowing to read.' In other words, the theory was used to develop a binary stance on the possible outcomes of the tests. By extension, the theory presupposed that the learners knew vowels, consonants, syllables and words assessed in the tests or they did not. In this line of the thinking, data was collected in such a discrete manner where non-continuing values were recorded (Read or did not). The analysis and presentation of the same data was equally binary in nature. The binary opposition theory was more useful to research objective one with the corresponding question one and its constituent parts on reading achievements.

2.1.2 Translanguaging Theory

Nkhata et al., (2019, p.102) reported that "translanguaging is a theory which supports bilingual or multilingual speakers to use their languages simultaneously as part of a communication process." The theory of translanguaging is contrasted with code-switching. Goodman and Tastanbek (2020, p.1) noted that;

> Recent discussions offer conflicting views on the relationship between two key terms, codeswitching and translanguaging, which describe the practice of using more than one language in bilingual and multilingual contexts, including contexts where English is the target language. It has been said on one hand that *translanguaging is based on a different conceptualisation of the bilingual mind from code-switching and, therefore, the two terms cannot be conflated* (Otherguy, Garcıa & Reid, 2015, 2019). On the other hand, arguments abound that *translanguaging is a range of practices that include codeswitching* (Garcıa, 2009a; Lewis, Jones & Baker, 2012; Mazak, 2017; Sayer, 2013) or that *translanguaging challenges the notion of "code" but is not intended to replace the term code-switching* (Wei, 2018, p. 27). Others focus more

generally on the theoretical differences (Heugh, 2015) or overlap (Baker & Wright, 2017; Lin, 2013) of these two terms without concluding why translanguaging is a preferred conceptualisation nowadays.

Code-switching is viewed as a language practice where a user lacks linguistic competence in one language while translanguaging is seen as the use of multiple languages to achieve communication intentionally or not. Garcia and Wei (2014, p.39) contended that "translanguaging is different from code-switching in the sense that code-switching is seen as the process of changing two languages, whereas translanguaging is about the speakers' construction that creates the complete language repertoire". Martínez, Hikida and Durán (2015) noted that the term 'translanguaging' derives from Colin Baker's translation of the Welsh term "trawsieithu" that originally referred to the pedagogical practice of students writing in one language and then reading in another. Using available languages in multilingual classes to facilitate learning is what García and Wei (2014, p. 39) described as using languages for educational purposes that "creates a social space that goes beyond linguistic structures". Canagarajah (2011, p. 1) noted that the scope of translanguaging is premised on the following assumptions;

(a) For multilingual speakers, languages are viewed as part of their repertoire or assets that they can access and use in their communication;

(b) Languages are not detached and separated but form an integrated system for people to use;

(c) multilingual competence emerges out of local practices where multiple languages are negotiated for communication;

(d) Competence does not consist of separate competencies for each language, but a multicompetence that functions symbiotically for the different languages in one's repertoire; and,

(e) Proficiency for multilinguals is focused on repertoire building using available languages known to them by developing abilities in the different functions served by different languages rather than total mastery of each and every language independently. Canagarajah (2011, p.2) cited the following terms that reflect or mean translanguaging as used in literature;

> Composition: codemeshing (Canagarajah, 2006; Young, 2004); transcultural literacy (Lu, 2009); translingual writing (Horner et al. forthcoming) New literacy studies: multiliteracies (Cope & Kalantzis, 2000), continua of biliteracy (Hornberger 2003), pluriliteracy (Garcia, 2009), Applied linguistics: plurilingualism (Council of Europe, 2000), third spaces (Guttierez,

2008); metrolingualism (Pennycook, 2010). Sociolinguistics: fluid lects (Auer, 1999); hetero-graphy (Blommaert, 2008); poly-lingual languaging (Jorgenson, 2008).

Mazak (2017) contended that translanguaging is a bilingual or multilingual language practice, which includes code-switching language practices. Lewis, Jones and Baker (2012) also indicated that code-switching is one of the dimensions of translanguaging. In this study, the concept of translanguaging includes code-switching practices as discussed by Sayer (2013).

Use of This Theory in This Study

The translanguaging theory was applied in this research to explain language use by first grade teachers and learners in multilingual classes of Lusaka District. In a class where multiple languages exist, code-switching and movement from one language to another during discussions and conversations was eminent and this is where translanguaging is handy. The translanguaging theory promotes language in complementation and not in competition, where the weaknesses of one language is supplemented by another (Simwinga, 2009). This was observed in multilingual classes where pupils and teachers on several occasions could switch from one language to another cautiously or not during interaction, asking questions and teaching in general.

2.1.3 The Three-Language Orientation Theory

The three-language orientation theory (language as a problem, language as a right and Language as a resource), was developed to "guide critical analysis and reflection about what is thinkable about language in society, not only to facilitate examination of the status quo but also as a way to imagine policy possibilities" (Ruiz, 1984, p. 16). Hult and Hornberger (2016, p.30) reported that "in 1984, Richard Ruiz set forth three orientations to language planning: language as problem, language as right and language as resource. Since that time, the orientations have only become more powerful, rising to the level of paradigm in the field of language policy and planning (LPP)." Nations around the world design their policies based on the three dimensions. "Any policy document or national policy situation may have tendencies that lean towards one or more of the orientations. Highlighting these tendencies raises awareness about what kind of policy development is needed to establish or maintain equity" (p.31). Hult and Hornberger (2016) provided a concise focus of what each of the three orientations to language addresses as presented in Table 2.

Table 2: Summary to the Three Orientation to Language Theory

Language as a Problem	Language as a Right	Language as a Resource
· Monolingualism in a dominant majority language is valued · Policies seek to limit or eliminate multilingualism · Linguistic diversity is a threat to assimilation and national unity · Minority languages are a threat to the status of the dominant majority language · Language problems are (falsely) equated with social problems · Speaking a minority language is a communicative disability to be overcome · Minority language speakers are defined based on missing linguistic abilities in the dominant majority language · Minority language maintenance is unnecessary; minority language loss is a solution to language problems	· Language mediates access to society including, but not limited to, employment, healthcare, jurisprudence, voting, education and media · Concern that linguistic inequality leads to social inequality · Rights to use one's language in specific domains, such as those above, are codified in de jure policy (positive rights) · Rights to non-discrimination based on language are codified in de jure policy (negative rights) · Rights may be framed in relation to international conventions and treaties · Speaking and maintaining one's language is a human right · Access to civil rights	· Societal multilingualism and cultural diversity are valued · National unity includes linguistic diversity · Languages are resources for everyone, not only for linguistic minorities and their communities · Languages are both a personal and a national resource · Linguistic minority communities have unique linguistic expertise to contribute to society · Languages have extrinsic value for purposes such as national security, diplomacy, military action, espionage, business, media, public relations, among other possibilities · Languages have intrinsic value for purposes such as cultural reproduction, community relations, identity construction, building self-esteem, intellectual engagement, civic participation, among other possibilities

· Language education aims at transition to the dominant majority language · Educational programmes that facilitate bilingual language development exacerbate social divisiveness · Skepticism that bilingual programmes in general may focus on the minority language to the detriment of majority language development · Bilingualism is related to cognitive difficulties and reduced academic achievement · Second language and mainstream immersion programmes are favoured over bilingual education (i.e., minority students are best served by as much exposure to the dominant majority language as possible) · Language learning is subtractive	may not be denied due to linguistic ability · Language is related to personal freedom · Language rights may be limited to certain specifically defined individuals or groups · Rights may focus on opportunities to attain proficiency in a dominant majority language and/or opportunities to develop and maintain minority languages · Academic programmes for linguistic minorities facilitate equal access to education; programme types may vary	· Rationales for language maintenance are aligned with extrinsic and/or intrinsic values · The interests and needs of a nation or of linguistic minorities themselves may be variously foregrounded · Bi-/multilingualism can enhance academic achievement · Awareness of different languages and cultures reduces ethnocentrism and xenophobia and enhances intercultural understanding · Linguistic minorities are resources for the multilingual development of a dominant majority · Academic programmes focus on the development of life-long bi-/multilingualism; programme types may be designed for linguistic minorities or both linguistic minorities and a dominant majority · Language learning is additive

Source: Hult and Hornberger (2016, p.33)

Despite the presence of multiple options for language in education policy in Zambia, the national trend on language in education policy supports a monolingual language ideology and a forced assimilation society. The Zambian language for literacy instruction policy views language as a problem and, therefore, supports monolingualism in education. García (2009, p.120) distinguishes between two competing theoretical frameworks regarding multilingualism in education; "Educational programmes founded on monoglossic language ideologies and educational programmes founded on heteroglossic language ideologies". "Whereas the first language ideology only considers linguistic practices enacted by monolinguals to be legitimate, the second language ideology embraces the fluid and dynamic linguistic practices of multilingual communities" (Iversen & Mkandawire, 2020, p.37). In language ideologies, some languages are defined as prestigious and valued, while others are minority and ignored. "Even when there are bilingual or multilingual programmes in place, the outcomes are generally transitional by moving students towards assimilation into the dominant society" (McNelly, 2019, p.5). In other words, "Zambia's transitional literacy programme from local languages to English is influenced by a monoglossic language ideology" where one language is used at a time (Iversen & Mkandawire, 2020, p.37).

Language as a Problem

Table 2 on the summary of language orientations indicates multiple ways of describing the concept of language as a problem. For instance, McNelly (2019, p.7) noted that language as a problem surrounds the ideas represented in deficit thinking. "This practice is the assumption that students who have low social-economic status, belong to a minority ethnic or racial group, or do not have proficiency in the dominant language are deficient in their ability to think and learn." McNelly further noted that deficit thinking leads to assumptions that bilingual students are mentally inferior, slower to learn the majority language, confused and that the new language is a burden on the brain;

> Additional deficit thinking assumptions include the notions that bilingual students have split-identity, cultural dislocation, low self-esteem, alienation, emotional vulnerability, a poor self-image and language anxiety. Stereotypes emerge that support a deficit approach of allowing students to acquire multiple languages. The fear from these stereotypes is that multiple languages within a societal group of people may cause more conflict, antagonism, less cohesiveness, contribute to poverty, cause students low test scores in school, prevent students from integrating into majority society and having less social

and vocational capital… Educators who view students with a deficit in their ability to think and learn are proponents of monolingual education programmes. Monolingual language policy programmes favour learning the dominant language at the expense of losing their home language and promote an assimilationist agenda (p.7).

The product of having monolingual forms and weak forms of bilingual education programme is monolingualism and limited bilingualism. "The goal of these forms of bilingual education language policy is for minority students to succeed in transitioning into accepting the majority language and the values of the majority society which control the school. The specific outcomes for students is that they are blamed for failing by implying that they are not smart enough, motivated, or appreciate the educational opportunities the school system gives them" (Darder, 2011; McNelly, 2019, p. 8). Multilingual and bilingual children have an enhanced ability to analyse their own knowledge of the language and have greater control of language processing than monolinguals and thus, bilingualism may encourage *earlier* reading acquisition and could lead to higher academic performance. Marian and Shook (2012) indicated that multiple research projects have shown that the bilingual brain can have better attention and task-switching capacities than the monolingual brain, thanks to its developed ability to inhibit one language while using another. In addition, bilingualism has positive effects at both ends of the age spectrum: Bilingual children as young as seven months can better adjust to environmental changes, while bilingual seniors can experience less cognitive decline. Furthermore, bilingual children have greater analytical awareness, because they are constantly organising and inspecting their languages, which indicates a difference in the way bilinguals process language (Baker, 2011).

Language as a Right

Harrison (2007) contended that "language as a right perspective essentially advocates for the entitlements of individuals and groups to actively use and maintain their languages in the social arena and for access to interpreter services and tuition in the majority language". Furthermore, "language as a right can be defined in terms of personal, human and legal or constitutional rights. Language as a personal right encompasses the freedom of an individual to speak in and to preserve his or her heritage language. Language as a human right refers to an individual receiving protection from discrimination based on their language choice, just as someone would for the religion they practice" (McNelly, 2019, p.10). Language as a right in the Zambian context

is also interpreted and influenced by the country's presence in international charters such United Nations. Chapter 1 of the United Nations under purpose and principles states that "to achieve international co-operation in solving international problems of economic, social, cultural or humanitarian character and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion."

In education, children have a right to learn in the language of their choice that they understand. However, due to political influence and power dynamics, regional and dominant languages are used in schools suppressing minority languages. "Tolerance-oriented approaches to bilingual education that do not recognise the non-dominant language as a human right leading to oppression, domination and injustice" (p.11).

Language as a Resource

McNelly (2019, p.12) noted that "language as a resource chooses a pluralistic society over assimilation. Language as a resource is an asset to a community and is useful in building economic and social bridges across different communities." Furthermore, "language as a resource can be seen as a way of eliminating the tensions that arise when discussing language as a problem and a right. Framing the discussions around language as a resource may be helpful in engaging the majority and minority communities in conversations surrounding the need for bilingual education" (Ruíz, 1984). Additionally, "language as a resource allows individuals and groups to play a greater role in world politics and the world economy" (Ruíz, 1984). "Language as a resource is preservation of heritage languages and promotes tolerance and cooperation between groups and is the central element and expression of identity" (Baker, 2011). "Languages as a natural resource cultivate cultural, spiritual and educational growth for economic, commercial and political gain" (Baker, 2011; Ruíz, 1984). Language as a resource orientation support all children in education regardless of their cultural and language background.

Usage of This Theory in This Study

The three-language orientation theory was used in this study to guide language use patterns in multilingual classes with a view to establishing whether multilingual classes perceive language as a problem, a right or a resource. The theory was also used to facilitate the scrutiny of the

status quo about the way multilingual classes imagine language possibilities and usage in multilingual classes. Teachers that viewed language as a problem avoided code-switching and focused on the use of the official language of instruction in their classes. Those that viewed language as a resource or right, allowed code-switching or translanguaging in their classes.

2.2   Conceptual Framework

A conceptual framework refers to a created graphical or narrative form of explanations outlining the fundamental issues to be studied such as key variables, factors and concepts which are described in a synthesised, progressive and simplified manner by a researcher. Peshkin (1993) observed that a conceptual framework is linked to the concepts, empirical research and important theories used in promoting and systemising the knowledge espoused by the researcher. Furthermore, a conceptual framework is the researcher's explanation of how the research problem would be explored (Adon, Husseni & Joe, 2018). The conceptual framework presents an integrated way of looking at a problem under study (Liehr & Smith, 1999).

This study aimed at assessing reading achievements of learners in three groups; multilingual versus monolingual learners, speakers versus non-speakers of Nyanja and each learners' learning progress by performance in pre-test versus post-test results with a view of ascertaining how much learning took place in Grade One. The dependent variable under investigation was *learners reading achievements,* which might be triggered by other independent variables such as teacher factors, teaching methodologies, language policy and the pupil factors. These variables have been summarised and correlated in Figure 2. The relationship among the variables being investigated is described in this section.

The Conceptual Framework

Can contribute to positive or negative learning achievements in the delivery reading content

Teaching Methods

Manner of delivering content: recognising letter sounds or names, blending, & reading two or more syllable words.

Language Policy & beliefs

Teaching & Learning Materials

Reading Achievements

Language zoning may advantage and disadvatge some learners

Availability or absence of teching & learning materials may affect

Absenteeism, transfers, age and gender

Pupil factors

Teacher factors

Teacher qualification, experience, attitude, and work culture

Figure 2: Conceptual Framework

Figure 2 indicates that reading achievements by Grade One learners, right in the centre of the image, is the dependent variable that was investigated on this study. As a dependent variable, reading achievements of learners may be affected by diverse independent variables including language policy, teacher beliefs or ideologies, teaching strategies or methods/phonics instruction approach, materials and pupil factors. This relationship among the variables under investigation is important in establishing cause and effect relationship. This means that failure to read by Grade One learners may be associated with independent variables as alternative explanations for pupils' inferior performance.

The framework provided is a contracted version of the major variables that were investigated in this study. It is important to note that findings on pupil factors such as performance as presented in the theoretical framework may be linked to any theory. The binary opposition theory guided data collected, analysis and presentation on the first objective. The theory of translanguaging and the three-language orientation were used to address issues of language policy and use in classrooms including language ideologies of teachers. They also helped in understanding teaching practices by teachers in multilingual settings.

2.3   Summary

The theoretical framework that governed this study was presented in this chapter. Three theories were presented with a brief explanation on how they were used in this study. The conceptual framework has also been provided highlighting key aspects that were addressed in this study. In other words, the independent variable that was under investigation (reading achievements) is right at the centre of conceptual framework while independent variables that had a bearing on reading achievements are listed in the periphery with their narrative explanations in brief on their impact. Each section on a theory concluded by linking how the variables to be examined or studied were related or associated with the theories. In the next chapter, review of literature related to the study is presented with respect to research objectives.

CHAPTER THREE: REVIEW OF RELATED LITERATURE

3.0   Overview

In the previous chapter, the theoretical and conceptual framework was presented. A review of literature related to the current study is presented in this chapter. The chapter is segmented into various themes that mirror research objectives. The literature review section begins with the conceptual review of terms and concepts used in the study. This is followed by a review of studies packaged in themes following the specific research objectives. These studies were selected from Zambia, Africa, Europe and other parts of the world. The last segment of literature review is tagged 'historical review of reading,' which has highlighted the history of reading globally and in connection to Zambia.

3.1   Conceptual Review

In this segment, relevant and specific concepts impinging on the study have been defined and operationalised while highlighting gaps and study relatedness in literature. Critical variables that were a focus of the present investigation have been outlined.

3.1.1   Reading

The definition of reading has been a contested issue as it varies according to the context and the purpose it serves. For instance, Gumbrecht (1990, p. 146) noted that giving the meaning of reading has its own limitations;

> Not only has empirical evidence questioned the hypothesis of uniformity in the reader-reactions to textual elements, but we are also beginning to speculate that the general attitude of "giving meaning" to phenomena (of "reading the word") might have had - and might in the future have - historical limits.

While Gumbrecht has reservations about assigning meanings to concepts, scholars like Kamhi and Catts (2012, p.3) observed that "some researchers prefer restricting the definition of reading to just the decoding component as a narrow view of reading as it delineates a restricted set of processes to be examined" (See Section 1.1.1 on page 1). Perfetti (1986) contended that one advantage of the narrow view of reading is that it provides a finite set of items and processes for educators to assess. The study of reading should be restricted to the decoding process that embraces the narrow view that may provide solutions to the reading crisis around the world

(Kamhi, 2009). Other scholars like Gates (1949, p.3) observed that "reading is a complex organisation of patterns of higher mental processes that can and should embrace all types of thinking, evaluating, judging, imagining, reasoning and problem-solving." Gate's definition of reading relates to the broader view of reading that involves multiple processes.

Although there are conflicting views about reading in literature, the simple and broader views of reading have taken a lead in varying contexts, each with a separate focus. In other words, there is no single definition that conclusively represents what reading is and what it does. This is what (Gumbrecht, 1990) was meant when reservations about giving meaning to a phenomenon were raised.

Despite the presence of diverse meanings of reading, the current study contributes to the debated gap by situating the meaning of reading to those elements that can be measured in the school curriculum as a move that supports the narrow view of reading theory. Narrowing the meaning of reading to what can be assessed or measured in the school set up adopts the functional and academic view as operationalised in this study. This view corresponds to Crowder (1982) who viewed reading as the decoding of letters, sounds, words and sentences that can be measured in the school milieu (See section 1.1.1) for additional meaning of reading.

3.1.2   Reading Achievements

As stated in chapter two, reading achievements by Grade One learners is the dependent variable that was investigated in this study. Considering that this study perceived reading from the narrow view that can be measured or assessed in schools, it follows that reading achievements addresses learners' successes in reading at their grade levels. The National Centre for Education Statistics (2017) noted that reading achievement usually refers to being able to use the skills that are needed to read grade-level material fluently and with understanding. If a learner starts the school year reading above grade level, that student's reading achievements would need to maintain a superior level of reading and understanding so that she continues to be an above-average reader. These views are supported by Araujo (2014) who noted that reading achievements are a measure of text-based reading comprehension and involves understanding of written texts. Educators use the concept of reading achievement to cover a range of information about learners' reading performance. A study by Weir (2001) that aimed at

investigating reading achievements of primary school learners in 'designated schools' in comparison to those in 'non-designated schools showed that schools with learners from disadvantaged backgrounds, poverty, unsupportive parents and limited resources had low reading achievements, while non-designated schools were those well-furnished schools with learners from well-to-do homes and had support and resources. The findings of the study revealed that the reading achievement of learners in designated schools were consistently and abysmally below in comparison to learners in non-designated schools in test standardised tests. Multiple literacy problems were noted in schools serving a multitude of learners from disadvantaged backgrounds in comparison to non-designated schools. The study, therefore, acknowledged socioeconomic status of learners' parents and availability of reading materials in school as factors that contributed to low reading levels among designated schools. These findings were supported by an old empirical study by Thorndike (1973) whose main objective was to investigate reading comprehension in education in 15 countries. Thorndike equally found that socioeconomic status (based on learners' reports of fathers' occupation, fathers,' or mothers' education) and availability of reading resources in the home were the two most predictors of reading achievement among the set of variables related to school characteristics and type of learners' home and community background. However, although the report presents a great insight on the relationship between socioeconomic status and students' reading achievements, Thorndike's report could be criticised for a few reasons. First, the research had a weak theoretical framing. Thus, no attempt was made to relate the study to previous research in reading or in comparative education. Second, incomplete and unclear reporting makes it difficult to understand and evaluate the methods used and the results obtained and replication of the study is hardly possible. Third, several methodological weaknesses raise grave doubts about the findings. For example, weaknesses in the tests that were revealed in pilot trials were not acted on; inferences about the validity of the instruments appear to be biased by the investigators' expectations; and there appear to be serious deficiencies in the sampling of subjects.

The literature on reading achievements seems to be consistent with what the concept does or reflect. The studies raised crucial factors that directly relates to the current study and the way the concept of reading achievements have been used. The issue of socioeconomic status and parental support towards reading achievements of learners could similarly be related to the current situation in Zambia. There is a high possibility that similar outcomes may be reflected

in the Zambian context. The current study interpreted reading achievements as gains or success first graders attained appropriatly at their grade levels. This included the decoding of letter names, sounds and words.

3.1.3 Monolingualism

Monolingualism is the state or practice of using one language in various contexts for diverse reasons. The online Collins English Dictionary defined monolingualism as "the state of understanding or having the knowledge to speak or write in only one language" (https://www.collinsdictionary.com/dictionary/english/monolingualism). Multiple studies and literature have similar perception of the concept. For example, Sievers (2018) noted that monolingualism or called monoglotism or unilingualism is the condition or state of being able to use one language. A similar version of the definition was reported by Van Herk (2015), Barker (2011) and Romaine (1995) and they all perceived monolingualism as the practice of using one language. Monolingualism is a segment of language policy (See the three-language orientation theory in chapter two) that is being examined as an independent variable that has a bearing on learners' reading achievements.

The current study identified some gaps with the definitions provided earlier and opted to problematise them in this segment. Although most definitions of monolingualism were restricted to individuals' abilities to use one language in spoken and written form, the concept of monolingualism has diverse meanings. For example, it includes the practice by individuals, organisations and countries to use one language in certain spheres of influence. As a case in point, when a journal accepts manuscripts for publication in one language only, they are practicing principles of monolingualism (Sievers, 2018). Similarly, when a state has decided to use one language of instruction in classes or certain circles, they are practicing principles of monolingualism. In 1966, when Zambia declared English as the sole medium of instruction from Grade One to university, the state adopted a monolingual language policy. In principle, Zambia was practicing monolingual language ideologies. Even later when Zambia decided to settle for the seven regional official languages (Bemba, Kaonde, Lozi, Lunda, Luvale, Nyanja and Tonga) as media of instruction in specific regions (Simwinga, 2006; Manchishi, 2004), the state equally adopted a monolingual language ideology because in those provinces or regions, there were other languages that were ignored. Such decisions viewed multilingualism as a problem or as

something that would cause confusion in the community (See the three-language orientation theory in chapter two). This line of thinking is what McNelly (2018) described as deficit thinking.

Deficit thinkers describe multilingual learners with diverse backgrounds, low social-economic status and who belong to a minority ethnic or racial group or do not have proficiency in the dominant language as deficient in their ability to think and learn and that, they are mentally inferior, slower to learn the majority language and have split identities (McNelly, 2018; Darder, 2011; Knight & Pearl, 1999; Ruíz, 1984). These labels are forms of deficit thinking founded on insufficient evidence and serving to defend monoglossic language ideologies by exercising what this thesis has called "diversity-blind thinking" and contrasted it with "diversity-powered consciousness." Diversity-blind thinking is denial that differences exist in communities that reflect the ethos, values and practices in schools and daily lives. Therefore, anything that is not "green," should be "red" and red is bad for business. Diversity-blind thinkers hold the notion that bilingual and multilingual learners have split-identity, cultural dislocation, low self-esteem, alienation, emotional vulnerability, a poor self-image and language anxiety which are mere stereotypes and veneer founded on "diversity-blind thinking" serving monolingual language practices. The arguments and fear that multilingualism may cause more conflict, antagonism, less cohesiveness, contribute to poverty, cause learner low test scores in school, prevent learners from integrating into majority society and have less social and vocational capital (McNelly, 2018, p.7), are all tools used to suppress multilingualism. They have driven countries to support the assimilation policies and moved away from a pluralistic society where inclusiveness and diversity are at the center (Baker, 2011; Darder, 2011). Currently, Zambia uses monolingualism in education where a regional language suppresses other languages from Grades 1 to 4 and English language suppresses all Zambian languages from Grade 5 to university. This move is against the presence of multiple languages especially in cosmopolitan towns where multilingualism may be more practical. While the monolingual language policy may be more ideal for monolingual communities especially those located in rural areas of Zambia, practicing monolingualism, in diverse communities it may not be practical and, therefore, may be contributing to the reading problems faced by learners in Zambia (See section 1.1.5 in chapter one where language was cited a factor contributing to low literacy levels by multiple studies in Zambia).

3.1.4 Multilingualism

Multilingualism is equally a segment of language policy (See the translanguaging theory and the three-language orientation theory in chapter two) that is being examined as an independent variable that has a bearing on learners' reading achievements. Valdés (2012) noted that multilingualism is the use of more than one language, either by an individual speaker or by a group of speakers. Simwinga (2006, p.1) noted that "Zambia is a multilingual state in the sense that several languages are spoken within its borders and individuals speak one or more languages in addition to their mother tongue." Simwinga further noted that migration played a critical role in the creation of diverse linguistic situation in Zambia. When different language groupings migrated from central and east part of Africa, they settled in various regions in the southern part of Africa including Zambia (See Figure 1: Linguistic and Tribal map of Zambia). What can be stated without much contradiction is that Zambia is currently a multilingual country (Banda & Jimaima, 2017; Tambulukani & Bus, 2011).

This study treated multilingualism the same way as explained in this section. However, the study further argues that for meaningful reading achievements to be recorded in linguistically and culturally diverse classes of Lusaka and other diverse communities, multilingualism must be present in such classrooms. Linguistic diversity has long been considered a contributing factor to the low literacy levels in Zambia (Tambulukani & Bus, 2011).

3.1.5 Language Policy and Bilingual Education

Language policy is an independent variable whose impact was investigated in this study. Mwape (2002, p. 66) defined language policy as "a programme of action on the role or status of a language in a given community." Johnson (2013, p. 9) stated that "a language policy is a policy mechanism that impacts the structure, function, use, or acquisition of language." Simwinga (2006, p.13) noted that there are three types of language policy: "those relating to languages recognized by the government and for certain purposes; those relating to languages recognized by educational authorities for use as media of instruction and as subjects for study at the various levels of public and private education; and those relating to unofficial government recognition or tolerance of languages used in mass communication, business and contact with foreigners." All the three types of language policies are prevalent in Zambia

starting with English that is clearly outlined in the constitution followed by the regional official languages that are used as media of instruction in the first four years of primary education. The remaining languages and dialects are used by the masses for communication and other purposes in Zambia (P. 13). These policies led to the establishment of a transitional bilingual education programme where instruction starts in a regional language and English takes over from grade 5 to university.

Despite the presence of multilingualism and transitional education programmes, the language-in-education policy of Zambian supports monoglossic language ideologies and "forced assimilation society" (Iversen & Mkandawire, 2020; McNelly, 2019). The regional official languages are assimilating minority languages in early grade classes in what we have termed "Indigenous regional language hegemony". By fifth grade, there is a shift to "English language hegemony" that continues through college and university levels. A favorable language policy reflects the ethos, values and practices of the community. In this regard, monolingual communities should have monolingual policies and vice versa. Communities, policies and schools that support multilingualism embrace "diversity-powered consciousness," a belief that becoming aware and being supportive of diversity and inclusion helps dispel biases, negative stereotypes, appreciate and understand differences and this helps in providing diverse solutions to diverse problems in communities, schools and people's lives. In other words, diversity-powered consciousness treats diversity and inclusiveness as an agency to challenges of culturally and linguistically diverse communities. Issues of representation of different genders, learner backgrounds, identities, races, languages, nationalities and sexual orientations are among the issues encompassed in diversity-powered consciousness and argue that all voices matter in development. Schools and classes that embrace diversity and inclusive ideologies understand that the weaknesses of one version of an issue, may be supplemented by another. For example, the weaknesses of one language can be supplemented by other available languages within the same context. This practice is what Simwinga (2014) described as languages in complementation. The use of multiple languages in diverse contexts of multilingual classes is what (García, 2009) described as translanguaging. In this study, language policy was interpreted through the lenses of declarations and statements on monolingual and multilingual language practices about Zambian schools.

Historically, Zambia has had three models of the language of instruction policies: monolingual, bilingual and trilingual language in education policies. The monolingual policy is a practice where only one language is used as a media of instruction in education from early grade classes to higher levels of education. This is the policy in many developed states worldwide and may times, this extends to the language of the community with a few exceptions. Bilingual language in education policy involves two languages that are used as media of instruction in education while trilingual policy is a practice where three languages are used as media of instruction in the education system. Bilingual and trilingual language policies are more pronounced in states where more than one language is spoken. Many times, such policies serve as a solution to linguistic diversity, thereby viewing language as resource. In this context, linguistic diversity is supported in contrast to monolingualism which many times view language diversity as a problem (Hult & Hornberger, 2016; Garcia, 2009; Ruiz, 1984). "Language diversity and minority languages are often conceived of as a social problem and solving the ´problem´ of such languages is then seen as requiring a technical approach" (Gorter & Cenoz, 2017, p. 232). The stress on the legal rights of language speakers is many times viewed as a move to planning for minority languages and suggest the calls for minority learners to receive instruction and education in their familiar language (May, 2001). "Ruiz saw the orientation of language-as-resource as the least divisive and as a solution for an integration of bilingual education into language policy … The language-as-resource approach is ever more present in studies about multilingualism and multilingual education" (Gorter & Cenoz, 2017, p. 232).

The presence of three models of language in education policy in Zambia is documented by existing studies. Kombe and Mwanza (2019, p. 115) observed that "In 1953, there was a three-tier language in education policy. This meant that a local language which was not necessarily a regional official language was used as media of instruction for the first two years while a regional official language was used in the third and fourth year of schooling." English language took over from Grade 5 to university and this was an example of a trilingual language in education policy. Linehan (2004, p.2) reported that from 1927, only three years after the Colonial Office took over the responsibility for what was then Northern Rhodesia up to 1963, "just before the break-up of the Federation of Rhodesia and Nyasaland, "the policy was consistent: mother tongue was used for the first two years of primary education, followed by a dominant vernacular up to Standard 5 and English thereafter"., Learners first received

instruction in their first language (L1). As the second language (L2) was added and used more intensively, the first language was subtracted. As the third language (L3) was added and used up to colleges, the second language was subtracted as media of instruction. This is what Lambert (1974) called subtractive bilingualism. Transitional education has permeated multilingual classes in early grades of Zambia.

Bilingual transitional language-in-education policy (weak form of bilingual education, Baker, 2011) dominated early grade classes of the Primary Reading Programme (PRP) and Primary Literacy Programme (PRP). In these programmes, a regional Zambian language was used as media of instruction in the first grade (PRP) and in the first four grades (PLP) and English language was used thereafter (Mbewe, 2015; Mwanza-Kabaghe, Mubanga, Matafwali, Kasonde-Ngandu, Bus, 2015).

The monolingual language-in-education policy was recorded soon after Zambia's independence from 1966 to 1996 where English language was the sole media of instruction from grades one to university (Linehan, 2004; Manchishi, 2004; Simwinga, 2004). Figure 3 shows a summary of the language-in-education policy models covering a period from 1925 when the British Colonial Administration ruled Zambia to date when literacy instruction is struck with challenges of multilingualism.

LANGUAGE IN EDUCATION POLICY MODELS OF ZAMBIA

Monolingual Language in Education Policy (1965/66 – 1996)
Note: *English was the sole media of instruction with exception of Zambian Languages subjects where ZL was used as medium of Instruction. The 1976/77 policy also allowed teachers to use ZL only to strenghthen learners' comprehension of topics in class.*

Bilingual Transitional Language in Education Policy (1996 – date)
Note: *Educating our future paved way for the Primary Reading Programme piloted in 1998 and Launched in 1999 and rolled country wide in 2000. Zambian languages in regions and English were the mediums of instruction. ZL in early grade and English took over from 2nd grade in PRP and 5th grade in PLP.*

Trilingual Successive Language in Education Policy (1925/27 – 1964)
Note: *The official policy demanded early grade learners to learn in their home mother tongue languages in the first two years and in 3rd to 4th grade switch to a regional language and by 5th grade to higher levels of education switch to English. However, some minor changes of bilingual education also took place in some years.*

Figure 3: Models of Language in Education Policy in Zambia.

Figure 3 shows that the formal decisions on bilingual language in education policy in Zambia started in 1925 following the Phelps-Stock Commission report by scholars from America that had established civil rights legislation decades ago. For example, the Civil Rights Act of 1866 guaranteed equal rights under law for all people who lived within the jurisdiction of the United States and the Civil Rights Act of 1875 guaranteed African Americans equal treatment in public accommodations, public transportation and prohibited their exclusion from jury service (https://www.loc.gov/exhibits/civil-rights-act/legal-events-timeline.html). These rights contributed to the philosophy of the Phelps-Stock commission's report about what was the right type of education for an African child and in what language it was to be conducted. The recommendation was for an African child to learn in a native language first before introducing an international language and this was the birth of bilingual education in Zambia and most African countries. It is imperative to note that the use of first language instruction in schools was started by missionaries around 1880s and this practice continued through the British South African Company (BSAC) era that ended in 1924 and the British Colonial Administration that took over from the BSAC (Manchishi, 2004). In 1927, the British Colonial Government strengthened the local language policy when they authorised Bemba, Lozi, Nyanja and Tonga languages of Zambia to be used in early grade classes in certain regions in the first two to four years before English Language was introduced (Manchishi, 2004; Simwinga, 2004). The logic of starting education in the home language of the children while developing English language skills was to help learners develop reading and writing skills to prepare them for instruction in English. This was under the premise that when children learn to read in one language, they can transfer the skills to read in another language.

The first official language in education policy in Zambia of 1927 was subtractive bilingualism and multilingualism in nature where two or more languages were expected to be used in education. The bilingual education policy was replaced by the monolingual policy in 1966 soon after Zambia's independence when English language was the sole medium of instruction in schools from Grade One to higher education. This monolingual policy was slightly modified in the 1977 education policy where the "Bilingual Method" of teaching was proposed. The bilingual method of teaching was developed by Dodson (1967) which recommended the use of two languages of instruction. One was the target language and another was a mother tongue known to learners. Teachers in Zambian schools were allowed to use learners' mother tongue

for purposes of facilitating understanding only. In other words, there were attempts to implement the bilingual method of teaching in the 1977 policy of Zambia and these attempts were expected to be reflected in the 1977 educational policy but, they were not (Manchishi, 2004). Other follow up policies of Zambia such as those for 1996 and 2013 education policies reintroduced a subtractive bilingual education policy. The subtractive bilingualism is many times contrasted with additive bilingualism (*additive bilingualism* and *subtractive bilingualism)* were developed by Lambert (1974). Subtractive bilingualism has been very pronounced in Zambia. Garcia and Sylvan (2011, p. 386) noted that;

> Additive bilingualism refers to the type of bilingualism Lambert hoped to develop because of immersion bilingual education programmes. A child enters school with a first language (L1), a second language (L2) is added and, as a result, the child becomes a speaker of both languages. The thinking is that the child's bilingualism needs to move toward "ultimate attainment," an endpoint in which the process is complete. Subtractive bilingualism, however, is often what language-minority students get. Students enter school with an L1 and while the L2 is added, the first language is subtracted. The child's bilingualism is moving away from the "ultimate attainment" of bilingualism. Instead, it is moving backward toward the "ultimate attainment" of monolingualism.

Subtractive bilingualism only supports English in Zambia. Additive bilingualism supports double languages, which are not practiced in Zambian schools.

The presence of bilingual and trilingual language in education policies imply the existence of multiple languages in Zambia. Multilingualism has been increasing in Zambia especially in cosmopolitan towns like Lusaka, Livingstone, Solwezi and Kitwe due to urbanisation, migration, business and immigration. This trend is common in several countries around the world such as Germany, Norway, America and Japan. Urbanisation, migration and immigration have made most early grade classes in Lusaka and other towns in Zambia multilingual;

> In recent years, multilingualism has spread in education for varied reasons. It is increasingly common to find learners whose home languages are not the same as the majority language in their class. School classes are more linguistically diverse than in the past due to the mobility of the population (Gorter & Cenoz, 2016, p. 231).

The observations by Gorter and Cenoz applies to Lusaka district of Zambia as there are multiple languages spoken in schools of Lusaka creating multilingual classes. The presence of multilingual classes in Lusaka does not imply the absence of monolingual classes in Zambia. There are several monolingual classes in the rural schools of Zambia where all learners in class speak one language and the same language is used during play and in the homes. This study attempts to assess learners initial reading achievements in multilingual and monolingual classes.

3.1.6   Reading Interventions in Zambia

Reading interventions are initiatives started by the government of Zambia to help improve reading levels in the country. Reading interventions are extra accelerated lessons provided to learners in early grade classes that have shown reading difficulties and are behind in certain reading skills in normal classes and wants an opportunity to improve their reading and writing skills meant for their grade level. Lipson and Wixson (2012) noted that an intervention is a programme meant to enhance the general education curriculum based on students' performance on a variety of assessment measures. It targets skills or set of skills to improve student outcomes. It is a short-term contact with explicit instruction and usually demand monitoring frequently to document progress and it can be revised any time, when necessary, based on student performance. Reading interventions are contrasted with remedial work in reading. While there are close similarities (Old wine in a new bottle), reading intervention comes with more additional and accelerated teaching package than remediation that may be done by the same teacher and replicating the same lesson. Reading interventions have accelerated focused way of teaching reading skills to individual or small groups of learners (Clay, 1987). In interventions, pupils may participate in small group instruction depending on the skills they need or the design of the programme they decide to follow. Reading interventions are among the neglected areas in Zambia which if taken seriously may help improve literacy levels in the country.

In a collective study by Zambia's Ministry of Education (MoE), Flemish Association for Development Cooperation and Technical Assistance (VVOB), United Nations International Children's Emergency Fund (UNICEF) and Abdul Latif Jameel Poverty Action Lab (J-PAL) Africa completed the pilot study on the use of the 'Catch Up' intervention reading programme in four selected districts in 2017 (VVOB, 2017). The aim of this study was to improve learning outcomes in literacy and numeracy of primary learners in grades 3 to 5 in a Catch-Up

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intervention using a methodology called Teaching at the Right Level (TaRL)'. The findings of the study revealed that despite the efforts made by "Zambian children to go to primary schools, many of them are not learning literacy skills very much. This is not acceptable, because once left behind, children have little opportunities to catch up. 'Teaching at the Right Level' is a remedial teaching methodology that helps these learners" (VVOB, 2017, p.19). Teaching at the right level was introduced by Abdul Latif Jameel Poverty Action Lab, Pratham organisation and United Nations International Children's Emergency Fund introduced the approach in 80 schools in Eastern and Southern province and commissioned VVOB to implement the study initiative. Overall results showed that the catch-up reading intervention programme helped multiple learners that were behind learned to read in the targeted schools. Due to its positive results, the Ministry of Education identified its preferred model of the Teaching at the Right Level (TaRL) approach, where learners that were behind in reading were expected to attend a one-hour lesson during each school day for two terms. Teachers under this catch-up intervention regrouped children based on their performance in a reading test given to them rather than following age or grade level. The Catch-Up teaching was centred on basic literacy and numeracy. The Catch-Up programme scaled up this successful approach to approximately 1,800 schools from 2017 to 2020. VVOB provided support for the scale-up for at least the first two years. In five years, VVOB had an implementing role at the level of teachers and schools. However, in the scale-up, VVOB operates as a capacity developer of government staff at zonal, district and provincial level to ensure the Teaching at the Right Level (TaRL) approach was infused in the regular activities of schools and the Ministry of Education to ensure learners are taught at the level of their abilities in Schools (https://www.vvob.org/en/programmes/zambia-catch).

The Catch-Up intervention for reading and numeracy study using TaRL approach by VVOB is related to the current study because it outlines an existing intervention initiative that is already taking place in Zambia to help learners that have difficulties in reading to catch up by reading at the right level. The present study benefits by reflecting on the current reading intervention options available in Zambia and how they are responding to the needs of learners that may be behind in reading skills in their classes. It is hoped that the current study may provide more specific intervention programmes responding to specific needs of individual learners. It is also important to note that, at the time of this study, the Catch-up intervention programme was running as a pilot intervention in some schools of Southern and Eastern provinces of Zambia.

In an intervention study by Jere-Folotiya, Chansa-Kabali, Munachaka, Sampa, Yalukanda, Westerholm, Richardson, Serpell and Lyytinen (2014) that sought to document conditions under which a computer-based literacy game (GraphoGame™) that was developed in Finland and used in schools there, could enhance literacy skills of first grade students in an African city. The effect of using this mobile phone literacy game to improve literacy levels of Grade One students in Zambian schools involved first grade students from Government schools (N = 573). The students were randomly picked into control (N = 314) and various intervention groups (N = 259). The GraphoGame™ was administered on cellphones to students at their schools under supervision. "Each student in the study was assessed using a battery of locally developed cognitive tests that measured emergent literacy skills (Orthography test), decoding competence (Spelling test), vocabulary (Picture Vocabulary Test—PVT) and arithmetic (Zambia Achievement Test—ZAT)" (P. 417). The 2014 paper was a report of "the findings of an applied research project entitled Reading Support for Zambian Children (RESUZ) conducted in 2011 with a representative sample of 573 Grade One students at public schools in the multilingual capital city of Lusaka" (p. 418). This project was a collaboration between the University of Zambia and University of Jyväskylä (Finland). The overall principal objective was "to assess the efficiency and effectiveness of a supplementary, computer-mediated learning resource in the form of a phonics game (GraphoGame™) played on a hand-held cell-phone and factors associated with its efficiency" (p. 418). As an intervention to regular reading instruction in Zambia, the results of the study showed that;

> There was a positive effect of the game for the Spelling test—which closely
> targeted the skill for which GraphoGame™ was designed to promote. The
> most effective intervention combined exposure of both the teachers and the
> students to the game. Initial letter knowledge was a good predictor of final
> letter knowledge on GraphoGame™ (P.417).

The game played by learners showed remarkable results towards the development of initial literacy in Lusaka public schools amid multiple constraints such as classroom environments, curriculum, teaching practices and family backgrounds. The authors reported an "interference of English letter name knowledge, despite the independent and explicit goal of teaching reading in the local languages" (p. 419). The study recommended that GraphoGame could be used as an independent supplementary learning activity and reading intervention to support schools' efforts

in teaching reading to Zambian learners. Authors noted that Graphogame reinforces the letter-sound knowledge and phonemic awareness already being taught in the Zambian primary classrooms. "With the enormous number of students in a classroom, the game can be played by the students without the direct supervision of the teachers. A schedule can be prepared so that students can take turns playing the game for a specified period each day" (p. 433). As an intervention, leaners were expected to be adequately trained in the use of the Graphogame with regular monitoring by the teacher. Regular monitoring will help establish the progress of learners and identify problematic areas with the view of providing additional alternative intervention where necessary.

The study by Jere-Folotiya et al. (2014) is related to the current study as it partly suggests an alternative solution to the problem of reading in Zambia. The use of phone related Graphogames may be a good intervention for struggling readers to help them understand letter-sound relations. If such an intervention does not work out for some learners, may be due to lack of facilities such as electricity or electronic gadgets, the current study suggests alternative intervention programmes that struggling readers may consider using to improve the reading as a way of responding to the challenges noted in this study.

Chuunga (2013) conducted an intervention study about teachers' practices in the teaching of reading and writing towards supporting learners with reading difficulties at lower primary among fourth-graders teachers in Monze District of Zambia. The aim of the study was "to investigate how teachers practiced the teaching of reading and writing to children at the lower primary level in Zambia" (p. 1). The researcher used a case study under the qualitative approach to collect data through interviews, lesson observation and document analysis by listening to teachers that taught reading and later describing their narrative story about supporting learners with reading difficulties to inform the findings. The first two research questions that the study sought to address focused on the teachers' backgrounds towards the teaching of reading with prevailing conditions. The last three research questions focused on assessment of reading, planning and classroom implementation. Among the findings were that teachers taught reading to the best of their abilities. Some schools made use of remedial literacy activities to support learning by learners after class, but this intervention was challenged by other school conditions such as over enrollment, teacher-pupil ratio and lack of teaching and reading materials. "The

results further show that the assessment procedures used to identify learners with reading difficulties only worked to further widen the gap between the so called 'slow learners' and 'fast learners'" (p. ii). Teachers and schools stressed much on summative assessments with little formative assessments. Teachers' performance in the teaching of reading were challenged by multiple factors including over enrolment, teacher-pupil ratio and lack of teaching and learning materials. "This made it difficult for teachers to consequently teach reading and support learners with reading difficulties leading to poor classroom practice" (p. ii). This means that remedial work and reading interventions for early grade learners is a challenge to accomplish.

Chuunga's (2013) study is related to the current study in the sense that it outlines the possible challenges teacher are likely to encounter in implementing the reading intervention programmes. These factors include over enrolment, high teacher-pupil ratio and inadequate appropriate teaching and learning materials. Chunga's study shades lighter on the current study in the sense that, whatever the current study may attempt to recommend as intervention model, there is need to consider factors such as teacher-pupil ratio and availability of teaching and learning materials.

3.2   Review of Studies on Learners' Reading Achievements in Multilingual Settings

Reading achievements of learners in multilinguals classes was the focus of this study. As a dependent variable, studies related to this subject matter needed review. Over the last three decades, a lot of research has been carried out in Zambia, Africa and other parts of the world about the performance or reading achievements of early grade learners. The results have shown low reading levels among learners globally. Studies carried out in some countries presents a better reading picture in comparison to others. This is an indication that, there are best practices that can be learnt across evidence-based research about the teaching of reading to early grade learners. Research has presented multiple reasons associated with low reading levels that partly informed and influenced the design of this study. In other words, the focus of this segment of literature review is to highlight studies that have been carried out about the performance or reading achievements of early grade learners in reading as a focus of research objective one of this study.

In a baseline survey by the United States Agency for International Development (USAID)/Zambia (2018), Grade 2 learners' performance in the core reading skills were tracked

over time using the Early Grade Reading Assessment (EGRA) tool. The focus of this survey was to measure reading achievements of Grade 2 learners in reading and decoding skills of assessment items ranging from letter sound to words. The baseline survey further aimed at addressing the current reading status of Grade 2 learners and establish whether gender or school type that learners attended had an impact on their reading performance. The results on reading abilities in Grade 2 as reported in this baseline survey were that "Forty percent of learners could not correctly identify a single letter sound out of 100 letters. The Ministry of Education (MoGE) curriculum indicates that all letter sounds are taught in Grade One and then reviewed in Grade 2. However, overall, 39.09 percent of learners scored zero, indicating that they could not identify letters, or the correct sounds associated with them" (USAID/Zambia, 2018, p. x). The results of this baseline survey showed that over 30% of Grade 2 learners across the targeted five Zambian regional languages were unable to identify single letter sounds. Over half the total number of learners were unable to read syllables. Over 75% could not decode non-words. Learners exhibited low alphabetic or letter knowledge and decoding skills, most Grade 2 learners could not read fluently and comprehend a text at a desirable level. The study associated the poor results due to lack of teachers' use of evidenced-based instructional practices in teaching reading. In addition, teachers did not provide positive feedback to learners adequately and schools lacked adequate reading materials.

This baseline survey is important to the current study because it is raising some reasons or factors contributing to low literacy levels among early grade learners in Zambia. The teacher factor and inadequate teaching and learning materials have been cited in other studies as well as an alternative explanation to the low literacy levels in Zambia. In addition, the USAID/Zambia survey is also important to the current study because it highlights the scope and framework of the baseline which is different from the current study that focused on Grade One learners with a different focus as explained in chapter one of this thesis. Despite the differences in the focus of the two studies, they are addressing an important issue that has perennially affected the lives of Zambian children.

In 2015, the Ministry of Education, Science, Vocational Training and Early Education (MESVTEE) in Zambia carried out a national assessment survey on learning achievements in Grade 2. The purpose of "the study was to measure a basic skill that all learners need to possess

as the foundation of a successful education: being able to read fluently with comprehension. The results can be applied to curriculum development and teacher training to increase the focus and quality of early grade reading instruction in Zambia" (Ministry of Education, Science, Vocational Training and Early Education, 2015, p. 3). This descriptive survey sought to understand how well learners in Zambia learned foundational reading skills in their local languages of instruction, by grade 2, how well were grade 2 learners able to name the letters of the English alphabet and understand what they heard in English. The survey also looked at the effects individuals, school-related and socioeconomic factors have on reading in any language. Lastly, the survey also compared reading results from this survey assessment to other previous ones (p. 5). This national survey involved 4,855 Grade 2 learners across all the 10 provinces of Zambia and in all the seven regional official local languages of instruction.

The results of this survey showed that learners in Grade 2 exhibited multiple challenges in reading skills across assessment items;

> … Grade 2 learners, on average, were struggling to read fluently; the average oral reading fluency rate for the local languages ranged from 1.84 to 8.40 words per minute, indicating that the typical Grade 2 pupil could sight-recognize a few words but struggled to string the words from a passage into a coherent sentence (P.2).

The findings of the survey further revealed that "learners were able to produce the correct sounds of only between 3.68 and 9.63 letters per minute across languages, indicating they lacked the foundation needed to decode unfamiliar words" (p. 2). Similar findings were reported in other segments of assessments such as the Reading Comprehension subtask, for which most learners were challenged to answer the comprehension questions of the passage they had just read. The survey further noted that there were several factors hindering reading progress in Zambia.

As a government survey, this study was important to the current study because it provided an alternative explanation for the low literacy levels in Zambia. The study further raised some factors contributing to low literacy levels in Zambia that included individual learner's factors, socioeconomic and school factors. The survey further acknowledged that "While these results will help inform policy for curriculum and instruction for early grade reading, it is important to stress that other contributing factors also make it challenging for children to learn to read" (p.

2). The survey studied Grade 2 learners and assessed them on several variables with a view of checking their reading achievements. The current study focused on Grade One learners and compared the performance of one group from another with a view of establishing whether, there was a significant difference in performance between speakers of the language of instruction to non-speakers.

Simfukwe (2019) carried out a qualitative study titled 'teachers' views on factors leading to literacy achievements among grades 1-4 learners in selected primary schools of Lusaka district. The study aimed at investigating the views of teachers about factors that leads to low literacy achievements among early grade learners. The researcher used a qualitative mode of inquiry that involved face-to-face interviews with the teachers. The findings revealed multiple factors that contributed to low literacy levels and these included teachers' commitment to work, lack of demanding work and motivation, inadequate teaching and learning materials, absence of monitoring and supervision of teachers by the school administration, language of instruction and pupil interest.

The study by Simfukwe was important to the present study because it explains multiple factors associated with low literacy levels among early grade learners in Lusaka as far as teachers of reading were concerned. His study also raised the factor of the language of instruction as a contributory aspect to low literacy levels in Zambia.

A mixed method study by Chipili (2016), which focused on "investigating factors that contribute to mediocre performance in reading of grade 2 learners in selected primary schools of Chibombo District" showed that there was deficient performance of learners in reading. The aims of Chipili's study were "to establish the attitude of teachers towards the teaching of literacy, to assess the attitude of learners towards the learning of literacy and to establish causes of poor reading" (p. 4). Chipili targeted Grade 2 learners and quantitative "data collection on learners was conducted using the assessment tool, Early Grade Reading assessment (EGRA) which was developed by Time to Learn (TTL) and acknowledged by Curriculum Development Centre (CDC) in the Ministry of Education" (p. 20). Interview guides were used to collect qualitative data. Quantitative data showed that several Grade 2 learners had difficulties in reading words and for some learners, uttering correct sounds was a problem. Further, the performance in letter-sound knowledge was poor because learners failed to name the sounds. In this task, performance

of learners indicated that they had challenges in associating letters with sounds. Results showed that out of 102 learners, only 15 of them learners scored 60 to 80 marks, 29 learners scored between 41 and 60. The rest (58 learners) got between 0 and 20. "Sounds (phonemes) are the key elements a child should master in learning to read. If they lack sound knowledge, then reading difficulties in such children should be expected even in their advanced grades" (p. 26). Chipili's study further showed that "teachers were playing a key role especially in the preparation of the decodable stories, they were able to create stories using the sound and syllabus of the day" (p. x). The study further revealed that "teacher- learner interaction was not sufficiently implemented. Most teachers were having double classes due to low staffing levels and high pupil enrolment. Some teachers were in a hurry of teaching to finish the syllabus without much focus on skills needed by learners" (p. x).

Chipili's study is important to the current one as it highlights reading achievements and causes of reading difficulties among early grade learners in Zambia which is part of what objective one addresses on this study. Her study focused on factors that affected poor reading performance in Grade 2 while this study focusses on Grade One classes with a view of establishing if at all there are differences in performances between speakers and non-speakers of the language of instruction vis-à-vis monolingual and multilingual classes. This study also focusses on establishing the strategies teachers.

In 2012, Kachinga concluded a mixed method study entitled "Reading performance in Nyanja of learners taught by an Indigenous teacher and those taught by a non-indigenous teacher of Nyanja at Lotus Basic School of Lusaka". The study sought to establish whether there were differences in performance between learners that were taught by a teacher, whose mother tongue was the language of literacy instruction to learners that were taught by a teacher, whose mother tongue was not the language of instruction. Data was collected through in class test, interviews and lesson observation. While the actual number or percentages in descriptive statistics showed an advantage for learners taught by a teacher, whose first language was used as media of instruction, the test on inferential statistics did not show any differences in performance between learners that were taught by a teacher, whose mother tongue was used as language of literacy instruction to learners that were taught by a teacher, whose mother tongue was not the language of instruction. The study further reported that "… despite both groups of learners being poor

readers, there was a difference in the reading performance of the learners from the two classes. The difference, however, was not significant. It was also revealed that the Indigenous teacher was proficient and comfortable when teaching using Nyanja while the non-Indigenous teacher lacked proficiency and had difficulty teaching using Nyanja."

Kachinga focused on the performance of learners using the lens of teachers' language background while the present study used the performance of learners that were speakers and non-speakers of the language of instruction in both pre-test and post-test. Hence, the need to carry out the current study.

Kumwenda (2011) conducted a study on multi-ethnic classes where he wanted to find out about reading achievements of learners to whom Chewa was not their first language in comparison to those whose Chewa was their first language. The study involved 109 learners from three schools in Chipata Urban and it was conducted at the end of Grade One. All the learners from the different language backgrounds were mixed and used to learn in one classroom. In the area where this study was conducted in Chipata of Eastern province of Zambia, Chewa/Nyanja was the official media of instruction for literacy education in Grade One only. This was the policy under the New Breakthrough to Literacy (NBTL) that was part of the Primary Reading Programme (PRP). The learners whose Chewa was not their first language were labelled category 2 while the other group whose Chewa was their first language were labelled category 1. The findings revealed that the difference in performance in reading between the learners to whom Chichewa was not their first language (category 2) and those to whom Chichewa was their first language (category 1) was significant. This information was reflected as follows;

…results showed that 96 respondents in category 2 got an average of 50% while 13 respondents in category 1 got an average of 66.7%. This suggests that learners to whom Chichewa was their first language performed better than learners to whom Chichewa was not their first language. The difference was 16.7% (Kumwenda, 2011, p. 45).

The study by Kumwenda imply that in a multilingual classroom, there is one group of students that is disadvantaged particularly the minority students whose languages were not used as media of instruction in their classes. On the other hand, children whose first language was used as media of instruction were advantaged and performed better than their counterparts.

Kumwenda's study is relate to the current study in the sense that both studies looked speakers and non-speakers of the language of instruction in multilingual settings. The two studies also looked at reading achievements where the current study's catchment areas were Lusaka and Katete Districts while Kumwenda's was Chipata. Kumwenda's study used existing school results as basis for comparison while the current study administered pre-test and post-test using a national modified assessment tool.

Mwanza (2011) carried out a comparative study on reading performance of pupils with Preschool and Non-preschool background among Grade One learners for literacy in Lusaka. The study sought to establish whether there was a difference in reading performance between preschool and non-preschool pupils and checked for differences in executive skills. Her study showed no differences in reading performance between preschool and non-preschool pupils in Grade One and equally, there was no difference in predictors of reading between preschool and non-preschool children. Mwanza's study also found no differences in executive function skills between preschool and non-preschool children. The study revealed that there were significantly low reading levels among Grade Ones. As a mixed method research, inferential statistics also showed no statistically significant differences in reading and executive skills between pupils with preschool and those without. Despite the results, teachers' views were that pupils with preschool exposure performed significantly well on letter knowledge and were reported to pay more attention than the non-preschool backgrounds during lessons.

Mwanza's study is important to the present study for two reasons; first, it acknowledges that learners in Grade One has difficulties in reading in Zambia which the present study is equally investigating with a focus on performances among diverse groups of learners with different language orientations. Second, the study acknowledges that the pre-school system in Zambia is not helping learners towards reading. While the present study does not have a bearing on pre-school background, Mwanza's study and the current one used similar research methodologies with some variations.

In his qualitative study, Mwambazi (2011) investigated the factors and the nature of low reading achievement among grade two pupils in selected schools of Mpika and Mbala Districts. The researcher used the Basic Skills Assessment Tool (BASAT), questionnaires, the Interview Guide and the Lesson Observation Form (LOF) to collect data. Test results of the study

confirmed that grade two pupils in target schools were not able to read Zambian Languages and English language materials meant for their grade level. Chi-square tests showed that there was no significant difference in performance among the six basic schools that were compared on the study. Mwambazi cited multiple reasons as an alternative explanation for poor reading performance across the six schools compared. These reasons included;

> absenteeism, shortage of suitable teaching/learning materials, shortage of teachers particularly those trained in literacy methodologies, large classes, poor family and educational background, poor and inadequate infrastructure, pupils not breaking through in Grade One, inadequate time allocated for literacy/reading lessons and use of unfamiliar language of instruction.

The study recommended that government through the ministry of education needed to supply adequate and appropriate teaching/learning materials for literacy and reading. Early grade teachers should be closely supervised and supported for them to produce desirable results. The study further recommended for the establishment of closer links between teachers with learners' homes.

The study by Mwambazi (2011) equally provided reasons for poor reading levels in Zambia and called for actions to be taken by government authorities in charge of education. Mwambazi's study and the current research both focused on reading achievements and the factors associated to its failure. The current study went further to isolate a single problem on language of instruction and investigated it with a view of establishing whether it is indeed a factor to the development of reading levels in Zambia.

A study by Wagner (2017) carried out in rural Guinea-Bissau of west Africa about children's reading in low-income countries shows some reading and educational realities of most low-income countries around the world. The author in this article sought to explore the research and policy related to children's reading in low-income countries and get to a conclusion that "many students are not even learning the basics of reading, writing and mathematics in their five years of primary school," (p.127). The author makes a comparison about the expectations of international agencies on education such as World Bank and UNESCO on skills children are expected to acquire at the end of the day. Further, the author also compared the role parents and guardians play in the development of reading and writing skills in Europe with literate families and rural

Africa with illiterate families. The author reported that rural learners face multiple challenges in accessing good education due to multiple challenges raging from distance to school, materials, early marriages and natural disasters. Learners and teachers in rural schools face multiple challenges that may hinder their relative progress in education. The author also labored much on the debate of the language of instruction and questions which languages should be used for instruction in multilingual and monolingual classes. The author argues that some learners from marginalized groups are forced to learn in a language unknown to them and in some cases; their performance is compromised due to lack of knowledge of language of literacy instruction.

This study by Wagner (2017) is related to the current study because it categorically alleges that learners that have difficulties in using the language of instruction have deficient performance in reading. This was part of the major problem that the current study sought to address by testing learners across groups in the present study.

In Kenya, Piper, Zuilkowski and Mugenda (2014) had a reflective study on first year effects of the Primary Mathematics and Reading (PRIMR) Initiative about improving reading outcomes. The study noted that while many learners in Kenya are participating in education, literacy outcomes remain poor. The Primary Mathematics and Reading (PRIMR) Initiative focused on improving "literacy learning by aligning curriculum and teacher practices with current research, providing ongoing instructional support and observation and supplying basic instructional materials in English and Kiswahili books for students" (p. 11). Furthermore, "PRIMR, focused on reading and mathematics in grades 1 and 2, using a nested series of randomized controlled trials to examine the effectiveness of several interventions, including enhanced technology in the classroom and additional teacher support" (p. 12). The outcome of this study was that there was an improvement on oral reading fluency in early grade classes in more than 400 schools in three counties. In general, the study "support the importance of in-class teacher support in programme implementation to improve literacy outcomes" (p. 11).

This study is important to current study in Zambia as it stresses on the importance of teaching and learning materials as well as teacher support as intervention strategies to improve literacy outcomes.

In Namibia, a study by Commeyras and Ketsitlile (2013) focused on reading achievements and highlighted Namibia's current position in reading and brought out research and other documents

pertaining the teaching of reading in Botswana from independence in 1965 to 2013. The purpose of the review was to get a big picture on reading education in Botswana and the results were reported in four categories: Reading in classroom, reading and policy, reading performance and reading outside school. The review methodology and sources of data were internet databases including dissertation abstracts, ERIC, JSTOR and web of science using terms and limiters such as read*, literacy, literate or illitera and Botswana*. Searches were expanded using google scholar with terms like "Botswana and reading or Literacy. Searches continued at University of Botswana where at least one copy of every document published in Botswana was archived. The results showed that teachers in Namibia were not providing much guidance to the pupils about reading and most of them lacked content knowledge. Teachers had limited knowledge of reading instruction and informal assessments were not conducted due to lack of training. Teaching and learning materials lacked in schools. Pupils' reading performance was poor and was linked to ill qualification of teachers. About home-school partnership, the study revealed that parents wanted their children to know how to read but some did not know how to help them due to lack of knowledge or they were busy with their office work. The study noted that students that come to school whose first language is not Setswana or English official medium of instruction should be given special attention so that they are not left behind.

This Namibia study informs the current study in Zambia in multiple ways. First, it calls for strengthened home-school partnership for teaching learners. Second, it recommends for teacher training to teaching reading effectively. Third, it highlights the problem of linguistic diversity and how Namibia settled for one or two languages at the expense of views viewing language as a problem. It also calls for the provision of teaching and learning materials and, presents the reading situation in Namibia that is closely related to the Zambian situation where the current study takes place.

Another qualitative study done in South Africa by Geske and Ozola (2008) whose major objective was to find out the reasons behind the low levels of reading among primary school students, found that pupil interest and absenteeism were critical to learners' performance in school. The data from IEA (International Association for the Evaluation of Educational Achievement) and Progress in International Reading Literacy Study 2001 were also analysed and reported that there were multiple factors that affected the performance of learners in early

grade classes. Among the findings of the study were that the socioeconomic situation of the family has a profound impact on students reading achievements. They also reported that the wellbeing and parents' education background also contributes, as they would be reading aloud to a child at the pre-school age. Students high achieving in reading literacy usually like reading for their own enjoyment and come from families where parents spend a lot of time on reading. Similarly, one other study by Dawkins (2017) whose purpose was to understand the reasons, as perceived by elementary school teachers at the target Title I school, for low student achievement in reading. The findings indicated that the teacher participants believed that there is need for increased parental involvement in reading. Parental involvement and the home environment were listed as two of the principal factors in student achievement in reading.

The studies by Geske and Ozola (2008) and Dawkins (2017) underscores the importance of learner interests, attendance of classes and parental support to the development of reading skills among leaners. Some of these factors such as parental involvement and absenteeism were also raised in this study as critical predictors of reading outcomes among learners.

Milić and Marić (2021) study on improving reading and writing literacy in I cycle of primary education in Montenegro in Europe unveiled low reading levels among early grade learners. This study aimed at examining the didactic/pedagogical issues and teaching/learning strategies by determining the characteristics of pre-literary skills in the I grade, reading skills in the II grade and reading and writing skills in the III grade. The study also sought to establish the difficulties that teachers faced in the teaching of literacy. Researchers used a qualitative mode of inquiry by observing some classes in primary schools in a few regions including Podgorica the capital city of Montenegro, Mojkovac, Budva and Nikšić. Findings revealed that a substantial number of I grade pupils did not have functional linking of symbols and had difficulties in understanding the words structures. Furthermore, pupils in the second grade (II grade) did not make a distinction in handwritten and hand printed letters and had difficulties with punctuation. There were difficulties in general understanding and the simultaneous processing of information. The presence of aspects of dyslexia and dysgraphia was observed among learners. Third grade learners (III grades) had uncertainties in writing, insufficient knowledge of fine graphomotorics and each 10th child had a difficulty in reading and understand what was read. About 13% of learners had difficulties in writing down what was read and about

22% of them had a reduced skill to draft a story based on the picture. Researchers in this study recommended for the need to redefine teaching goals, increase the number of hours for acquiring pre-school skills, teaching languages and teaching literature, propose more clearly the activities of adopting pre and general literacy skills, earlier learning of the Latin letters, to modernize teaching and have a team approach to teaching (p.12).

The study from Montenegro country is related the present study in Zambia because the two countries share similar literacy situation. Early grade pupils in Montenegro as explained in the study exhibited multiple challenges in decoding letters, phonological awareness and writing, Zambian learners equally exhibit the same challenges in early grade classes as explained in the background of this study and part of the review of literature. The study by Milić and Marić (2021) is important as it informs the present study that challenges of reading and writing skills among early grade learners are not unique to Zambia or in the present study. Multiple countries around the world are making alternative ways of improving reading which the present study envisage to suggest so that reading achievements can improve in Zambia.

In the United States of America, National Assessment of Educational Progress (NAEP) carries out reading assessments regularly;

> National Assessment of Educational Progress (NAEP) assessment in reading comprehension is given every two years to students at grades 4 and 8 and approximately every four years at Grade 2. The assessment measures reading comprehension by asking students to read selected grade-appropriate materials and answer questions based on what they have read. The results present a broad view of students' reading knowledge, skills and performance over time. The most recent reading assessment was given in 2019 to approximately 150,600 grade 4 students, 143,100 grade 8 students and 26,700 Grade 2 students (https://nces.ed.gov/nationsreportcard/reading/).

These assessments project the performance of learners in certain grades, focusing on specific reading skills. The 2019 assessment report indicated a slight improvement from the previous 2017 assessment. Overall, 35% of 4th graders and 34% of 8th graders performed at or above the National Assessment of Educational Progress proficient in reading at national level. Across the states or jurisdictions where assessments occur, the percentage of public school fourth graders

that performed at or above *NAEP Proficient* in reading ranged from 24 percent to 49 percent (https://nces.ed.gov/nationsreportcard/reading/). The National Assessment of Education Progress achievement levels are performance standards that describe in detail what students should know and be able to do at those grade levels. Results are reported as percentages of students performing at or above three achievement levels (*NAEP Basic*, *NAEP Proficient* and *NAEP Advanced*). Students performing at or above the *NAEP Proficient* level on NAEP assessments demonstrate solid academic performance and competency over challenging subject matter. The performance shows proficiency in the subject matter that is being assessed (https://www.nationsreportcard.gov/reading/states/achievement/?grade=4).

The results obtained from the National Assessment of Educational Progress (NAEP) in the United States of America shows tremendous reading failure by several American early grade learners. Honig, Diamond and Gutlohn (2018, p.3) cited four factors attributing to reading failure in America "neurological factors (brain metabolism), familial factors (environment), socioeconomic factors (poverty) and instructional factors (teaching)". Despite huge investments in education and resources in America, reading scores are abysmally low and have not changed much across states.

This study is related to the current research in Zambia because both studies focused on assessing learners' proficiency and knowledge on certain skills in reading. The NAEP assessed reading progress in comprehension while the present study in Zambia focused on assessing alphabetic principle, letter knowledge, phonics and decoding words in general. It is clear from NAEP results that the challenges that America is facing in reading failure as explained by Honig et al. (2018) are the same as those of Zambia. A wealthy nation like USA is expected to have much better results in reading among early grade learners than most third world countries.

Progress in International Reading Literacy Study (PIRLS) of 2016 places Singapore primary pupils in second position in an international test that measured how well they could read out of 58 countries or territories. Progress in International Reading Literacy Study is a well-established worldwide standard for monitoring reading comprehension achievement in the fourth grade and started its assessments in 2001. In the year 2016, PIRLS added an optional electronic component for assessing reading tagged 'ePIRLS' as an innovative assessment of online information reading. Several studies have acknowledged that reading is the foundation for academic success

in schools and PIRLS is a valuable vehicle for studying whether new or revised policies impact achievement. The PIRLS' reading assessment is based on a comprehensive framework that covers major reading purposes that include but not limited to the following: literary experiences, acquisition and use of information and to search for information on the internet (https://timssandpirls.bc.edu/pirls2021/index.html). The 2016 results of the Progress in International Reading Literacy Study found that pupils in Singapore outperformed their peers in other countries in reading and navigating online text. Singapore pupils came up tops surpassing several wealth countries in reading as shown in Figure 4. About 6,500 pupils from all 177 primary schools in Singapore took part in the test in 2016. More than 319,000 pupils worldwide took part in the PIRLS study. Russia was top out of 58 countries or educational systems in this round, while Hong Kong was third, Ireland fourth and Finland fifth. The results showed that the pupils did well in higher-order skills such as interpreting and evaluating information.

Best readers

Top 10 performers in reading literacy

Education system	Average score
Russia	581
Singapore	576
Hong Kong	569
Ireland	567
Finland	566
Poland	565
Northern Ireland	565
Norway	559
Chinese Taipei	559
England	559

Top five countries in online reading literacy

Education system	Average score
Singapore	588
Norway	568
Ireland	567
Sweden	559
Denmark	558

Source: PROGRESS IN INTERNATIONAL READING LITERACY STUDY (PIRLS) AND EPIRLS 2016
STRAITS TIMES GRAPHICS

Figure 4: International Reading Performance by PIRLS

The PIRLS 2016 study is shedding more light on the present study and about the reading situation in Zambia as well as other countries. For example, some developing countries such as Singapore that performed better, outperforming developed countries such as United Stated and England, is an indication that any country can improve its education system and do better. The improved performance in Singapore, Finland and Sweden does not mean that they do not have challenges on their own. However, these countries prioritized early grade education yield better results. Furthermore, Singapore has several languages spoken and learners can breakthrough to reading and writing early, surpassing other developed countries. This may be an indication that language of literacy instruction, a focus of the current study, may not be a major factor in helping learners to read.

Johansson, Myrberg and Rosen (2012) had research centred on teachers and tests as a means of measuring or assessing pupils' reading achievement in primary schools of Sweden. This study focused on examining validity aspects of teachers' judgements of pupils' reading skills in their classes. The research data emerged from Sweden's participation in the Progress in International Reading Literacy Study for Grades 3 and 4 learners. Overall, the study resolved that for pupils at the same achievement levels, as measured by PIRLS 2001 test, teachers' judgements of pupils' achievement levels varied from one teacher to another. There were significant differences between teachers' judgements in Grades 3 and 4. These variations were attributed to teacher experiences in the teaching profession. Teachers of Grade 3 who had taught their pupils for almost 3 years or more showed higher correspondence between their judgements and pupil achievement within classrooms than 4th-grade teachers who, typically, had only taught their pupils for approximately 1 semester at the time of the data collection. These results indicate that teachers' judgements and tests can be useful within classrooms, but that teachers may need external assessments to calibrate judgements over classrooms. In other words, teachers' judgements of their classrooms' performance in reading does not ideally represent the actual abilities of learners.

This study by Johansson, Myrberg and Rosen (2012) is important to the current study because it rules out the idea of basing performance of pupils reading abilities on teachers' views as was the case with some studies (Muzata, 2015; 2019) carried out in Zambia about low reading levels based on the views of teachers. Conversely, the study recommends intensive and thorough ways

of assessing learners with high external presence in those assessments. The assessment of learners in the present study in Zambia was done by external assessor in the presence of teachers as assistants to help in managing classes.

Veii and Everatt (2005) conducted a study about predictors of reading among Herero–English bilingual Namibian school children. The study involved 116 grades 2-5 bilingual speakers of Herero and English languages in four state schools. The study administered multiple measures in both Herero and English language including phonemic awareness, word reading to non-word reading and fluency. The two languages known by learners had distinctive features. For instance, Herero is an agglutinating language belonging to the family of Bantu languages and has a transparent orthography, unlike the opaque orthography of English that served as the learners' second language. The results of this study were that first and second language reading skills were best predicted by first language verbal comprehension and second language phonological processing. Literacy acquisition was faster in Herero with its transparent orthography than in English with its opaque orthography. The findings were also consistent with the view of the importance of phonological processing in early literacy development in both languages. Children with strong phonological processing skills in one language also showed similar skills in the other language.

This study is important to the current research as it correlates reading achievements in one language to another. Although the current study is not focusing on skill transfer from one language to another known to the learner, the study reminds readers that possessing multiple languages is an advantage on the part of learners, which was part of the focus in the currents. Therefore, multilingualism should not be viewed as a problem but as a resource for learner and teachers should be more helpful to bilingual learners. Reading achievements or gains among learners may be triggered by several factors such as instruction pedagogies, teacher factors, language matters, environment, materials and learner disadvantaging factors (Weir, 2001; Mumba & Mkandawire, 2020). These factors may promote or hinder effective teaching and learning in a school set up and eventually, would influence learning achievements for learners (Gurney, 2007). As reported by Weir, achievements in reading can be determined by language of instruction. This implies that teaching in monolingual and multilingual classes may have a bearing on reading achievements among learners. Tembo (1975) observed that learning in a

familiar language as a media of instruction facilitates quick acquisition of targeted skills. Furthermore, a series of evidence-based research worldwide has shown that, meaningful learning takes place when children are taught in a language that they understand which makes it easy in improving their reading performance (Banda & Simwinga, 2018; Tambulukani, 2015; Mwanza, 2012; Simwinga, 2007; Manchishi, 2004). Familiar language-based instruction empowers learners cognitively, which in turn maximizes their reading achievements (Benzies, 1940). Language of instruction as a factor in reading achievements imply that policy makers and educationalist need to take serious precautions when deciding on language of literacy instruction. This may become complex when dealing with multilingual classes (Blank, 2016). With appropriate language of instruction, children at a very tender age can demonstrate certain abilities and behaviours that can facilitate learning (Davidson & Weismer, 2014). Furthermore, Nally, Healy, Holloway and Lydon (2018, p. 15) noted that;

> … children as young as two years-of-age demonstrate emergent or pre-reading behaviors. These emergent reading behaviors include print awareness (letters and words have meaning), oral language skills (recite rhymes and letters) and print conventions (knowledge of book orientation and turning pages of a book).

It is these behaviours that in turn facilitate the acquisition of fluent reading abilities that lead to exceptional reading achievements among early grade learners.

This section has provided literature related to reading achievements or the performance of learners in reading among early grade learners as a focus of research objective one. The studies were conducted by various scholars and institutions including government wings, non-governmental organisations, scholars and researchers have been included from Zambia, Africa and other parts of the worlds. The next segment reviews literature related to the teaching of reading in diverse language and cultural background.

3.3   Instructional Strategies used by Teachers in Multilingual Classes

Instructional strategies as an independent variable that has an impact on learners' reading achievements was equally studied in linguistically and culturally diverse classes of Lusaka district. Most towns and cities around the globe are becoming increasingly diverse and multilingual due to the increase in migration, immigration and urbanization of people.

Multilingual communities automatically breed multilingual and diverse classes in education. In the case of Zambia where this study took place, classes in cosmopolitan cities such as Lusaka, Kitwe, Livingstone and Solwezi are becoming more diverse and multilingual. This is because Zambia has a long history of multilingualism as there are 73 languages and dialects representing ethnic groupings in the country. The exact number of Zambian languages is not known although many texts claim that Zambia has 73 languages or 73 languages and dialects. The Figure 73 is probably due to a non-distinction between language and dialect using the criterion of mutual intelligibility. If this criterion were used, the number of Zambian languages would probably be about 20 or 30 only (Chanda & Mkandawire, 2013; Simwinga, 2015; Banda & Jimaima, 2017). Furthermore, in the last three decades, the number of refugees and immigrants has been increasing in Zambia. This segment of literature review addresses the second research objective and it starts with a general survey of studies about teaching in multilingual classes followed by studies that recommend best practices and ends with the Zambian situation about teaching diverse learners.

A study by McNelly (2019) on language learning Policies through the lens of the three-language orientation theory (language as a problem, as a right and as a resource) developed by Ruiz (1984) analysed bilingual education programs in the United States stressing on practices, policies and outcomes of language as a problem, as a right and as a resource. The author noted that "Most national conversations surrounding education reform and the achievement gap move us toward a hegemonic or dominant structured society" (McNelly, 2019, p.5; Olivos, 2006). "One approach to the achievement gap is that students who are not meeting the requirements are to blame for not taking advantage of the opportunities they have available to them. Another approach to the achievement gap is that students who are not meeting the requirements are lacking the dominant cultural capital that the hegemonic or dominant structured society possesses" (Darder, 2011; Olivos, 2006). In both approaches, language is a key component (McNelly, 2019, p. 6).

The differences in achievement gaps across groups of students in the United States have been studied and discussed in education for decades. Some scholars have associated achievement gap to opportunity gap while others associated it to educational debt with biased resource distribution and funding opportunities (Schneider, 2011; Darling-Hammond, 2010; Ravitch,

2010; Ladson-Billings, 2006). "The achievement gap is one of the most talked-about issues in U.S. education. The term refers to the disparities in standardized test scores between Black and White, Latina/o and White and recent immigrant and White students" (Ladson-Billings, 2006, p.3). The term applies to achievement gaps among races or groups of students with diverse backgrounds. Ladson-Billings argues that a focus on the achievement gap is misplaced. Instead, there is need to look at the "education debt" that has accumulated over time, which comprises historical, economic, socio-political and moral components. This debt is extended to the language of instruction in culturally diverse and multilingual classes. Much of these discourses sideline the language factor even when they are dealing with culturally diverse and multilingual classes forcing unknown language on diverse students. The blame on all these debates has been associated with dominant cultural capital that the hegemonic or dominant structured society possesses created by the colonial whiteness in America and other parts of the world.

McNelly's (2019) study noted that the bilingual and diversity education programs in the United States were generating monolingual and limited bilingual students. This is because the "United States' monolingual approach has an outcome of non-supportive and limited integration" (p.6). The author suggests that since the nation is not approaching language as a resource, they may consider looking globally for examples that support generating bilingual and bicultural students because multilingual classes need much support and demand inclusive language practices. The author favours strong bilingual education programs that promote bilingual and bicultural children where for example, two languages can be used at the same time in education starting with a more familiar language moving slowly to a dominant one in a two-way or dual language program;

> Two-way or dual language programs are either 90/10 or 50/50. The 90/10 program instruction is 90% in the minority language with a gradual introduction toward equal use of the two languages later in elementary school. The 50/50 program has equal instruction usually one-half school day each of two languages (p.14).

Such classes may use bilingual or multilingual teachers that can switch from one language to another without problems. When monolingual teachers are used, they must practice team teaching so that in certain hours, one language of instruction can be used and in other hours, another language with a different teacher can be used.

This study by McNelly (2019) is related to the current research as both studies describe how nations can embrace multilingualism and development progressive bilingual and multilingual education programmes that may serve as part of the solution to the problems of multilingualism. While MacNelly's study was centred on America, the present study was based on Zambia where multilingualism has a long history but given little attention in education. Comprehensive multilingual programmes are definitive outcome of language as a resource in contrast to language as a problem that embraces monolingual language ideologies.

In a series of studies carried out under multilingual matters summarised by Baker and Wright (2017) publication about bilingual education, bilingualism and multilingualism. Several studies use the concept of bilingualism or bilingual education to include multilingualism or multilingual education and in these studies, bilingualism is interpreted the same way. The authors noted that "bilingualism and multilingualism relate to, for example, the use of two or more communication systems, identity and personality, globalization and assimilation, thinking and reading, education and employment, politics and culture" (p. xiii). Baker and Wright (2017) have provided a comprehensive guide and scenarios relevant to bilingualism and multilingualism. For example, their studies have unpacked critical dualisms and paradoxes throughout their research of bilingualism and multilingualism. For instance, the authors stated that the individual bilingual person is different from groups and societies where bilinguals live and that the linguistic view is often compared with the sociocultural and socio-political views. Many times, language skills and language competences are contrasted and similarly, codeswitching and translanguaging are correlated and contrasted in similar context. Baker and Wright (2017) present a broad discussion of diverse types of bilingual education, followed by an examination of the effectiveness of those types. After a focus on systems of bilingual education, bilingual and multilingual classrooms are examined considering pedagogical practices and language negotiation. Furthermore, multiliteracies and biliteracy and key bilingual education strategies have been presented. In all these discussions about bilingualism, multilingualism and bilingual education, political and cultural dimensions that surround bilingualism and bilingual education in society are explained. The authors provided alternative views about value and purpose of bilingualism and multilingualism in education. The goal of bilingual or multilingual education is to provide an environment conducive for learning to take place and a community where development can be viewed from diverse perspectives.

These studies by Baker and Wright (2017) relate to the present study in Zambia in the sense that, they provide alternative choices that Zambia and this study may take as an explanation for literacy and bilingual or multilingual education practices in the country. Baker and Wright (2017) also highlighted the general behaviour of young and older people towards the use of minority/dominant languages by arguing that, young people prefer to use a popular and dominant language for status and dislike minority language and this is the opposite with older generation. This discourse is important to the present study as it highlights language practices in literacy classrooms in multilingual classes of Zambia.

In a study by Marian and Shook (2012) that aimed at understanding the cognitive benefits of being bilingual or multilingual showed that "the bilingual brain can have better attention and task-switching capacities than the monolingual brain, thanks to its developed ability to inhibit one language while using another" (p.1). This study further claims that multilingual "children as young as seven months can better adjust to environmental changes, while bilingual seniors can experience less cognitive decline" (p.1). The study further stated that multilingual children address problems and conflicts in a more manageable and reasonable manner in comparison to monolingual counterparts. The study further reported that multilingual learners maintain a balance between two languages, "the bilingual brain relies on executive functions, a regulatory system of general cognitive abilities that includes processes such as attention and inhibition. Because both of a bilingual person's language systems are always active and competing, that person uses these control mechanisms every time she or he speaks or listens" (p.4).

This study is relating to the existing study in Zambia because it acknowledges the existence of multiple languages in classes that reflect a common trend in the world today. Much of world's population is becoming more bilingual or multilingual than monolingual. Multilingual communities and their respective classes must be supported in education and a means of addressing problems of multilingualism.

Baker (2011) stated that knowing more than one language is a resource. The author also indicated that developing bilingualism, multilingualism and biliteracy in schools highly contribute to higher achievement across all curricula and is a better use of human resources in a country's economy. Multilingualism helps and fosters self-esteem, self-identity and a more positive attitude to schooling and leads to increased social harmony and contentment. Over the

years, research has supported additive bilingualism as it strengthens students' academic stance. Multilingual students also have positive linguistic, cognitive, or academic growth (Cummins, 2011). Several other studies over time have shown that bilingual students show more developed awareness of the structure and functions of language itself and have advantages in learning additional languages beyond what they already know. Studies by Cummins (2008; 2009) have shown that bilingual education programmes with the goal of developing students' academic skills in languages do not create cognitive confusion or handicap in learning but allows students to benefit by having access to multiple languages. Communities that view language as a resource help their children benefit from bilingual or multilingual educational programmes. Such children and members of the community can train others within the community and raise the level of importance of their community as an important source of expertise (Ruíz, 1984).

The studies by Baker (2011) and Cummins (2008 & 2011) are related to the current study in Zambia as the country strive to find alternative ways addressing multilingual children. The current study learns that multilingualism is resource and that it should be embraced in the Zambian education systems because multilingualism is a norm of the 21st century classrooms in cosmopolitan environments.

Studies have shown that teaching bilingual or multilingual children demand teachers to create an environment that is supportive of multilingualism. An atmosphere where diversity and cultural differences are appreciated and respected as means of inclusion. Multilingual teachers should embrace principles of diversity, inclusion and oneness in classes. Allowing and appreciating the differences in multilingual classes is a good starting point for multilingual pedagogy. In such an environment, multilinguals develop an enhanced ability to analyse their own knowledge of the language and have greater control of language processing than monolinguals and thus multilinguals or bilingualism may encourage earlier reading acquisition and could lead to higher academic performance.

Garcia and Sylvan (2011) study attempted to understand educational pedagogies and practices that take place in Multilingual Classrooms. The aim of the study was to look "at how students plurilingual abilities are built through seven principles that support dynamic plurilingual practices in instruction: heterogeneity, collaboration, learner-centeredness, language and

content integration, language use from students up, experiential learning and local autonomy and responsibility" (p. 386) in a network of United States schools for newcomer immigrants. The paper echoed on the singularities in pluralities by stressing on identifying individual differences in languages exhibited by learners and how these can be used in multilingual classroom settings to foster learning. Garcia and Sylvan (2011) noted that much literature on bilingualism in education particularly "the education of language majorities or language minorities has most often treated language groups as if they were static, homogeneous and monolithic" (p. 385). In this regard, "models and pedagogies of second-language education and bilingual education developed in the 20th century generally treat groups as if they were monolingual and acquiring an additional language in a stepwise fashion" (p. 386). The authors argued that these programmes usually group students homogeneously by language level, using "established pedagogies and instructional materials that are levelled and that use one language at a time." This strict language arrangement in bilingual classrooms about who should speak, when and to whom;

> …responds to diglossic arrangements and models of bilingualism developed in the 20th century. However, in the 21st century, heteroglossic bilingual conceptualizations are needed in which the complex discursive practices of multilingual students, their translanguagings, are used in sense-making and in tending to the singularities in the pluralities that make up multilingual classrooms today.

Translanguaging as a goal to meaning making in diverse classes help learners become more knowledgeable and academically successful but also more confident users of academic English, better at translanguaging and more plurilingual-proficient. In this regard Garcia and Sylvan (2011) "presents translanguaging in education as the constant adaptation of linguistic resources in the service of meaning-making and intending to the singularities in the pluralities that make up multilingual classrooms today" (p. 385). The authors recommend that schools should encourage diversity or heterogeneity and build the strengths of every single individual learner in the school. "The collaborative structures in which students work and learn mirror those in which faculty work and learn, capitalizing on everyone's diverse strengths and maximizing their ability to support one another" (p. 396). Furthermore, "constructing learner-centered classrooms for meaningful student linguistic and content output is important. Many times, language

emerges most naturally in purposeful, language-rich, interdisciplinary study" (p. 397). Garcia and Sylvan (2011) noted that monolingualism is no longer a practice that should be tolerated in the 21st century. Since "the 21st century is characterized by the concurrent means of communication in many media and languages and, thus, conceptions of bilingualism and multilingualism must also become more flexible, more dynamic" in classes. Schools that respond to this more dynamic model of bilingualism or multilingualism adopt a dynamic plurilingual approach with translanguaging as an important strategy so that students and teachers can make sense of learning moment by moment. Rather than languages being strictly "assigned" a space, time, place, or person in the curriculum, these dynamic plurilingual programs use the individual student's languages to act on learning. We have just begun to understand the potential (and the possible limitations) of these educational programs.

This study relates to the present study in Zambia as it provides alternative strategies or methods for teaching multilingual classes which is part of the focus of the present study. The study detailed on models to teaching multilingual classes such as dynamic plurilingual approach and translanguaging as a resource to the teaching of multilingual and diverse classes.

Another study by García and Wei (2014) on translanguaging as an alternative method for teaching multilingual classes in education noted that it is important to go from bilingualism in education to translanguaging in education and the impact of this shift is to transform monolingual, foreign/second language education and bilingual education structures to more inclusive educational experiences for learners. One of the most successful approaches to bilingual teaching and learning has been the purposeful and simultaneous use of two or more languages in the same classroom, a process that is referred to as translanguaging. Garcia and Wei (2014) explain translanguaging in education as a process by which students and teachers engage in complex discursive practices that include all the language practices of students to develop new language practices and sustain old ones, communicate and appropriate knowledge and give voice to new socio-political realities by interrogating linguistic inequality.

This study is equally related to the current study as it explains strategies multilingual teachers can use to teach diverse learners which was the focus of the second research objective of this study. As noted in Garcia's studies, teaching using multilingual approaches is centred on the

idea that students would transfer the reading skills learnt in one language to another. Therefore, comprehensive bilingual programmes must be recommended in multilingual settings.

A conceptual study by Durga (2018) recommended the 'Bilingual Method' for teaching bilingual or multilingual learners. The bilingual method of teaching demand that teachers use one target language and only allow the teacher to use another language that is known to the learner for explaining a teaching point for purposes of aiding the learners to understand the topic. The bilingual method was developed by Dodson in 1967 and it partly combined aspects of the Direct Method and the Grammar Translation Methods. Durga (2018, p.4) stated that the Principles of the Bilingual Method of teaching include the following "Pupils can understand the words and sentences in foreign languages easier using mother tongue. When it comes to the classroom, the teacher does not need to create any artificial situations while teaching or explaining the meaning of words and sentences of the target language." This method of teaching emphasises on speech practice and provides greater practice of spoken language. Furthermore, it suits both rural and urban schools and makes use of linguistic habits formed during learning mother-tongue. The method partly helps learners learn two languages at a time and saves time, energy and labour of the teacher.

Durga's (2018) study resonate with the current thesis in the sense that it seeks alternative ways of teaching multilingual classes. Although the bilingual method suggests a weak form of bilingual education for multilingual classes (Garcia & Sylvan, 2011), it is a good starting point to think about bilingualism or multilingual education. Multilingual classes demand a more proactive language practice in classes that reflect learners' language resources to be present in the classroom space.

A study by Schroeder (2013) about teaching and assessing independent reading skills in multilingual African countries reflected those multiple challenges. Schroeder (2013) questions whether reading theories and reading methods that are products of research on monolingual English readers are appropriate in multilingual African contexts with different social, economic and linguistic situations. The author challenges the adoption of English reading methods for teaching literacy in African languages by citing variations in linguistic backgrounds, differences in orthographic depth, as well differences in phonological and morphological properties of languages. The author posits that some reading methods such as the Dual Route Model that

discusses phonological and lexical route for word processing, is more applicable to reading in an opaque orthography such as English than the transparent orthographies of African languages, where phonological processing is important. The author discusses three implications for reading methodologies that needs to be taken into consideration: the morphological, phonological and orthographical features of African languages when designing reading materials and instructional approaches. The author further emphasized for the need to contextualise reading curricula, instruction and assessment on the African continent and suggests numerous ways in which learners and teachers can be empowered to become better readers and reading teachers of African languages in ways that are congruent with the African context.

This study challenges the one size fits all approach to education and the author demands that multiple considerations must be considered reflecting the ethos of the context of reading in Africa. Linguistic context and situations surrounding African studies must be considered. This study is related to the current study as it looks for alternative ways of teaching reading in African languages, which is part of the focus of this study with a focus on Nyanja language of Zambia as a case in point. The point is that reading instruction in Nyanja may not rigidly follow the English model due to structural differences of languages.

In a study by Moll, Amanti, Neff and Gonzalez (1992) about funds of knowledge for teaching multilingual classes, the authors investigated home-school partnership by connecting learners' home experiences to their classrooms. The paper sought of establishing the role of the cultural and linguistic knowledge that learners come with from home to the classrooms. Moll et al. (1992) stated that when teachers in multilingual classes tap into the rich bodies of cultural knowledge and linguistic background by building relationships with their students and their wider social networks, they allow for meaningful learning opportunities for the learners. "Teaching practices that tap into multilingual ways of reading, writing and speaking allow students in diverse settings to access resources that enhance the personal significance of their classroom work, as well as expanding access to knowledge through texts in more than one language" (p.133). Moll's study suggests that one of the strategies multilingual teachers can use to when teaching linguistically and culturally diverse learners is to incorporate learners' home languages.

Multilingual learners know their home languages well and they come to school with a wealth of knowledge that teachers should tap into and respect. As a multilingual teacher, it is expected that space and time for multilingual learners use all their languages to think and express themselves must be provided many times in class. Create activities that allow each learner to use their languages and link it to what they are learning in a different language helps multilingual learners. Visual materials such as real objects and images may be a good starting point or multilinguals to say something in their home languages.

This study relates to the current one in that it suggests best practices for teaching multilingual learners, which the current study partly sought to establish in Zambia. Two strategies for teaching multilingual classes (use of home language and knowledge for learners and the use of visual aid) have been presented. These models suggest that teachers in multilingual classes needs to address specific needs of learners in such settings.

In a quasi-experimental quantitative study by Tambulukani (2015) on the teaching of initial reading in the first language in Zambia, the study sought to establish whether the language policy of introducing initial literacy in the local, familiar Zambian language in Grade One in Zambian primary schools was yielding the desired results of a breakthrough to literacy for all children. The study further wanted to establish whether the literacy skills and strategies gained from the Grade One course in the first language transferred to English literacy course in grade two (p. 7). Tambulukani's study tested the effects of a fit between the local language spoken in the homes and playground and the language officially designated as language of instruction using the Familiar Language Test and five literacy tests, which were administered to children. From three districts that were likely to differ in language fit, the author selected four state-funded primary schools that all used the new Primary Reading Programme for over six years. Two hundred and forty (240) learners were involved. "The researcher assessed learners beginning literacy in a Zambian language and English when they were in their second grade after 18 months (about 1 and a half years) of reading instruction" (p. vi).

The results on Tambulukani's study showed that the performance of learners whose language of instruction was the same as their first language (L1) was good on same variables while the performance of learners that were non-speakers of the language of instruction was lower on some variables. "On average children scored 9.71 words (SD=3.99) on the Familiar Language

Test. A minority scored 4 or lower (11%) or over 16 (6%)". Further, learners who according to the teacher were categorized as L1's performed better on the language of teaching with an average score of 8.04 and had low scores on the second language with some scoring as low as zero whereas children categorized as L2 did better on the other Zambian language with an average score of 7.27 and had low scores on the language of teaching with an average score of 2.74. "Differences between L1 and L2 on language of teaching and second language were significant according to t-tests, t (df = 238) = 10.64, p< .000 and t (df= 238) = -11.02, p< .001, respectively. In other words, children's scores on the familiar language test agreed with the categorization by teachers" (Tambulukani, 2015, p.80). The overall performance of speakers and non-speakers of the language of instruction was different on some variables but the same or close on certain variables on first language (L1) and second language (L2) speakers in Chipata.

The study by Tambulukani is related to the current study as it reflects the ideology that language policy in multilingual and diversity classrooms needs rethinking. Speakers and non-speakers of the language of instruction outperformed one another in some tests. This may mean that the language background of learners in diverse classes may not be a major factor that would hinder them from learning to read. Further, the current study is carried under a different reading programme (Primary Literacy Programme) while Tambulukani's study was carried out under the Primary Reading Programme with a view of establishing whether the language policy of introducing initial literacy in the local, familiar Zambian language in Grade One in Zambian primary schools was yielding the desired results of a breakthrough to literacy for all children. The study further wanted to establish the literacy skills transfer from one language to another. This study assessed first graders while Tambulukani focused on second graders with a view of comparing home language, language of play and language of instruction.

Muzata (2015) published survey research that covered four districts namely Kabwe, Chibombo, Livingstone and Solwezi entitled "Familiar language versus mother tongue: an analysis of the implications of the current language of instruction policy in Zambia". In this study, Muzata "examines the implications of the shifts in the language of instruction (LoI) in Zambian schools" (p. 65). This survey study reported that there were several multilingual classes in Zambia taught by teachers that came from different language backgrounds. Muzata's study also indicated that the language of literacy instruction

disadvantages some learners that did not speak the language of initial literacy instruction as reported by teachers. He noted that "…all teachers taught a heterogeneous group of learners; that is, no one class had purely learners speaking one Zambian language. There are learners from different languages in classes that teachers taught regardless of the location" (p. 71). The results presented did not reflect the language skills between speakers and non-speakers of the language of instruction. However, the study acknowledged that they were in multilingual classes. The author noted that the movement of people from one place to another for assorted reasons might cause them face difficulties learning in the local language they find in the new area.

Muzata's study relate to the current study in the sense that, he highlights the language situation and the presence of multilingual classes in Zambia. He noted that although teachers reported various results for speakers and not speakers of the language of instruction in class, the overall results did not show many differences among learners in multilingual classes as far as teachers were concerned.

Muzata (2019) made a follow up study and publication tagged "The daunting challenge of multilingual education policy: teachers' perceptions" where the views of teachers were sought about the performance of learners that spoke different languages. In the two studies (Muzata, 2015 and 2019), the research did not test learners but used the views of teachers that were teaching learners in grades 1 to 4. The later study reported that the performance of non-speakers of the language of instruction was poor in comparison to that of learners that were speaking the language of literacy instruction (p. 171). The teachers further added in Muzata's study that non-speaker of the language of instruction, lacked confidence in class due to language barrier (p. 170).

The current study differs from the two studies by Muzata in several ways. First, the studies by Muzata relied more on what teachers of grades 1 to 4 said but this present thesis study tested learners in class as well as checked on teachers' voices on multilingualism. Second, Muzata's study focused on four grades while the current study focused on Grade One learners only. Third, in the current study, more variables are investigated such as method of literacy instruction, performance of groups of learners and language ideologies of multilingual classes.

In his qualitative and quantitative study tagged 'The Language of Initial Literacy in a Cosmopolitan Environment,' Mwanza (2012) wanted to establish if one local language 'Nyanja' was appropriate to be used as language of initial literacy instruction in a cosmopolitan environment such as Lusaka. The results of his study on appropriateness of Nyanja were that "*Nyanja was the language of play in high and medium density areas and the dominant language of play in the low-density areas was English language. However, Bemba, Tonga, Nsenga and Lozi were among the other languages children used during play… Nyanja spoken in Lusaka was a mixture of different languages and was characterized by code switching, code mixing and code shifting. Therefore, there was a mismatch between the Nyanja spoken by children during play and the one recognized in schools," (Mwanza, 2012*, p. *98*).

Mwanza's study acknowledges that there are multilingual classes in Zambia as evidenced in the number of languages that children used when playing in the same district. However, he did not discuss the strategies and methods that teachers were using in class to instruct children from different language and cultural backgrounds. This was part of the focus of this study to establish specific strategies that teachers were using to teach reading in a multilingual context.

Studies by De Angelis (2011), Otwinowska (2014), Haukås (2015) recommended the use of the multilingual pedagogical approach in multilingual classes. They further noted that instructing diverse children using the multilingual pedagogical approach in the classroom requires competent teachers. In the case of language teachers, they should be able to meet several, if not all, of the following requirements as outlined by Haukås (2015, p.3):

- They should be multilingual themselves and serve as models for their learners.
- They should have a highly developed cross-linguistic and metalinguistic awareness.
- They should be familiar with research on multilingualism.
- They should know how to foster learners' multilingualism.
- They should be sensitive to learners' individual cognitive and affective differences.
- They should be willing to collaborate with other (language) teachers to enhance learners' multilingualism.

The recommendations are for teachers in multilingual classes to be inclusive and accept diversity by creating favourable environments where all learners' languages are present in their classes. The multilingual pedagogy is a learner-centred approach to teaching aimed at

developing students' language awareness as well as language learning awareness in all the languages that learners know in their classes.

These segment-documented studies related to the teaching of reading to culturally diverse and multilingual classes. Multiple studies were cited ranging from teaching strategies to best practices for teaching culturally diverse learners. The next segment addresses research studies related to language ideologies of teachers, which may have implication of what they do in multilingual classes.

Classroom based evidence in reading from researchers and educators worldwide have recommended critical components that need to be taught to children to help them learn reading skills quickly. Early Reading Strategy: The Report of the Expert Panel on Early Reading in Ontario (2003, p.1) noted that "A broad consensus now exists among researchers and educators regarding the knowledge and skills that children need in order to read, the experience that influences the development of such knowledge and skills and the basic components of reading instruction". The Ontario report listed nine (9) effective reading knowledge and skills for learners to quickly break through to reading and these were "oral language, prior knowledge and experience, concept about print, phonemic awareness, letter-sound relationship, vocabulary for reading, semantics, syntax and pragmatics, metacognition and comprehension strategies and higher-order thinking skills" (p. ii). The National Reading Panel (2000) identified five (5) components of reading as essential aspects of reading namely: Phonemic Awareness, Phonics (Alphabetic principle), Fluency, Vocabulary and Comprehension.

The report of the National Reading Panel received many criticisms from researchers and educators for omitting certain critical components that contribute to effective reading instruction. For example, Yatvin (2002) castigated the panel for ignoring the correlation and interdependence between reading and writing skills. Furthermore, Yatvin indicated that "The research on language development, pre-reading literacy knowledge, understanding of the conventions of print and all the other experiences that prepare young children to learn to read also demanded the panel's attention" (p.1, 2). Pressley, Dolezal, Roehrig and Hilden (2002, p. 80) reported that they were "taken aback by the National Reading Panel's neglect of the preschool years". Indicating that preschool years have an influence on reading progress by children. Allington (2002) questioned the report by the panel for leaving out motivation and

home experiences vis-à-vis family literacy and home language development. Furthermore, Shanahan (2004) rebuked the National Reading Panel for disregarding some content that helps children read. "Some important reading topics have been neglected" (p. 239). A study by Mehta et al., 2005) proposed the addition of spellings as a key component in reading instruction. They further reported that "although students' growth in passage comprehension remained close to average from first through fourth grade, their spelling scores dropped dramatically by third grade and continued to decline in fourth grade" (p. 85). "Progress in reading does not necessarily result in progress in spelling. Spelling instruction is needed to develop students' spelling skills."

It is important to note that although there was criticism of the National Reading Panel (2000) report, it remains one of the most authoritative reports on beginning reading. Some of the criticisms of the panel did not take into consideration the aims of the national reading panel.

McCardle and Chhabra (Ed) (2004, p. 151) reported that "no single component of reading-Phonemic Awareness, Phonics, Fluency, Vocabulary or Comprehension – is sufficient by itself to produce reading success". Therefore, there is need to use multiple components of reading to help learners understand from the following essential components of reading based on the evidence from the studies cited. Oral language, prior knowledge and experience with family literacy, concept about print, phonemic awareness, letter-sound relationship and Phonics, vocabulary for reading, spellings, comprehension, fluency, semantics, syntax and pragmatics, metacognition and comprehension strategies and higher-order thinking skills.

It is also imperative to understand that developing reading skills is a complex and continuous process as reported by the Ontario report. "Becoming a reader is a continuous process that begins with the development of oral language skills and leads, over time, to independent reading. Oral language – the ability to speak and listen – is a vital foundation for reading success. In every culture, children learn the language of the home as they observe, listen, speak and interact with the adults and children in their environment. This process happens naturally and predictably in all cases. While developing oral language is a natural process, learning to read is not. Children must be taught to understand, interpret and manipulate the printed symbols of written language. This is an essential task of the first few years of school. Reading success is the foundation for achievement throughout the school years. There is a critical window of opportunity from the ages of four to seven for learning to read. Children who successfully learn to read in the early

primary years of school are well prepared to read for learning and for pleasure in the years to come. On the other hand, children who struggle with reading in Grades 1 to 3 are at a serious disadvantage. Academically, they have a much harder time keeping up with their peers and they increasingly fall behind in other subjects. They are far more likely to suffer low self-esteem and, in their teen years, are more likely to drop out without completing high school. Children with unaddressed reading difficulties have not failed the system; the system has failed them. We now know that this is not inevitable, even for children who face significant challenges. With the right instruction and support, all children in elementary schools can learn to read" (Early Reading Strategy: The Report of the Expert Panel on Early Reading in Ontario (2003, p.7).

Honig, Diamond and Gutlohn (2018) itemised word structure, early literacy, decoding and word recognition, reading fluency, vocabulary and comprehension as necessary knowledge and skills for children to learn reading skills. The itemised segments in detail included issues to do with print knowledge, letter knowledge, phonological awareness, phonics, recognising irregular word and dialogic reading.

In summary, for children to learn reading skills quickly, they need the knowledge and skills discussed in this section which include oral language, prior knowledge and experience, print awareness, letter knowledge, phonemic/phonological awareness, phonics, vocabulary, fluency and comprehension.

3.4 Teachers' Views on Teaching Learners in Multilingual Settings

Teachers' language beliefs and ideologies in multilingual classes have an enormous impact on what they do in their classes and this was another independent variable that was investigated as it has a bearing on pupils reading achievements. Teachers that view language as a problem are strict in prescribing certain forms of languages to be used in their classes while those that take it as a resource may be more inclusive. This segment focusses on the language ideologies of in-service teachers in multilingual classes as the major focus of objective three of this study.

Mwanza (2019) carried out a comparative qualitative study about teachers' language ideologies in Grade One multilingual Classes. The researcher sought to understand the language ideologies held by teachers in public and private schools and how these could affect their language practices in multilingual classes. The study was guided by the three-language orientation theory

by Ruiz (1984). "The purpose of this study was to compare language ideologies between Grade One private and public-school teachers in teaching multilingual classes in Lusaka district" (Mwanza, 2019, p. 2). The findings from the teachers described language either as a problem, or a resource. Teachers who viewed language as a problem were resistant to use multiple languages in class while those that believed in language as a resource were more open to suggestions. This may imply that, language policies founded on monoglossic language ideologies may view language as a problem while those founded on language as a right and a resource may be more flexible in addressing learners needs.

This study by Mwanza partly addresses research objective three of my thesis. Language beliefs that teachers hold may have a bearing on what they do and practice in multilingual classes. The current study partly looked at in-service teachers' language ideologies as a supplement to the reasons for the performance of multiple groups being compared in the pre-test and post-test.

Zhong, Muyunda and Cheng (2021) conducted a study in Zambian schools on teachers' epistemological beliefs and conceptions about language teaching and learning Chinese language in Zambia. Using a mixed-method study, researchers investigated "beliefs and conceptions about language teaching and learning of non-native learners and teachers of Mandarin Chinese in Zambia" (p. 2). The demand for the teaching and learning of Chinese language in Zambia and other parts of the world had been increasing in the 21st Century. Some countries such as Zambia have started teaching Chinese as a foreign language in schools. "As a proactive response, the Ministry of Education in Zambia included Mandarin Chinese as a second additional language in the secondary school Curriculum" (p.1). However, the authors expressed concern that there was lack of exploring the epistemological beliefs and conceptions about Mandarin Chinese language teaching and learning in Zambia that fueled their study. Data was collected through a belief questionnaire that was administered to 100 students learning Chinese as a Foreign Language (CFL). "Semi-structured interviews were adopted to seek deep insights from 10 secondary school teachers on their epistemological beliefs and conceptions about Chinese language teaching and learning" (p.1). The result showed that the "students' epistemological beliefs about the introduction of Mandarin Chinese language learning in secondary schools is key to enhance mutual understanding and friendship between the People's Republic of China and Zambia" (P.1) Further, results indicated that students perceive learning

Mandarin Chinese language as a window of opportunity for a respectable job and learning a new language. On a negative part, teachers perceived the introduction of Mandarin Chinese language in Zambia as a new form of Neo-colonization in Africa.

The study by Zhong, Muyunda and Cheng, (2021) about teachers and learners' beliefs about the teaching of Chinese in Zambia was related to the current study in the sense that teachers' beliefs may have had a negative impact on their teaching in class, which is part of the investigation on research objective three of this study. The authors felt it was necessary for teachers in Zambian schools to review their epistemological beliefs and conceptions about Mandarin Chinese language teaching and learning as a way embracing cultural diversity and multilingualism. In this regard, this account of teachers and learners' beliefs may serve as literacy artefact and cultural artefacts in the teaching of Mandarin Chinese language in Zambia.

In her study about teachers' experiences in teaching multilingual classes in Lusaka Zambia, Sampa (2019) noted that teachers had mixed feelings about teaching multilingual classes. The purpose of Sampa's study was to find out "the beliefs and experiences of teachers in teaching multilingual classes, with a view to suggesting recommendations for other teachers in the same position" (Sampa, 2021, p.4). This was a qualitative case study administered on thirty (30) research participants specifically teachers from randomly selected primary schools of Lusaka district. The data was analysed qualitatively using thematic analysis. The study report begun by outlining the sociolinguistic background of Zambia as far as language was concerned. Sampa noted that Lusaka, the catchment area of her study was a multi-linguistic and multi-ethnic area. In this region, she said, the people speak several languages for purposes of communication. IciBemba, Nyanja, Silozi, Chewa, CiTonga and other major and minority languages were common in Lusaka. Students who attended the government primary schools speak these languages. Thus, public school classrooms are characterised by multilingual teaching and learning approaches in Lusaka District. The teachers involved in the study had varying teaching experiences ranging from three (3) to twenty-four (24) years in the teaching profession. All teachers interviewed reported that they had taught a class with pupils from different language backgrounds or those that spoke different languages. The findings showed that most teachers were unhappy about the teaching of Nyanja language as a sole medium of instruction in multilingual context of Lusaka classes due to linguistic diversity in the classrooms. Teachers

indicated that some learners in multilingual classrooms were lacking confidence to use Nyanja language because they hesitated to commit mistakes. Such learners had a different mother tongue that they used in their homes. The study further noted that multilingual teachers' views may have had an impact on their delivery and language use in multilingual classes.

This study resonates with part of the present study in the sense that both studies focused on the role teachers' views have on their performance in multilingual classes. Although Sampa's study was strictly covering Lusaka province, the present study was confined to Lusaka and Katete districts of Zambia.

Banda and Mwanza (2017) narratives about language-in- education policy and Linguistic Diversity in Zambia's primary schools provided an alternative explanation for low reading levels across primary schools. The arguments in their narratives were centered on pedagogical benefits of multilingual discourses in classroom practices in diverse. Recent studies worldwide have shown some level of dissatisfaction with monolingual policies favoring diverse and inclusive language ideologies. The authors noted that Zambia practices a monolingual/monoglot (one-language-a-time) and that this is also common across multiple countries. This monolingual discourse practices that still pervade language education disadvantages minority groups and it is becoming increasingly unpopular across countries around the world. The authors claim and demand for "…the shifting paradigm in learning and teaching in multilingual and multicultural contexts, in which pupils' linguistic repertoires and related cultural heritage are seen as central rather than peripheral to classroom practice" (p.109). The authors further claimed that such a position is dominating global discourses about multilingual language practices and teaching as reported by other scholars such as (Garcia 2009; Baker, 2011; Cummins, 2008). The narratives from the arguments raised by the authors in this paper "entails a move away from typical Western education models, premised on the One Nation, One Language, or and in the case of Zambia, One Province, One Language monoglot/monolingual approach, to models that draw on pupils' multicultural and multilingual heritage as a way to bridge home/community and school-based literacy practices" (pp. 109-110). The authors are calling for a more dynamic and responsive policy that addresses the needs of the 21st century education. In this regard, the teaching of initial literacy in culturally diverse and multilingual contexts demand the use of more than one language in classrooms including dialects or hybrid forms, to ensure that pupils

are actively involvement in classroom practices. Teachers views about teaching in culturally diverse and multilingual classes should be tailored to inclusiveness and creating a classroom space where all languages and cultural orientations are well represented. A space where all learners feel safe and represented in classroom spaces to an end in the 21st century pedagogies.

The study by Banda and Mwanza (2017) brings home the idea that multilingual classes must be inclusive and for teachers to create a space where all learners feel safe and represented. This in turn makes learning more meaningful. The paper also calls for migration in practices from monoglossic language ideologies to heteroglossic ones where all learners in classrooms are well represented. In this regard, teachers' views and expectations should be for the benefit of all learners in classrooms. These discourses are part of the central focus of the current study in Zambia. Teachers' languages in this regard have a significant role to play in diverse classes.

Haukås (2015, p.12) noted that "Knowledge of teachers' beliefs is central to understanding their decision-making in the classroom". This was part of the findings in a qualitative study conducted in 2015 on teachers' beliefs about multilingualism and a multilingual pedagogical approach stressed on the idea that knowledge and teacher's beliefs about language are central to understanding teacher's decision-making in the classroom. The study explored Norwegian language teachers' beliefs about multilingualism and the use of multilingual pedagogical approach in the third language (L3) classroom. Haukås (2015, p.1) noted that "Multilinguals differ from bilinguals and monolinguals in several respects. Research has shown, for example, that multilinguals demonstrate superior metalinguistic and metacognitive abilities, such as the ability to draw comparisons between different languages and to reflect on and employ appropriate learning strategies." The role teachers can play to foster multilingualism have immense opportunities to facilitate learning among multilinguals. Studies have shown in different countries that most teachers have positive beliefs about multilingualism and think that multilingualism should be promoted. However, such teachers many times do not foster multilingualism in their classes by for example, making use of learners' previous linguistic knowledge and creating an environment conducive for multilingualism to thrive in their own classrooms. Teachers do not feel competent at doing so and think that they need training in such a field, otherwise, such a practice, they think, could disrupt further language learning by learners. The findings on Haukas' study were that some teachers viewed multilingualism as an

asset as they made several steps in implementing a multilingual pedagogy. Teachers regarded multilingualism not only as positive for learners but also as a tool to help learners find linguistic links between L3 and previously learnt languages. The teachers frequently used their students' linguistics knowledge of previous first language (L1) and second language (L2) to teach about the third language (L3). This study also noted that the multilingual pedagogical approach is a learner centered approach that relies on raising the awareness of learners' languages that are present in a classroom.

The study by Haukås raises critical issues that part of the current study attempts to address in the Zambian situation. Teachers' language beliefs and ideologies in multilingual classes have a strong bearing on learners' academic progress. Objective one and three of the current study in Zambia attempted to understand reading performance and the role teachers' language beliefs play in helping culturally diverse and multilingual classes towards their development of reading skills.

De Angelis (2011) did a study on 'teachers' beliefs about the role of prior language knowledge in learning and how these influence teaching practices. The study armed at assessing teachers' beliefs on three issues; first the study checked on the role of prior language knowledge in language learning, second, the perceived usefulness of language knowledge in modern society and last, the teaching practices to be used with multilingual students. There were 176 research participants that were serving as teachers drawn from three countries: Italy (N=103), Austria (N=42) and Great Britain (N=31. These teachers taught multiple subjects including languages, literature, science and physical education. The results showed that teachers in the three countries; Italy, Austria and Great Britain shred multiple views on the three topics examined in their study. They recommended for the need to introduce materials about bilingualism and multilingualism as well as language learning as a regular feature of teacher training programs. "Many teachers showed beliefs that suggest little awareness of the cognitive benefits of multilingualism and of the usefulness of home language maintenance for students and their families" (p. 216). The study by De Angelis (2011, p.217) further noted that "Teachers play an essential role in fostering multilingual behavior in the language classroom and their actions can exert profound influence on their students". Teachers' beliefs have a profound influence and power as they dictate whether to embrace multilingualism in their classes or not. They may also

decide whether to "integrate minority languages into their teaching turning students' multilingualism into a useful resource for the entire classroom or can choose to ignore minority languages closing a source of linguistic knowledge for their students" (p. 217). Teachers' beliefs may also have much power outside their classrooms as they are in the position to advice families on how and when to use the home language in their daily lives. "Teachers may choose to encourage or discourage the use and/or maintenance of the home language on the basis of personal beliefs, individual interests or personal experience and the advice they offer will inevitably influence parents' decisions and contribute to supporting or hindering the spread of multilingualism in the school context" (p. 217). This means that what teachers do in their classes may be influenced by their knowledge of single or multiple languages and this may have a bearing on their actions in their classes.

The study by De Angelis (2011) relates to the present study on research objective three on teachers' language beliefs as it explains that teachers' beliefs and knowledge of languages may support or discourage multilingualism in their classes. There is need for teachers to be encouraged to support and create a conducive environment for multilingualism to thrive in their classes because studies have shown that bilingualism and multilingualism facilitates the acquisition of additional languages and improves cognitive functioning in individuals.

In a study by Otwinowska (2014) that sought to establish the influence of multilingualism on plurilingual awareness of Polish teachers of English reviewed much about teachers' language beliefs in multilingual classes. The study discussed the components of language teachers' awareness, which was expected to differ both qualitatively and quantitatively from that of the languages used by learners and users. The study urged the European countries to develop plurilingual awareness and train learners to become multilingual citizens and that they are more responsive in their classes. "This awareness involves cross linguistic, metalinguistic and psycholinguistic knowledge concerning multiple language acquisition" (P.97). Otwinowska (2014) further demanded that teachers operating in multilingual classes should ideally be multilingual themselves. The challenges teachers face in classes are partly associated with their awareness and how this is linked to teaching experience and multilingualism. The paper pinpoints that "The awareness of formal and semantic similarities between the languages one learns enhances language acquisition by triggering transfer from the native language

(Otwinowska, 2014, p.98). However, "in order to train learners, teachers themselves must possess the type of awareness that can be called 'plurilingual' and is different from what is involved in traditional training of language teachers" (p. 98). The study noted that teachers' language awareness and the acquisition of multiple languages is beneficial for their multilingual class. Teachers equally noted that multilingualism helped them acquire another language and the same might apply for learners.

The study by Otwinowska (2014) is related to the current study in the sense that it centers on teacher beliefs, language skills of teachers and how these may influence their decisions in classes which is part of the focus of this study. Teachers' language knowledge, awareness including beliefs have immense implications in multilingual classes.

Iversen (2019) conducted a study that investigated how pre-service teachers negotiated an understanding of which multilingual practices were legitimate in mainstream education in Norway. In this study, Iversen collected data through seven focus groups with 24 pre-service teachers participating in their first field placement. The author designed three fictitious themes about multilingual students in mainstream education and these were introduced and discussed in the focus groups with research participants. Data was analysed using the three-language orientation theory by Ruiz (1984) and Bakhtin's concept of heteroglossia. Data analysis indicated how pre-service teachers were "concerned with the needs of the class, of the teacher and of the multilingual students when multilingual practices were introduced to mainstream classrooms" (p.1). To establish which multilingual practices were legitimate, pre-service teachers drew on different language ideologies. The results showed that pre-service teachers "considered multilingual practices to be legitimate if they did not compromise group work nor challenged Norwegian as the language of instruction." The study also indicated that most pre-service teachers involved in the study were not familiar with multiple languages in their classes. "The study recommended pre-service teachers to develop awareness of their own heteroglossic language ideologies. This study suggests that teacher educators can use focus groups to achieve this goal" (p.1).

The study by Iversen is important and related to the current study in the sense that it unveils possible multilingual practices and highlight language competencies of pre-service teachers serving multilingual classes. The study recommends teacher educators to ensure that trainee

teachers during training in colleges and universities should acquire certain skills to prepare them to handle multilingual and culturally diverse classes.

This section has presented literature related to teachers' language believes and ideologies in multilingual classes and it was noted that what teachers believe have a significant impact on what their actions in multilingual classes that they teach. Teachers that view language as problem are strict in prescribing certain forms of languages to be used in their classes while those that take it as a resource may be more inclusive to diversity. The next segment begins a discussion on phonics instruction approaches that can be applied in both monolingual and multilingual classes in a quest to address research objective four of the current study.

3.5   Review of Studies on Phonics Instruction Approaches used by Teachers in Monolingual and Multilingual Classes

This segment of literature review addresses research objective four as an independent variable on phonics instruction approaches prominent in various parts of the world. These phonics approaches are applicable in both monolingual and multilingual classes. This segment is important because it would highlight what the phonics instruction approaches are and correspond them to existing studies in Zambia. Honig, Diamond and Gutlohn (2018, p.170) reported that "Phonics is a method of instruction that teaches students the systematic relationship between the letters and letter combinations (graphemes) in written language and the individual sounds (phonemes) in spoken language and how to use these relationships to read and spell words". The authors further noted that "Phonics instruction also help students to understand the alphabetic principle-written letters represent spoken sounds. In other words, letters and sounds work together in systematic ways to allow spoken language to be written down and written language to be read" (p.170).

3.5.1 Phonics Instruction Approaches

There are several approaches to the teaching of phonics in alphabetic and some non-alphabetic languages. Some of these approaches have been presented in this segment especially those that have been discussed in reading studies. The National Reading Panel of America conducted a meta-analysis of reading studies between 1977 to 1999 to review and evaluate research on the effectiveness of various approaches for teaching children to read (National Reading Panel, 2000). The panel's report noted multiple phonics instruction approaches that helped children to

read. These phonic approaches were also reported by other independent and organizational studies carried out by different researchers (Wanzek, Otaiba & McMaster, 2020; Ehri, 2006; Chall, 1997). Common approaches to phonics instruction include Synthetic Phonics, Analytic phonics, Embedded phonics and analogy phonics. These are summarised towards the end of this segment.

Chall (1997) conducted a desk study which reviewed several reading reforms in California and elsewhere. His paper was first written as a talk to the Orton Dyslexia Society where he reported that approaches to the teaching of reading have historically been categorised into code emphasis and meaning emphasis;

> *Generally, beginning reading methods can be categorized into two major approaches—what I have called a code emphasis and a meaning emphasis. A code emphasis approach gives early instruction in learning the alphabetic code—the relationship between letters and sounds—as well as the reading of connected texts. A meaning emphasis approach focusses primarily on reading words and connected text for meaning, right from the start, expecting that the alphabetic principle will be acquired incidentally by inference from the reading for meaning (*Chall, 1997, p. 258*).*

The overall findings of the studies reviewed were that "a code emphasis, no matter what it was called—whether a spelling method, a phonics first method, a direct, an explicit or a systematic phonics method—produced better results than a meaning emphasis," (Chall, 1997, p. 259). These results were further supported by Adams (1990) and Balmuth (1992) who reported that when using code-emphasis to teach reading, the results were better in word recognition, reading and understanding than whole-word, sight and story methods for children in general.

The study by Chall is important to the current study as it outlines reading teaching methods that have historically been used in reading classes which is the focus of research objective four of this study. On whether the historical reading methods were prominent in Zambia was what the current study sought to address. While it is appreciated that the teaching of reading worldwide has over the years exhibited similar trends in the manner it has been taught, arguing that it was confined to two major approaches of beginning to read methods namely, code emphasis and

meaning emphasis, the Primary Literacy Programme in Zambia stresses on code emphasis as outline in the policy. What happens in classrooms is part of what this study sought to establish.

The National Reading Panel (2000) study noted that some teachers used integrated phonics instruction into their lessons with some extra isolated phonics and others taught phonics as a separate part of word study. The report further noted that "Whole language approach where teachers typically provided some instruction in phonics, usually as part of invented spelling activities or using graphophonemic prompts during reading. They were teaching unsystematically and incidentally in context as the need arose. The whole language approach regarded letter-sound correspondences, referred to as graphophonemics, as just one of three cueing systems (the others being semantic/meaning cues and syntactic/language structure) that are used to read and write text" (p. 102). Teachers that believed in 'Whole language approach' observed that "phonics instruction should be integrated into meaningful reading, writing, listening and speaking activities and taught incidentally when they perceive it is needed" (p.102). As children attempt to use written language for communication, they discover naturally that they need to know about letter-sound relationships and how letters function in reading and writing. When this need becomes evident, teachers are expected to respond by providing the instruction. Although some phonics are included in whole language instruction, significant differences have been observed distinguishing this approach from systematic phonics approaches. In several vignettes portraying phonics instruction in whole language contexts, few if any instances of vowel instruction were found. This contrasts with systematic phonics programs where the teaching of vowels is central and is considered essential for enabling children to decode. "Another practice that is found in some systematic phonics programs but is not found in whole language programs is that of teaching children to say the sounds of letters and blend them to decode unfamiliar words. Programs that teach this procedure are referred to as synthetic phonics programs" (National Reading Panel, 2001, p. 102).

The meta-analysis study by the panel relates to the current study in the sense that, it partly addresses aspects of research objective four of this study. Furthermore, the National Reading Panel's report highly influenced the development of the Primary Literacy Programme of Zambia through its recommendation of the big five; phonological awareness, phonics, fluency,

vocabulary and comprehension. These are the core aspects of the Zambian reading programme currently on which this study is also based.

In their narratives about the teaching of reading, Honig, Diamond and Gutlohn (2018, pp. 172-173) provided a summary of four of the approaches to the teaching of phonics namely, synthetic phonics, analogy phonics, analytic phonics and embedded phonics. A summary of each of these phonics instruction approaches is discussed in this segment.

3.5.1.1 Synthetic Phonics

The synthetic phonics approach is where pupils learn to transform letters and letter combinations into sounds and then blend or synthesize the sounds together to form recognizable words. Synthetic phonics is also called blended phonics or inductive phonics and they are all centered on the teaching of reading by first teaching letters with their corresponding sounds and then builds up to blending these letter sounds together to achieve full pronunciation of whole words. Synthetic phonics classroom practices and activities may include blending, segmenting, addition and deletion activities.

3.5.1.2 Analogy phonics

The analogy phonics demand that learners use a phonogram or rime (rhyme) in a familiar word to identify an unfamiliar word with the same rime. A phonogram is a grapheme that represents a phoneme or combination of phonemes such as *p, br and sh*. Learners do this by first recognizing that the rime of the unfamiliar word is identical to the familiar word. This is followed by decoding the unfamiliar word by first pronouncing the shared rime and then blending it with the new onset or coda. For instance, to teach the unfamiliar word *crack,* the teacher may first introduce the rime *–ack* in the familiar word *pack.* The teacher may then inform the learners that both words *crack and pack* contain *–ack* rime. The teacher may ask learners to pronounce *–ack* and blend it with *cr-* to make *crack*. After this, the teacher may also ask learners to look for words that end in –ack as an activity for practice. The teacher may introduce other activities such as sound/blends addition or deletion exercise to help learners learn.

3.5.1.3 Analytic phonics

In analytic phonics, instruction begin with identification of a familiar word. The teacher then introduces a particular sound/spelling relationship within that familiar word. For example, the

teacher may write a word *mat* on the board in class and tell learners that the sound in the middle of the word mat is /a/. The teacher may identify other words with the same sound in the middle such as fat, bag, tan, can and then ask volunteers in class to read the whole word aloud without blending individual sounds. The teacher may decide to focus on the middle sound, first sound or last sound. Multiple activities can also be introduced to practice certain sounds.

3.5.1.4 Embedded phonics.

Embedded phonics is taught during an authentic activity on either reading or writing in a particular context. Phonics elements are introduced informally when the teacher feels that students need to know them may be due to the challenges observed in executing a certain reading or writing experience. Instruction focusses on teaching learners to predict the identities of words using a variety of word-solving skills. These skills may include the use of context, pictures, familiar word parts and the first or last letters of words. For example, if a learner has trouble identifying a word while reading, the teacher may intervene and correct the learner. Further, the teacher may ask the learner if they knew other words starting with the same sounds or letters for the learner to practice in context.

3.5.2 Phonics Instructional Delivery Strategies

The teaching of phonics and reading in general can be intensified in the way they are delivered by teachers in classes. Delivery strategies play a critical role in the development of reading skills among learners. Some instructional delivery categories have been discussed in this segment.

3.5.2.1 Explicit Instruction

"Explicit instruction refers to providing overt instruction for new reading practices or tasks." (Wanzek, Otaiba & McMaster, 2020, p.5). This view is supplemented by Honig, Diamond and Gutlohn (2018, p. 171) when they stated that "Explicit instructions refers to lessons in which concepts are clearly explained and skills are clearly modelled, without vagueness or ambiguity". In a study by Carnine, Silbert, Kame'enui, Tarver and JungJohann (2006) about teaching struggling and at-Risk Readers, observed that instruction is explicit when the teacher clearly, overtly and thoroughly communicates to students how to do something. In this segment, explicit instruction phonics is about providing clear instructions on what learners need to do in their classes.

3.5.2.2 Systematic Instruction

Honig, Diamond and Gutlohn (2018, p. 171) contended that "Systematic phonics lessons are organised in such a way that the logic of the alphabetic principle become evident, newly introduced skills are built on existing skills and tasks are arranged from simple to most complex". In systematic instruction, the expectation is that when learners are asked to learn something new, they already possess the appropriate prior knowledge and understanding that can help them learn the new task. In this regard, previous topics that are important to the understanding of another topic must be taught first. Systematic instruction is about teaching more complex topics using small manageable steps for learners to easily follow and understand.

A study by Ehri (2006) about phonics instruction reported that learners that received systematic and explicit phonics instruction were better readers than learners that received nonsystematic or no phonics at all. Ehri's study agrees with the National Reading Panel's findings from their meta-analysis study of literature between 1977 to 1999 where they noted that;

> Systematic phonics programs also commonly teach children an extensive, pre-specified set of letter-sound correspondences or phonograms while whole language programs teach a more limited set, in context, as needed. Systematic phonics programs teach phonics explicitly by delineating a planned, sequential set of phonic elements and teaching these elements explicitly and systematically; some systematic phonics programs also use controlled vocabulary (decodable text) to provide practice with these elements. Whole language programs do not pre-specify the relations to be taught. It is presumed that exposing children to letter-sound relations as they read text will foster incidental learning of the relations they need to develop as readers (National Reading Panel, 2001, p. 102).

In explicit and systematic phonics instruction, it is expected that skills are directly taught and modelled. Learners should be guided and have adequate time for independent practice. Small group instruction and gradual release model as a form of scaffold helps learners to read.

3.5.2.3 Teaching Phonics Using the Gradual Release Model

The Gradual Release Model (I do, we do, you do) teaching strategy demand that the teacher follows a series of steps during instruction starting with a demonstration of a teaching point or

what learners are expected to do and then leading the instruction to an action or activity done by both the learners and the teacher and finishing with learners working independently to practice the teaching point. (https://www.evidencebasedteaching.org.au/the-i-do-we-do-you-do-model-explained/).

Nanchengwa (2016) carried out a qualitative study that sought to "investigate the teaching techniques teachers in private schools of Mufulira District were using to teach literacy skills to Grade One learners" (p. vi). This was a qualitative Case Study design with fifteen research participants who were purposively sampled. The data collection instruments used were the observation guide, semi-structured interview guide and document analysis. "A semi-structured interview guide was used to collect data from all fifteen participants and the observation guide was used to collect data from the nine schoolteachers. Document analysis was used to collect data from the teachers' documents. The data that was collected was analysed thematically" (p. vi). Nanchengwa's (2016) study revealed that teachers in private schools of Zambia used the following methods when teaching literacy in Grade One; phonics, look and say and phonemic awareness.

Nanchengwa's study is relevant to the current study because it addressed part of research objective four on phonics instructional approaches. The study is also important because it acknowledges that the phonics method is pronounced in Zambian private schools. The researcher of the current study wonders whether similar phonics methods pronounced in the target school for the present study. Nanchengwa's study was also important as it helped in providing data reflecting the idea that private schools were not implementing the national literacy framework of Zambia which followed a pre-scripted literacy lessons where the five key competencies (Phonemic awareness, phonics (alphabetic principle), oral reading fluency, vocabulary and comprehension) were stressed (MoESVTEE, 2014).

Lupele (2014) conducted research where she wanted to establish the methods that were used to teach the new breakthrough to literacy (NBTL) by Grade One teachers in literacy classes at two primary schools in Lusaka district. The findings of Lupele's study were that teachers preferred to use traditional literacy teaching methods more frequent as opposed to the recommended NBTL methods when teaching literacy skills. "The general methods used by the teachers in the study included *whole word method*, *whole language method*, *alphabet* and *discussion method,"*

(Lupele, 2014, p. *43).* Furthermore, some of her respondents reported that they were using the methods which they were familiar with particularly those learnt when they were teaching English from Grade One. On this point, Lupele's findings were like those by Haukås (2015) who noted that the knowledge of teacher's beliefs is central to understanding teachers' decision-making in the classroom. Lupele further reported that the recommended methods of NBTL were look and say, phonics language experience method, real books and syllabic but phonemic awareness, fluency, comprehension, phonics and vocabulary were considered when teaching NBTL.

Lupele's study relate to the current study as it equally brings in the possible teaching strategies that teachers in Zambian classes were using. However, the study by Lupele focused on the previous Primary Reading Programme (PRP) particularly the New Breakthrough to Literacy (NBTL) in Zambia while the current study was centered on the new Primary Literacy Programme in Zambia (PLP) of the National Literacy Framework.

This section discussed the literature review related to research objective four on phonics instruction approaches that were applicable to both monolingual and multilingual classes. This segment is important because it highlighted what the phonics instruction delivery strategies looked like as recommended in literature. The next section discusses literature review related to reading interventions.

3.6.   Summary

In this chapter, literature related to the teaching of reading in multilingual and monolingual classes as well as aspects of language in education policy were presented. The chapter begun with a conceptual review and proceeded to review a series of studies related to the present study. The literature that informed this chapter was obtained in various parts of world including Africa, Asia, America and Europe. The author is certain that necessary details have been presented under each research objective.

CHAPTER FOUR: METHODOLOGY

4.0 Overview

A review of related literature was presented in chapter three of this study. Various forms of literature were reviewed and summarised from the global community to the local Zambian context. In this chapter, the research methodology that was used in this study is explained. Irny and Rose (2005) defined research methodology as a systematic, theoretical analysis of the methods applied to a field of study and usually encompasses concepts such as paradigm, theoretical model, quantitative and/or qualitative techniques. Kara (2015, p.4) observed that methodology "is a contextual framework' for research, a coherent and logical scheme based on views, beliefs and values, which guides the choices researchers [or other users] make". These partly constitutes "a systematic inquiry that is made public in research" (Skilbeck, 1983, p. 1). The significance of research methodology is that it guides the researcher on what needs to be done and how they want to proceed in the research process (Corbin & Strauss, 2015). This study used a mixed method approach to collect, analyse and present data. The justification for using a mixed method design is also provided. The chapter equally highlights research paradigms, design and data collection methods within the mixed method framework that was used in this study.

4.1 Research Paradigm

Kuhn (1962, p.175) defined a research paradigm as "a set of practices that define a scientific discipline at any particular period of time". These practices according to Cohen, Manion and Morrison (2018) include;

> What is to be observed and scrutinised; the kinds of research questions to be asked and problems to be investigated; how to structure such research questions; what predictions can be made by the primary theory in that discipline; the ways of working; and how to interpret results. A paradigm embodies the values and beliefs of a group, such that one set of views and beliefs may be incommensurable with another, abiding by different philosophical assumptions, ontologies, epistemologies and axiologies (p.34).

According to Mertens (2012, p.256), "paradigms are philosophical frameworks that delineate assumptions about ethics, reality, knowledge and systematic inquiry". Cohen, Manion and Morrison (2018) contended that;

> Paradigms include how we look at the world, the conceptual frameworks in which we work in understanding the world, the community of scholars who are working within that framework and who defines what counts as worthwhile knowledge and appropriate methodology in it, how we research the world, what the key concepts are, what counts as relevant knowledge and how we validate and consider that knowledge (p. 34).

According to Creswell and Plano-Clark (2011), there are several worldviews or paradigms that researchers utilise to inform their studies and these include positivism which is quantitative in nature, post-positivism may be qualitative or quantitative research, constructivism for qualitative research, participatory or transformative for qualitative research and pragmatism for both qualitative and quantitative research or a mixture. The current study used pragmatism to guide and inform the study.

4.1.1 Pragmatism

Creswell and Clark (2011) acclaimed that pragmatism is a research paradigm that acknowledges the existence of single or multiple realities in research that are open to empirical inquiry. In other words, in pragmatism, the belief is that facts or views on an issue can be collected using multiple methods or approaches (Pansiri, 2005; Walsh, 2019).

> Pragmatism as a research paradigm finds its philosophical foundation in the historical contributions of the philosophy of pragmatism and, as such, embraces plurality of methods. As a research paradigm, pragmatism is based on the proposition that researchers should use the philosophical and/or methodological approach that works best for the research problem that is being investigated (Kaushik & Walsh, 2019, p. 2).

Pragmatism is a philosophy that allows research to use multiple methods to collect data for answering research questions. Cohen, Manion and Morrison (2018, p.34) reported that,

Pragmatism (quantitative and qualitative), in which the research focuses on framing and answering the research question or problem, which is eclectic in its designs, methods of data collection and analysis, driven by fitness for purpose and employing quantitative and qualitative data as relevant, i.e. as long as they 'work' – succeed – in answering the research question or problem and in which the researcher employs both inductive and deductive reasoning to investigate the multiple, plural views of the problem and the research question.

The present research study used the pragmatic paradigm to guide the research methodology. In this study, selected aspects of positivism and post-positivism translated to quantitative and qualitative were used to collect, analyse and present data. This philosophical view is ideal for this study, which focused on establishing reading outcomes and reading achievements among groups of learners with varying language backgrounds. The study also looked at the views of teachers on language practices and the teaching of reading to multilingual and monolingual classes in targeted sites. Kaushik and Walsh (2019, p.7) observed that when it comes to "research methodology and finally, deciding on the research methods, pragmatism raises some methodological concerns. For instance, if a research problem has different layers, how can all the layers be measured or observed? Certainly, one important strategy for inquiry would be to employ multiple methods, measures, researchers and perspectives" to address research questions. The multiple methods that were employed in this study stemmed from both qualitative and quantitative modes of inquiry under the mixed method research.

4.1.2   Mixed Methods Approach

Cohen, Manion and Morrison (2018, p.34) held that "mixed methods research has several foundations…quantitative approaches may have their roots in positivism while qualitative methods may have their roots in post-positivism and the interpretive paradigm". These foundations reflect on the allegiances that researchers opt to utilise in their research.

The foundations of Mixed Method Research (MMR) have multiple allegiances and these allegiances determine and embrace worldviews (what the world is like and how to look at the world), ontologies (views of reality), epistemologies (ways of understanding, knowing about and researching that

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reality) and axiologies (values and value systems, e.g., value-free, or value-laden research). These are brought together in different ways in different paradigms (p.34).

The practices that bring together various allegiances in a study like this one is consolidated in a research paradigm chosen for research. Cohen, Manion and Morrison (2018) contended that "Mixed method research concerns not only mixing data but mixing paradigms, ontologies, epistemologies and axiologies in order to give a fair, rounded picture of the phenomenon under investigation" (P. 34). Furthermore, Creswell and Plano-Clark (2011) noted that.

> Mixed method research typifies research undertaken by one or more researchers, which combines various elements of both quantitative and qualitative approaches (e.g., about perspectives, data collection and data analysis) to research, together with the nature of the inferences made from the research (p. 4), the purposes of which are to give a richer and more reliable understanding (broader and deeper) of a phenomenon than a single approach would yield (p. 4).

4.1.3 Justification for Using Mixed Methods Research

The justification is provided in segments starting with quantitative inquiry and ends with qualitative inquiry.

4.1.3.1 Quantitative Inquiry

The justification for using the quantitative mode of inquiry on the first hand is that research objective 1, sought to establish reading achievements across groups of learners in Grade One by analysing marks scored of 375 learners that took a pre-test and post-test assessments from the 10 schools. This objective demanded the use of descriptive and inferential statistics in a software called Statistical Package for Social Sciences (SPSS) Version 25 supplemented by another software called STATA version 14 on inferential statistics.

Descriptive statistics was used in the analysis and presentation of data so that it helps the researcher to describe, show and summarise data in a meaningful way on the first research question. The researcher in this study calculated the mean ranks for the pre-test and post-test data for the 375 learners and presented the data in tables and graphical form. Therefore, the

presence of test scores from reading tests and the presentation of data in quantities in form of figures and tables are clear indicators of the quantitative mode of inquiry.

Inferential statistics were also used on research objective 1 to suggest explanations on the findings. Chin and Lee (2008) reported that "Inferential statistics help to suggest explanations for a situation or phenomenon. It allows the researcher to draw conclusions based on extrapolations and is in that way fundamentally different from descriptive statistics that merely summarise the data that has been measured." In this case, inferential statistics can ascertain whether there was a statistically significant difference in performance between separate groups of learners in the pre-test and post-test results in monolingual and multilingual learners and speakers with non-speakers of Nyanja, the language of instruction. Inferential statistics examined the relationships between variables within the 375 sampled learners and then made predictions about how the stated variables related to a larger population. For instance, inferential statistics on this study was used in SPSS version 25 and STATA version 14 by using Binomial logistic regression in STATA 14, Mann-Whitney U Test and Mcnemar Test in SPSS 25 to compare variables with a view to establishing the presence or absence of significant differences between and among variables under consideration.

4.1.3.2 Qualitative Inquiry

The use of qualitative mode of inquiry under post-positivism research tradition in this study is justified by the presence of research objectives 2, 3 and 4. In these objectives, data was collected through lesson observations, interviews and focus group discussions. Creswell (2013) reported that, these methods of data collection fall under the post-positivism research tradition. While the aim of the study was to have the reality about reading achievements across groups of learners and how best to teach reading to multilingual and monolingual classes, the objective might not be easy to achieve for ontological reasons. Shank (2002, p. 5) defines qualitative research as "a form of systematic empirical inquiry into meaning". In this case, by systematic he means planned, ordered and public in nature following rules agreed upon by members of the qualitative research community. By empirical, he means that this type of inquiry is grounded in the world of experience. Denzin and Lincoln (2013, p. 3) indicate that "qualitative research involves an interpretive and naturalistic approach. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the

meanings people bring to them." They further indicated that it involves interactive techniques such as interviews, observation and discussions, hence, the choice for mixed research design for this study. Data was presented in themes reflecting the voices and narratives of participants extracted with help from content analysis.

4.1.3.3 The Correlation of Quantitative and Qualitative Results

There is a close relationship between qualitative and quantitative data in this study. The data obtained from test scores in form of figures and tables for reading achievements barely indicated the presence or absence of reading abilities among learners. However, the reasons for poor or superior performance from quantitative data was explained with data from qualitative inquiry through interaction with learners and teachers during lesson observation as well as the interviews and discussions with teachers. For example, the performance of learners in a post-test would shed light on whether the strategies that teachers were using to teach reading in monolingual and multilingual classes were working or not. These teaching strategies were noted during lesson observation and interviews. Similarly, qualitative data may predict the performance of learners in tests. For instance, if teachers were not trained in reading and were unfamiliar with the language of instruction, it may suggest outcomes in their tests. This is a cause-and-effect principle that conforms to laws of nature that is highly believed in positivism and post-positivism (Sapsford, 2007).

4.2   Research Design

Bryman and Bell (2019, p. 27) observed that "a research design is a framework for the collection and analysis of the data that is used to answer the research questions. It must satisfy certain criteria and the form it takes depends on the research questions being asked." This study was informed by the embedded mixed methods research design.

4.2.1   The Embedded Design

Creswell (2006, p. 67) stated that "the Embedded Design is a mixed methods design in which one data set provides a supportive, secondary role in a study based primarily on the other data type". This view was supplemented by Edmonds and Kennedy (2017, p. 189) who contended, "the embedded approach is a nested approach and is used when one type of data (quantitative or qualitative) is most critical to the researcher. This approach is used when different questions

require different types of data (qualitative and quantitative)." Furthermore, Creswell (2006) stated that:

> The premises of this design are that a single data set is not sufficient, that different questions need to be answered and that each type of question requires different types of data. Researchers use this design when they need to include qualitative or quantitative data to answer a research question within a largely quantitative or qualitative study. This design is particularly useful when a researcher needs to embed a qualitative component within a quantitative design, as in the case of an experimental or correlational design (p. 67).

Edmonds and Kennedy (2017) further stated that "the embedded approach is also useful when the researcher logistically cannot place equal priority on both types of data or simply has little experience with one of the forms of data". The embedded design is one of the recommended mixed method research designs by Creswell and Plano-Clark (2011) and Cohen, Manion and Morrison (2018) to be used in research. Its usage may take one of the two forms as illustrated in Figure 5.

(a) Embedded Design
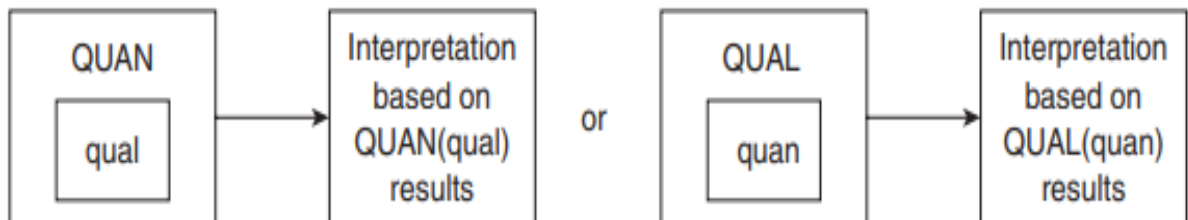
Figure 5: Embedded Design

Source: Creswell (2006, p. 68).

The notations used in Figure 5 were introduced by Creswell and Plano Clark (2011) where the uppercase or capitalised 'QUAN' or 'QUAL' means they are prioritised while lower cases 'Quan' or 'qual' means they are secondary or supplementary data to help explain the primary data in capital letter. Cohen, Manion and Morrison (2018, p. 39) rephrased these notions in the following manner. "QUAN = Quantitative data which have priority over qualitative data. Quan = Quantitative data which are subordinate to qualitative data. QUAL = Qualitative data, which

have priority over quantitative data. Qual = Qualitative data which are subordinate to quantitative data."

The embedded design was used in the present study in a "QUAN [Qual]" or 'qual () QUAN' manner where the quantitative data set were priorities over qualitative, or the qualitative inquiry is embedded in quantitative to provide alternative explanations to the results obtained in quantitative data. The correlation of the philosophical underpinning, paradigm, research method and the design are reflected in Figure 6.
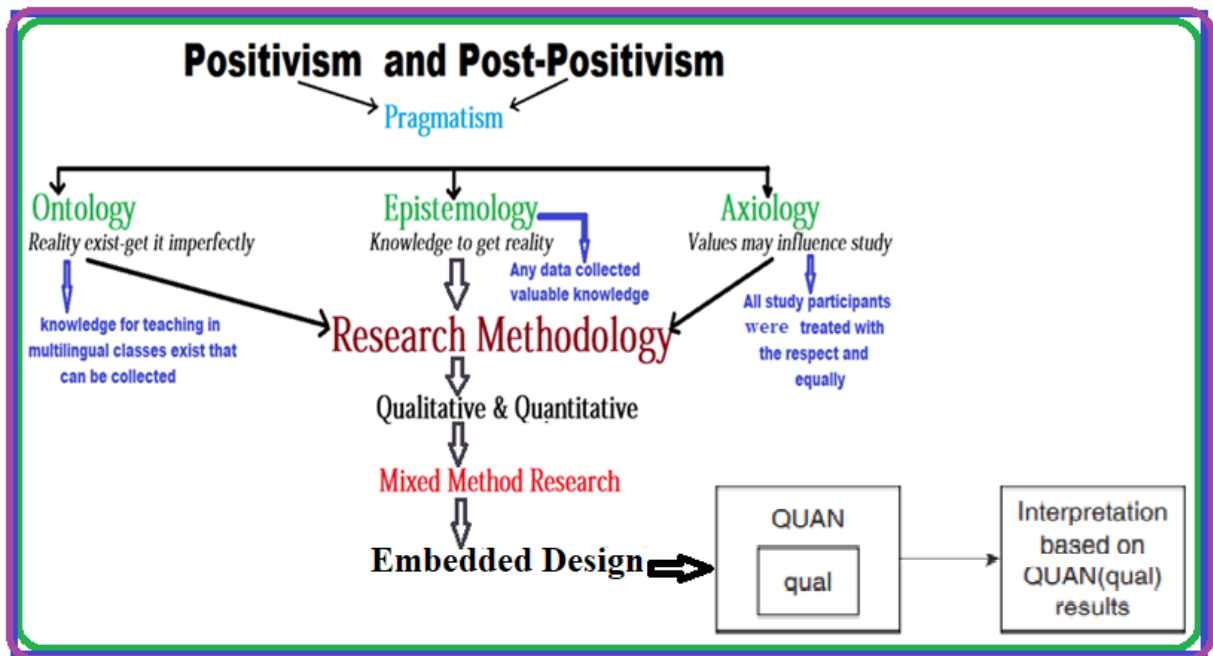
Figure 6: Research Paradigm

4.3   Population

Best and Kahn (2006, p. 13) defined a population as "any group of individuals that has one or more characteristics in common and that are of interest to the researcher". These researchers suggest that a target population is a specific group of entities necessary for a particular project. In this study, the target population was all Grade One learners, teachers and primary classes of Katete and Lusaka Districts of Zambia that were either in monolingual or multilingual classes.

4.4   Sampling

This study used a typical case sampling of purposive sampling because the researcher was interested in typical multilingual or monolingual classes in the research sites. Purposive

sampling was used to select the participating schools and the thirty-six teachers because the researcher needed specific schools and teachers with multilingual and/or monolingual characteristics in Lusaka and Katete districts, respectively. After eligible schools were selected purposively, a simple random sampling (picking papers in a plastic bag with numbers representing monolingual and multilingual schools) was used as described in Item 4.5.2.

The current study used non-probability sampling to purposively select teachers, monolingual and multilingual classes or schools in the first phase. When these schools were established, the probability sampling method particularly the simple random sampling was used to select a representative sample. The non-probability sampling particularly typical case sampling of purposive sampling was used to select teachers, monolingual and multilingual classes in schools. The purposive sampling was supplemented by the inclusion and exclusion criteria.

In terms of inclusion, this study only included multilingual schools in Lusaka District that were in less than ten kilometers from town center and exhibited or contained a minimum of three languages present in class spoken by learners. When more schools with multilingual speakers were identified in Lusaka, some schools were excluded based on Zones. All primary schools in Lusaka District are classified into Nine Zones namely; Chibolya, Chilenje, Emmasdale, Kaunda Square, Lilanda, Lusaka Central, Matero, Mumuni and Munali. Five schools, one per zone, which had more multilingual learners were involved in the study and these schools were selected using typical case sampling of the purposive sampling criteria. The same sampling criteria was used in Katete District when selecting typical monolingual classes where, only schools in the periphery of about five or more kilometres from Katete town centre that had all learners in class using or speaking one language only were picked for inclusion in this study.

The probability sampling particularly random sampling was used to select a representative sample from the monolingual and multilingual population using the Bartlett, Kotrlik and Higgins (2001) sample size calculator. This sampling technique was used as it provided an equal opportunity for any participant to be included on the study. Cohen, Manion and Morrison (2018, p. 214) noted that a sample is called probability because "…it draws randomly from the wider population, is useful if the researcher wishes to be able to make generalisations, because it seeks representativeness of the wider population." A non-probability sample, on the other hand,

"deliberately avoids representing the wider population. It seeks only to represent a particular group, a particular named section of the wider population, for example, a class of students, a group of students who are taking a particular examination, a group of teachers."

This study used the Bartlett, Kotrlik and Higgins (2001) sample size calculator for non-categorical data such as the one obtained for this study. The description and details of the process and ways of arriving at the sample size have been summarised under sample size in subsection 4.5.2.

4.5 Sample Size

Cohen, Manion and Morrison (2018, p. 203) stated that "a sample size of thirty is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis on their data, although this is a very small number and we would advise very considerably more". In this study, the total sample size was 411 (n=411) research participants.

4.5.1 Composition of the Sample Size

Out of the 411 participants, 375 were learners and 36 were early grade teachers in Grade One and those that taught first grade in the past two years.

4.5.2 Calculation of the Quantitative Sample Size

This study arrived at the sample size n=375 learners following Bartlett, Kotrlik and Higgins (2001) model of arriving at sample sizes as illustrated in Table 3. According to Bartlett, Kotrlik and Higgins (2001, p. 48) "the sample size will vary according to the statistics to be used". These scholars indicated that:

> For categorical data, if the number of independent variables is in the ratio of 5: 1 then the sample size should be at least 313 and the number of regressors (independent variables) should be no more than 62. For categorical data, if the number of independent variables is in the ratio of 10: 1 then the sample size should be at least 313 and the number of regressors (independent variables) should be no more than 31 (p.49).

In summary, Bartlett, Kotrlik and Higgins (2001, p. 48-49) provided various scenarios of sample sizes in one model. The sample sizes were for distinct types of data sets emanating from either continuous or categorical data.

According to the Ministry of Education (2016), Lusaka Province has seven hundred and eighty-six (786) primary schools (p.5), while Eastern Province has one thousand and ten (1,010) primary schools (p. 4). Lusaka District alone has 198 primary schools while Katete district had 63 primary schools excluding community schools (https://www.moge.gov.zm/?page_id=5055). Out of 198 primary schools in Lusaka, the researcher begun the inclusion and exclusion process where some schools were excluded from the study because they had less than three languages in their classes, while other schools were excluded because they were outside the radius covered in the study. This process reduced the number of eligible schools to 32. These 32 primary schools had multilingual classes with a total of one thousand five hundred and sixteen (1,516) learners.

Using Bartlett, Kotrlik and Higgins (2001, p. 48-49) calculation, a population of 1, 516 learners for categorical data gave a sample size of 230 to 461. Therefore, the researcher ensured that sample size from multilingual classes should be in between 230 to 461. The study ended up with 248 learners at the beginning of the study. However, the number was reduced naturally due to transfers, family migration, withdraw from school and other factors to 204 learners from five multilingual classes. A simple random sampling among the thirty-two eligible schools was used by listing the names of the schools in alphabetical order starting from A to Z and these schools were numbered from one to thirty-two (1-32). The researcher created small pieces of paper of ten millimetres (10 mm) in size and wrote numbers 1 to 32 on them corresponding to the names of the schools. These papers were put in a black plastic bag and asked an independent person to pick five random numbers from the bag. This was how schools among the multilingual and monolingual schools were selected.

The total number of pupils eligible from monolingual classes at the beginning of the study was 1,288. After using Bartlett, Kotrlik and Higgins (2001) sample size calculator, the study ended up with a sample size of 227 for monolingual classes at the beginning of the study. However, after cleaning the data, it came to 171 learners calculated using the same procedure where some schools were excluded on account of the existence of multiple languages in class, radius of the

catchment area and accessibility. Some schools were excluded out of this number because of multiple factors such as difficulties in accessing the school due to floods or poor road network, teacher factor where one teacher was handling multiple classes and some schools according to teachers were closed due to an outbreak that was not named. Table 3 on the next page shows Bartlett, Kotrlik and Higgins (2001) sample size calculator based on the population found in the eligible schools.

Table 3: Calculating Sample Size Model

TABLE 12.2   SAMPLE SIZES FOR CATEGORICAL AND CONTINUOUS DATA

Population size	Sample size					
	Continuous data (margin of error = 0.3)			Categorical data (margin of error = 0.05)		
	alpha = 0.10	alpha = 0.05	alpha = 0.01	alpha = 0.10	alpha = 0.05	alpha = 0.01
100	46	55	68	74	80	87
200	59	75	102	116	132	154
300	65	85	123	143	169	207
400	69	92	137	162	196	250
500	72	96	147	176	218	286
600	73	100	155	187	235	316
700	75	102	161	196	249	341
800	76	104	166	203	260	363
900	76	105	170	209	270	382
1,000	77	106	173	213	278	399
1,500	79	110	183	230	306	461
2,000	83	112	189	239	323	499
4,000	83	119	198	254	351	570
6,000	83	119	209	259	362	598
8,000	83	119	209	262	367	613
10,000	83	119	209	264	370	623

Source: Bartlett et al. (2001, p. 48), reproduced with permission from R. G. Brookshire and J. E. Bartlett

Source: Cohen, Manion and Morison (2018, p. 207)

The sample size of learners as research participants for research objective one of this study came to (n=375) calculated using the Bartlett, Kotrlik and Higgins (2001) as shown in Table 3. These learners came from ten schools: five monolinguals and another five from multilingual schools. The study worked with one class from each of the ten schools involved in the study.

4.5.3   Justification for the Sample Size

The justification for having such a sample size is that first, it is scientifically supported by scholars such as Cohen, Manion and Morison (2018, p. 203) to be enough for statistical analysis. Second, by sampling ten schools in two provinces and five per district would constitute a representative sample considering the nature of the study and the exclusion criteria employed.

The third reason is that in qualitative studies, numbers do not matter but the quality and depth of the information collected in the understanding of the subject matter (Vasileiou, Barnett, Thorpe & Young, 2018; Morse, 2000; Sandelowski, 1995, p.183). Furthermore, "qualitative sample sizes are large enough to allow the unfolding of a new and richly textured understanding of the phenomenon under study, but small enough so that the 'deep, case-oriented analysis' of qualitative data is not precluded" (Vasileiou, Barnett, Thorpe & Young, 2018, p. 2). "The more useable data are collected from each person, the fewer participants are needed" (p. 2). In this study, qualitative data was collected from research objectives 2, 3, 4 and 5 and the pupils and teachers that responded to these questions were sampled purposively because the study needed either monolingual or multilingual learners with their respective teachers.

4.6 Research Site

This study took place in two districts of Zambia namely, Katete rural, where there were classes with monolingual speakers and Lusaka urban, where there were classes with children from different language backgrounds. Table 4 is a summary of some critical factors in context.

Table 4: Summary of Critical Factors in Context

	Quantitative	Qualitative
Sample Size	375 learners (10 Schools)	36 Teachers (10 schools)
Types of Data to collect	Pre-test and post-test-results	Observation field notes, interview and focus group discussion notes
Instruments or protocols	Pre-test and post-test question papers	Observation guides, interview guides, focus group discussion guide
Types of Questions	(1) How many learners had full knowledge of the variables assessed as reading achievements in a pre-test and post-test in Grade One under the following categories:	(2) How did teachers of multilingual classes help learners who did not understand language of literacy instruction in Grade One classes of Lusaka District?

	(a) Learners' learning progress between the pre-test and post-test (b) Speakers versus non-speakers of the language of instruction in multilingual classes (c) Multilingual versus monolingual classes in the pre-test and post-test	(3) What were the in-service teachers' language beliefs about teaching in multilingual classes of Lusaka District of Zambia? (4) What phonics instructional approaches did Grade One teachers use to teach multilingual and monolingual classes of Lusaka and Katete Districts of Zambia?

4.7   Data Collection Instruments

The following were the data collection instruments.

4.7.1   A lesson observation guide was used to collect data by physically looking at how teachers were teaching and using language. An audio recorder used to record literacy lessons supplemented the observation guide (See Appendix 3).

4.7.2   Interview guides were used in the study to guide the researcher on which questions to ask early grade teachers in target schools. This document had a set of questions preset before the interviews took place. An audio recorder used to record most interviews with in-service teachers supplemented the interview guide (See Appendix 2).

4.7.3   Focus Group Discussion Guide was used to guide the researcher during discussions with in-service teachers to ask different research questions. The observation guide (See Appendix 4) was used to guide the flow of questions and notes were written down. Discussions were also documented on a digital recorder for further analysis.

4.7.4.   A pre-test and post-test were used to collect data. Pre-test was used to check on whether learners were at the same level. Post-test was used to measure learning achievements. See Appendix 1.

4.8   Data Collection Methods

Cohen, Manion and Morrison (2018, p. 469) noted that "…we identified eight main kinds of data collection methods and instruments with many variants included in each: questionnaires, interviews, observations, tests, personal constructs, role plays, visual media, using secondary data…". Field data was collected in a space of one year and some months using the following data collection methods associated with the research objectives in Tables 5 and 6.

Table 5: Quantitative Data Collection and Analysis

Research Objectives	Data Collection Tool	Data Analysis
1 – compare reading achievements across groups	Pre-test and post-test	SPSS – Descriptive and Inferential statistics. STATA tool was also used on inferential statistics

Table 6: Qualitative Data Collection and Analysis

Research Objectives	Data collection	Data Analysis
2 – How teachers helped non-speakers of the language of instruction learn	Lesson observation and interviews	- Content analysis via data coding and thematic analysis
3 – In-service teachers language beliefs about teaching in multilingual classes	Focus group discussion and interviews	- Content analysis via data coding and thematic analysis

4 – Teaching methods used to teach in Grade One	Lesson observation and interviews	- Content analysis via data coding and thematic analysis

The nature of the data collected in Table 5 and research objective 1 is descriptive comparative in nature as no variables of any kinds were manipulated.

4.8.1   Interviews

Brinkmann and Kvale (2015, p. 149) stated that "the research interview is an interpersonal situation, a conversation between two partners about a theme of mutual interest". This view is supported by Yin (2011, p.133) who stressed that "all interviews involve interaction between the interviewer and the interviewee. Structured interviews carefully script this interaction so that it is easy to follow." In other words, interviews are conversations between the researcher (interviewer) and the respondent (interviewee), usually of acceptable age limit ethically. Furthermore, it is important to note that the interview method involve asking people direct questions to elicit their responses with a room for probing. To maintain trustworthiness particularly credibility, detailed follow up questions were asked complemented by other methods of collecting data especially focus group discussions and observations. In addition, Brinkmann and Kvale (2015, p. 3) contended that "the qualitative research interview attempts to understand the world from the subjects' point of view, to unfold the meaning of their experiences, to uncover their lived world prior to scientific explanations". In other words, interviews focus on collecting detailed information about an issue known to a respondent based on their past experiences. Trustworthiness on interviews was also observed by ensuring there was quality interview with trustworthy respondents. The transcription from oral data was of good quality including making sound judgement when analysing data as described by Kvale & Brinkmann (2009, pp. 248-249).

According to Corbin and Straus (2015, p.37), "there are three types of interviews. These are unstructured interviews, semi-structured interviews and structured interviews." This study used

semi-structured interviews where some questions and topics for discussion were designed in advance before the interview (p.39). Semi-structured interview is what Yin (2011, p.132) called structured interview which was distinguished from qualitative interview where there are no questions prepared prior to the interview and this preparation contributes to quality interview and partly, contributes to trustworthiness of the study.

The interview method of data collection was included in this study (See Appendix 2) because there were specific research questions that demanded previous knowledge and experiences of early grade teachers of reading instruction. Most interviews were recorded and field notes were written down for further analysis. The interviews with teachers were necessary because teachers are best placed in explaining the strategies they used when teaching diverse learners from different language backgrounds, which is part of the focus of the study. It was hoped that by conducting face-to-face interviews with Grade One teachers of reading instruction, it would help to address certain research questions in the study.

4.8.2   Focus Group Discussion

Krueger and Casey (2009, p.2) defined a focus group as "a carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment." The use of focus group interviews or discussions serves time and costs because research participants discuss information collectively and can provide checks and balances within the same group. Yin (2011, p.142) observed that the major rationale for conducting focus group interviews is to help target audiences especially the young ones that might be shy to express themselves in a face-to-face interview but might be more open in a group. In other words, a focus group discussion is a form of qualitative research in which a group of people are asked about their perceptions, opinions, beliefs and attitudes towards an idea. Practically, questions are asked in an interactive group setting where participants are free to talk with other group members (Atkinson, 2017, p.70). During this process, the researcher either take notes or records important points he or she is getting from the group (Morgan, 1996 p.136). This study used focus groups because individual interviews might be biased and may obtain false data, which can be corrected in a focus group discussion. Furthermore, a focus group can be a good opportunity to discuss key research questions such as teachers' beliefs about

language use in multilingual classes and ways of helping non-speakers of the language of instruction, which was part of the focus of this study.

Focus group discussions are more useful in collecting balanced and valid types of data from a group of interest. This view is supported by George (2012, p. 257) who contended that "the interaction between focus group participants has the potential to create a dynamic synergy that is absent in individual interviews." The significance of focus group discussion in qualitative research is summed up by Morgan (1996, p.136) when he explained that "what makes the discussion in focus group more than the sum of individual interviews is the fact that the participants both query each other and explain themselves to each other." This study employed focus group discussions (See Appendix 4) with teachers of reading instruction to help discuss different research questions. All group discussions were recorded and field notes were written down for further analysis. In other words, focus group discussion as a data collection method was used in this study and the subsequent data was supplemented by other methods especially interviews and lesson observations because data collected from focus groups may lack depth, at times (Yin, 2011, p. 142).

4.8.3   Observation

Observation is one of the typical qualitative methods of data collection based on the natural and traditional way of interacting with the environment. This study employed lesson observation (See Appendix 3) because some of the research questions demanded observing the approaches or strategies and languages that teachers were using when teaching reading in class. Ten reading classes were observed two to three times in a year. Each lesson observed was recorded and field notes were taken. In observational methods, it is expected that the researcher is with the target research community at some point, watching exactly what is happening in those communities with respect to the set research questions. Marshall and Rossman (1989, p. 79) as quoted by Robinson et al., (2015) defined "observation as a research method that deals with the systematic description of events, behaviours and artefacts in the social setting chosen for study'. Furthermore, observational methods have been widely used in research in different academic disciplines, seeking to study both explicit and tacit cultural knowledge (Robinson et al., 2015, p. 220). In addition, Angrosino (2007) noted that researchers that use observation as a method for data collection do it in four different ways:

The complete participant where the researcher is totally immersed in the community and does not disclose his or her research agenda. *The participant-as-observer* where the researcher is immersed in the community but is known to be conducting research and has permission to do so. *The observer-as-participant* where the researcher is detached from the community, interacting with it only on specific occasions, perhaps to conduct interviews or attend organised functions. *The complete observer* where the researcher collects completely objective data about the community from afar without becoming involved in its activities or announcing his or her presence, (Angrosino, 2007 p. 6).

This study utilised observer-as-participant as described above because the researcher was detached from the target schools and only interacted with them on specific occasions when conducting interviews, focus group discussions, observing reading instruction lessons in class and when administering tests. Observation as a data collection method is important as it provides primary data to the researcher. This view is supported by Yin (2011, p. 143) who noted that:

Observing can be an invaluable way of collecting data because what you see with your own eyes and perceive with your own senses is not filtered by what others might have reported to you or what the author of some document might have seen. In this sense, your observations are a form of primary data to be highly cherished.

Furthermore, Angrosino and Rosenberg (2011 p.467) indicated that "in qualitative research, observation typically takes place in settings that are the natural loci of activity". In this study, classes in a school set up were in a natural setting. Therefore, the observation method was required in this study to confirm and verify the information stated by participants during interviews and focus group discussions. It is also done to have original information that might be interpreted differently from the way others might have perceived it. In other words, this study employed observation method because there was a research question in the study that addressed the strategies teachers used to teach reading in multilingual learners. While it might be difficult to interpret some data observed, this was made clearer with data collected using other qualitative methods, which are discussed in this study. Shank (2006) stated that using observation as a method in scientific research is difficult precisely because it is a natural element deeply rooted

in our everyday life. Therefore, when using observation as a method, it is advisable to use other methods of data collection such as interviews to help interpret the information being observed. This explains why this study used other methods of data collection such as interviews to supplement what was collected from other methods.

4.8.4   Test

In research, a test is a data collection method, instrument or technique that is used to measure knowledge, skills, performance and collect information about any attributes, properties and enquiry of a subject matter of interest to a researcher. It uses some pre-structured set of guidelines, procedures or questions that are tailored to establish the quality, performance, or reliability of what is being measured. Many times, it is aimed at addressing a specific goal such as responding to a research question of interest to the researcher. In the education sector, tests are educational assessments intended to measure the knowledge, skills, performance and aptitude in a subject or topic of interest to an educator. It is used as a form of measurement of how much students have learnt or acquired on a specific issue.

This study used the pre-test and post-test (See Appendix 1) for two major reasons: First, the results of the pre-test were used to establish whether learners on entry into Grade One was at the same level as far as reading and decoding were concerned. Second, the post-test was used to help establish how much learning of reading or decoding was taking place in Grade One by the end of the year among separate groups of learners with different language backgrounds (Monolinguals, multilinguals, speakers and non-speakers of the language of instruction). In both pre-test and post-test (See Appendix 1), learners were tested on six variables about their knowledge on: vowel knowledge, consonant knowledge, knowledge of one syllable blends, two syllable word, three syllable words, consonant clustered words and complex words. Vowels and consonants were in upper and lower cases. The same test items that were given on entry into Grade One, were also administered at the end of Grade One by simply swapping the order of some items on each of the variables assessed. If learners were unable to read at the beginning of Grade One and later, they learn to read at the end of Grade One year or vice versa, it was an indication of the presence or absence of decoding or reading abilities. For more information about the contest of the test (See Appendix 1).

4.9   Data Preparation and Formatting

All the data collected on the study from the recordings and field notes were transcribed and translated in readiness for analysis. Data preparation and formatting was done while in the field and afterwards. The data collected from tests, interviews, observation and focus group discussion was put on separate bunches in readiness for analysis. In other words, data collected were prepared and arranged into categories based on the method of data collection.

4.10   Data Analysis

Ader (2008, p. 333) describes research data analysis as "a process of inspecting, cleaning, transforming and modelling data with the goal of highlighting useful information, suggesting conclusions and supporting decision-making." These views were further supported by Lewis and Michael (1995) who stated that data analysis is done in a variety of ways depending on the instruments used to collect it and how the researcher wants the information to be presented. In this study, qualitative data was analysed as described below.

4.10.1 Qualitative Data Analysis and Procedure

The data recorded from lesson observations, interviews and focus group discussions were transcribed into specific scripts. All the data collected on lesson observation was merged into a one lesson observation script of data. The same procedure was followed for the data on interviews and focus group discussions. In the end, the researcher with help from three data analysts, had three different scripts of data based on the method of data collection. The researcher shared these three scripts with assistant data analysts and resolved to perform the qualitative content analysis, through a process of meaning condensation as described by Brinkmann & Kvale (2015, pp. 233-235) on each data script. The researcher with the analysts read the three scripts in the first round and these scripts were swapped in the second round so that each analyst interacted with two scripts. A meeting was called for data coding where "identified statements in the transcripts relevant for the research questions through a thorough reading of the transcripts, utterances expressing certain views on pedagogies and multilingualism in education were identified" (Iversen & Mkandawire, 2020, p. 39). Later, common data codes were generated in form of themes under which specific statements related to the codes were assigned, a concept that (Brinkmann & Kvale, 2015, p. 228) describe as "data-driven coding". When common codes based on the data were generated, the researcher with the

analysts went further with paraphrasing and quoting of some content and assigned them under codes (themes) and points with various meaning units as simply as possible using a process called data condensation. This means that "the researcher starts out without codes and develops them through readings of the material" (p. 228). All the codes were bundled into five categories: statements on multilingual pedagogical practices, comments on language beliefs or ideologies, phonics practices, comments on interventions and comments on language policies in Zambia. The coded data that was already classified under themes was then merged with respects to codes in form of themes generated. Merged data and patterns from the three scripts emerged with more similarities than differences, making it possible for the researcher to identify policy statements, teachers' pedagogical practices, beliefs about multilingualism, phonics practices and reading interventions that served culturally and linguistically diverse learners. At this point, the data begun to be reformatted responding to the research questions.

4.10.2 Quantitative Data Analysis and Procedure

Quantitative data in form of test scores from learners' performance in pre-test and post-test was analysed using the Statistical Package for Social Sciences (SPSS) software version 25. Soon after pre-test data was collected from learners on their entry into Grade One, it was entered in SPSS. Soon after, descriptive and inferential statistics were run to check on the overall performance of learners across groups and establish if there were statistically significant differences in performance among groups of learners. The same procedure was followed in the post-test and more comparative tests were subjected to the data. Another software called STATA version 14 was also used for inferential statistic to help predict if reading achievements were associated with learners' language background. This mostly served as a confirmatory test on the correlation between the independent variable (language background) and the dependent variable (performance) of learners in both pre-test and post-test.

Weaknesses of the Quantitative Data on Tests

The quantitative data collected through the pre-test and post-tests had one major weakness. It did not account for learners that had partial knowledge of the variables that were assessed in both tests. In other words, the data collected from tests only counted learners that were able to read all items under each variable. For instance, when looking at learners' ability to name or

identify vowel sounds as a variable, the study only counted learners that named or identified all vowel sounds as being able to read vowels. Those that were able to read or identify one or two or four and failed to read or identify one vowel or two or three, after showing the same vowels several times, were considered unable to read vowels as they had partial knowledge of the variable being assessed. This was the standard principle used for all variables on the quantitative data question under the binary opposition theory.

The data collected from test results were binary in nature as it measured full knowledge of the variables assessed. This means that learners were classified into two categories; its either they knew how to read assessed items (vowel knowledge, consonant knowledge, knowledge of one syllable blends, two syllable word, three syllable words, consonant clustered words and complex words; See Appendix 1) or they did not.

The advantage of having binary categorization or thinking in this study is that it helps researchers, readers and teachers see these significant differences in education and among learners as a matter that needs to be addressed. Teachers may understand that good readers are understood from the lens of bad readers and similarly, knowing how to read may be understood from failure to read. This dichotomy may call for consented efforts to address the differences in reading abilities of learners. The dichotomy makes the position of the study clear and definitive by encouraging difference, non-dominance and non-transcendence (Elbow, 1993).

4.11   Ethical Issues

Bearing in mind that the study was being done on children and teachers in multilingual and monolingual schools of Lusaka and Katete districts of Zambia, permission from the Ministry of Education Permanent Secretary (See Appendix 6), District Educational Board Secretary (DEBS) (See Appendix 7) and school heads including class teachers and learners were sought. Furthermore, the ethics committee of the University of Zambia Humanities and Social Sciences (See Appendix 5) approved the study. Consent was obtained from children's guardians in form of a note asking them to allow their children to take part in the study (See Appendix 8). Children's consent was also sought and this was not a onetime incidence but an ongoing process or activity so that they were not forced. In one of the classes in multilingual set ups, two children were called by their teacher to take a pre-test. These two learners refused to take the test and started crying one at a time. The two were excluded from the study even though their parents

and school authorities allowed them to take part. A similar incidence happened to four more different children in a post-test at different schools and they were excluded from the study and their data was deleted from the storage soon after. The researcher ensured that there was voluntary participation of respondents and no harm of any emotional or physical was inflicted on respondents. The researcher maintained the integrity and privacy of participants, including assurance of anonymity and confidentiality of the information collected during the study.

4.12 Validity, Reliability and Trustworthiness

This segment discusses what the terms validity, reliability and trustworthiness of research instruments mean in both qualitative and quantitative research and how they have been applied to the present study.

4.12.1 Validity

Cohen, Manion and Morrison (2018, p. 245) stated that "some versions of validity regard it as essentially a demonstration that a particular research instrument, in fact, measures what it intends, purports or claims to measure, that an account accurately represents 'those features that it is intended to describe, explain or theorise". Flick (2009) and Ary, Jacobs and Razavieh (2002) reported that validity in qualitative research outlines some guidelines and principles that researchers may need to address:

> The natural setting is the principal source of data; context-boundedness and 'thick description'; data are socially situated and socially and culturally saturated; the researcher is part of the researched world; as we live in an already interpreted world, a doubly hermeneutic exercise (Giddens, 1979) is necessary to understand others' understandings of the world; the paradox here is that the most sufficiently complex instrument to understand human life is another human (Lave & Kvale, 1995, p. 220), but this risks human error in all its forms; holism in the research; the researcher – rather than a research tool – is the key instrument of research; data are descriptive; there is a concern for processes rather than solely with outcomes; data are analysed inductively rather than using a priori categories; data are presented in terms of the respondents rather than the researcher; seeing and reporting the situation through the eyes of participants; respondent validation is important; catching

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agency, meaning and intention are essential, (Cohen, Manion & Morrison, 2018, p. 247).

In this study, quantitative data collection instruments were the pre-test and post-test question papers. These tools were valid as they collected the intended data in natural settings, provided detailed description of the phenomena intended to be measured. In other words, validity principles in quantitative research were addressed in this study by siting in classrooms that were natural and this was supplemented by internal and external validity or trustworthiness in qualitative data collection instruments by chatting with teachers in their natural workplaces and provided thick descriptions based on respondents' narratives.

Heale and Twycross (2015, p. 66) held that "validity is defined as the extent to which a concept is accurately measured in a quantitative study". Validity is extrapolated in three dimensions namely; content validity, construct validity and criterion validity.

> Content validity refers to the extent to which a research instrument accurately measures all aspects of a construct. Construct validity deals with the extent to which a research instrument (or tool) measures the intended construct and criterion validity addresses the extent to which a research instrument is related to other instruments that measure the same variables (p. 66).

Cohen, Manion and Morrison (2018, p. 247) reported that "in much quantitative research, validity often (not always) strives to be faithful to several features, for example: controllability; replicability; consistency; predictability; the derivation of generalisable statements of behaviour; randomisation of samples; neutrality/ objectivity; observability".

In this study, assessment tests for Grade One both pre-tests and post-tests were modified from the national assessment tool called the Zambia Assessment of Early Literacy Abilities (ZAELA) and this was part of the validity. The tests were designed to collect valid quantitative data that the study sought to collect or measure on vowels, consonants, syllables and words. Reading achievements of Grade One learners can effectively be measured via tests. "In quantitative research, issues of the reliability and validity of the instruments are very important aspects for minimising errors that might arise from measurement procedures" (Mulenga, 2015, p. 83).

Triangulation was used in this study to ensure validity. Cohen, Manion and Morrison (2018, p. 265) noted that "triangulation is often characterised by a mixed methods approach to a problem in contrast to a single-method approach". There are several types of triangulations which include:

> Data triangulation where data is collected at different times and source and combined or compared to increase confidence; investigator triangulation where data is gathered by different investigators, independently and compared/combined to increase confidence; methodological triangulation: this uses either (a) the same methodology on different occasions or (b) different methods on the same object of study. paradigm triangulation: different paradigms used in the same study; instrument triangulation: data-collection instruments; sampling triangulation: different samples and sub-samples (Cohen, Manion & Morrison, 2018, p. 265).

This study used four kinds of triangulations namely, paradigm, methodological, instrument and data triangulation. A paradigm is "the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed" (Kuhn, 1970). In this study, qualitative and quantitative and qualitative of positivism and post-positivism respectively were used. Method triangulation involved the use of interviews, focus groups, lesson observation and tests were used to collect data. Instrument triangulation involving interview guides, observation guide and group guide and tests papers were used. Data triangulation was also used where data during analysis was brought together to supplement one another.

4.12.2 Reliability

Bryman and Bell (2019, p.5) noted that "reliability is concerned with the consistency of measures". Furthermore, "reliability of research instruments refers to the accuracy and precision of a measurement procedure" (Creswell, 2012). In addition,

> Reliability in this context refers to the consistency or repeatability of an instrument. The most important form of reliability for multi-item instruments is the instrument's internal consistency—which is the degree to which sets of items on an instrument behave in the same way. If the same result can be consistently achieved by using the same

methods under the same circumstances, the measurement is considered reliable. (Creswell & Creswell, 2018, p. 215).

Furthermore, Mugenda and Mugenda (1999) observed that "reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials". The tools used in this study were valid and reliable because the study used a modified national literacy assessment tool called "Zambia Assessment of Early Literacy Abilities" (ZAELA), which has been used in other studies before.

4.12.3 Trustworthiness

Bryman and Bell (2019, p. 409) contended that "trustworthiness is a general criterion (composed of four more specific criteria; credibility, transferability, dependability, confirmability) used by some writers in assessing the quality of qualitative research". Korstjens and Moser (2018, p. 121) added reflexivity to list and provided the interpretation of each of the terms on trustworthiness

> Credibility - The confidence that can be placed in the truth of the research findings. Credibility establishes whether the research findings represent plausible information drawn from the participants' original data and is a correct interpretation of the participants' original views. Transferability is the degree to which the results of qualitative research can be transferred to other contexts or settings with other respondents. The researcher facilitates the transferability judgment by a potential user through thick description. Dependability refers to the stability of findings over time. Dependability involves participants' evaluation of the findings, interpretation and recommendations of the study such that all are supported by the data as received from participants of the study. Confirmability is the degree to which other researchers could confirm the findings of the research study. Confirmability is concerned with establishing that data and interpretations of the findings are not figments of the inquirer's imagination, but clearly derived from the data. Reflexivity is the process of critical self-reflection about oneself as researcher (own biases, preferences, preconceptions) and the research

relationship (relationship to the respondent and how the relationship affects participant's answers to questions).

Furthermore, "trustworthiness or rigor of a study refers to the degree of confidence in data, interpretation and methods used to ensure the quality of a study" (Pilot & Beck, 2014).

In this study, trustworthiness was achieved by data triangulation and creditability. Same participants were involved in focus group discussion, interviews and their lessons were observed to check for various themes including what they reported during interviews and focus groups. Furthermore, the different segments of trustworthiness were achieved on this study in the following ways. The results of this study are credible because the research findings represent the original data from the participants. Furthermore, the data of this study can be transferable by potential users in different contexts. The findings of this study are dependable because the data reflects the views of participants, their interpretation and recommendations. In terms of confirmability, the output of this study can be confirmed by other similar studies. This means that the data on the study were not just out of the researcher's imagination, but clearly derived from the data from the field. Through self-reflexivity, the researcher was able to link the findings to existing trends, literature and context in the discussions with a view of validating the trustworthiness of the study.

4.13   Summary

In this chapter, the embedded research design that was used in this study, population, sample size, data collection instruments and the procedure for data analysis were explained. Furthermore, ethical issues about the treatment and interaction with participants were presented. The next segment presents findings of the study after data collection.

CHAPTER FIVE: FINDINGS

5.0   Overview

In the previous chapter, the research methodology for this study was explained and how each research question presented in chapter one, was investigated through data collection procedures, methods and analysis. In the current chapter, findings of the study are presented. These findings have been arranged with respect to the research questions and emerging themes generated from the data. The chapter is divided into sections according to the research questions and themes. The first section deals with reading achievements of Grade One learners as a dependent variable, while the second, sought to understand how teachers were helping learners that were non-speakers of the language of instruction in multilingual classes in Grade One. The third section reports teachers' views about language use in multilingual classes. The fourth section discusses phonics instructional approaches applicable to multilingual and monolingual classes. The fifth section outlines major reading problems among learners with reading interventions for them.

5.1   Emerging Research Findings

In the beginning of this study, there were 475 Grade One learners that took part in the pre-test assessment at the beginning of the school calendar year from monolingual and multilingual classes collectively. Out of that number, only 375 learners that took a pre-test also took a post-test assessment at the end of the same academic year. A difference of 100 learners that took a pre-test at the beginning of the year, did not take a post-test at the end of the year from the 10 schools. The 100 learners that took the pre-test but did not take the post-test (see Table 7) included those that cried or declined to take the post-test, those that were absent from class, and those that moved out of the study schools. Although the current study did not focus on learner absenteeism, it is a crucial factor as an independent variable that has a bearing on the learners' reading achievements, which the study sought to address. When asked why there were high numbers of absentees, teachers indicated that there were multiple reasons associated with learner absenteeism. These factors include domestic chores, family responsibilities, distance to school, negative attitudes about school, transfers from one school to another and cultural matters of the society where they lived.

Table 7: Total Learners that Took Pre-test and Post-test

Pre-test

	No	Percent	Valid Percent	Cumulative Percent
monolingual	249	52.4	52.4	52.4
multilingual	226	47.6	47.6	100.0
Total	475	100.0	100.0	

Post-test

	No	Percent	Valid Percent	Cumulative Percent
monolingual	171	45.6	45.6	45.6
multilingual	204	54.4	54.4	100.0
Total	375	100.0	100.0	

Table 7 shows that, 249 pupils from monolingual classes and 226 pupils from multilingual classes took a pre-test. In addition, 171 monolingual learners and 204 multilingual learners took the post-test. One hundred learners with the majority from monolingual classes did not take the post-test.

5.1.1 Post-test Absentees Data Cleaning

Data was cleaned in the sense that learners that took a pre-test but did not take a post-test were excluded from analysis of variables particularly those on research question 1 that assessed learners' reading achievements in the two tests. The reason was that it was not easy to measure their learning progress using the pre-test alone. In other words, pre-test and post-test were used to help establish how many learners were breaking through by the end of Grade One.

5.2 Reading Achievements of Grade One Learners

The first research question sought to establish the performance of Grade One learners in the pre-test and post-test results. As a dependent variable under investigation, data was analysed using descriptive and inferential statistics to obtain a clear understanding of the subject matter. The researcher used the results from pre-test and post-test to assess reading achievements of learners from the time they started Grade One to the end of the first grade. The results from pre-test and post-test were presented and compared under three categories:

(a) Learning progress of all learners between the pre-test and post-test results;
(b) Reading achievements of speakers and non-speakers of the Language of instruction in multilingual classes; and
(c) Reading achievements of multilingual classes and monolingual classes.

To measure or assess the impact or effect of the language of instruction on reading achievements, inferential statistics (Binomial Logistic Regression in STATA 14, Mann-

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Whitney U Test and Mcnemar Test in SPSS 25) were used. Prior to this, descriptive statistics were used to describe, show and summarise the overall performance in figures, quantities and tables reflecting results of speakers of the language of instruction (Nyanja) and non-speakers of the language of instruction. The same was used to measure learners' general reading progress between the pre-test and post-test results. The findings for these categories are presented in subsequent sectors below bearing the sub research questions.

5.2.1 *Learners' Reading Progress between a Pre-test and Post-Test Results*

First grade learners were given a pre-test on entry into Grade One as a baseline to establish whether all learners were at the same level or which learners had knowledge of the items that were being assessed on their entry into Grade One. The pre-test was also given to ensure that learners' prior knowledge on the assessment items did not interfere or mislead the interpretation of post-test results on reading progress. The post-test results were given to measure the percentage of learners that entered Grade One unable to read but completed the first grade with knowledge of reading in the assessed variables (vowel knowledge, consonant knowledge, knowledge of one syllable blends, two syllable word, three syllable words, consonant clustered words and complex words; See Appendix 1). Part (a) of the first research question sought to establish learners reading progress between the pre-test and post-test. The overall reading results for question one part (a) are shown in Table 8.

Table 8: Summary of All Learners Reading Progress in Pre-test and Post-test

Variable Assessed	375 learners' performance in the pre-test	375 learners' performance in the post-test	Percentage of learners' reading progress between tests
Learners' Ability to Read **Vowel Sounds: i, a, o, u, e.**	140 learners knew vowels on entry into Grade One 235 learners did not know all vowels on entry into Grade One	239 learners read vowels at the end of Grade One 136 completed Grade One without knowing vowels.	239-140=99/235x100 (42.1%) *of learners in Grade One that learnt to read* vowels. 136/235x100 (57.9%) completed Grade One without knowing vowels.
Learners' Ability to Read **Consonant**	52 learners knew consonants on entry into Grade One	155 learners read consonants *at the end of Grade One*	155-52=103/323x100 (31.9%) *of learners in Grade One learnt to read* consonants.

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Sounds: d, g, f, k, m …	323 learners could not identify any consonant	220 completed Grade One without knowing consonants	220/323x100 (68.1%) completed Grade One without knowing consonants.
Learners' ability to read **1 syllable words: Ti, Za, Me, Ca…**	*16* learners knew *1 syllable words* on entry into Grade One *359 could not read 1 syllable words* on entry into Grade One	*102 learners read 1 syllable words* at *the end of Grade One* *273 could not read 1 syllable words at the end of Grade One*	102-16=86/359x100 (24.0%) *of learners in Grade One learnt to read* 1 *syllable words.* 273/359x100 (76.0%) completed Grade One *unable to read 1 syllable words.*
Learners' ability to read **2 syllable words: Meka, lota, Wina…**	*6* learners knew 2 *syllable words* on entry into Grade One *369 could not read 2 syllable words* on entry into Grade One	*76 learners read 2 syllable words* at the end of Grade One *299 could not read 2 syllable words at the end of Grade One*	76-6=70/369x100 (19.0%) *of learners in Grade One learnt to read 2 syllable words.* 299/369x100 (81.0%) completed Grade One *unable to read 2 syllable words.*
Learners' ability to aead **3 syllable words: Putako, Bazuka, Vapita…**	*5* learners knew *3 syllable words* on entry into Grade One *370 could not read 3 syllable words* on entry into Grade One	*65 learners read 3 syllable words at the end of Grade One* *310 could not read 3 syllable words at the end of Grade One*	65-5=60/370x100 (16.2%) *of learners in Grade One learnt to read 3 syllable words.* 310/370x100 (83.8%) completed Grade One *unable to read 3 syllable words.*
Learners' ability to read **consonant clustered words: Pothila, Mbeu, Yathu…**	*4 learners read Consonant Clustered Words on Entry into Grade One* *371 could not read consonant Clustered Words* on entry into Grade One	*57 learners read consonant clustered words at the end of Grade One* *318 could not read Consonant Clustered Words at the End of Grade One*	*57-4=53/371x100 (14.3%) of learners in Grade One learnt to read consonant clustered words.* *318/371x100 (85.7%) completed Grade One unable to read consonant clustered words.*
Learners' ability to read **complex words: Nkhani, Nkhwangwa, ndi, mpini.**	*4 learners read complex words* on entry into Grade One	*53 learners read complex words at the end of Grade One*	*53-4=49/371x100 (13.2%) of learners in Grade One learnt to read complex words.*

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	371 could not read complex words on entry into Grade One	*322 could not read complex words* at the end of Grade One	*322/371x100 (86.8%) completed Grade One unable to read complex words.*

Table 8 summarises the actual performance of all learners between pre-test and post-test on all the seven items assessed. The interpretation of Table 8 results by assessment items is provided in this section.

5.2.1.1 Learners' Ability to Identify Vowel Sounds (Variable 2 Assessed) in Nyanja Language

Descriptive statistics on vowels in Table 8 shows that, out of the total sample size n=375 learners that took a pre-test, 140 started Grade One class with knowledge of vowel sounds already. The remaining (n=235) learners started Grade One without knowledge of vowels. In the post-test, n=239 learners read vowels at the end of Grade One inclusive of those that knew vowels on entry. When 140 learners that knew vowels on entry into Grade One is subtracted from the 239 learners that read vowels in the post-test (239-140 = 99), we get 99 learners. The table indicates that 99 learners from the 10 schools on the study show progress of learning to read vowels by the end of Grade One, which translates to 42.1% of (n=235) learners that started Grade One without knowledge of vowels. Table 8 also shows that 136 learners out of 235 that entered first grade without knowledge of vowels, completed the first grade unable to read vowels (136/235x100 = 57.9%).

To establish whether there was a statistically significant difference in performance between the pre-test and post-test, the researcher had to run a non-parametric inferential statistic called the Mcnemar's test in SPSS version 25. The Mcnemar test was used to determine if there were significant differences in performance of the same learners but in two different tests (pre-test and post-test). The Mcnemar test is like the paired-samples t-test, except that, it focusses on dichotomous and non-continuing variables (yes/no or read/did not read) that are discrete and not continuing. The purpose of using Mcnemar's test was to establish if the proportion of learners that were **not able to read vowel sounds** in a pre-test **decreased** significantly in a post-test. Table 9 shows the Mcnemar's Test Statistics on Vowel Sounds.

Table 9: Mcnemar's Test Statistics on Vowel Sounds

	Read Vowels: pre-test and Read Vowels: post-test
	Read vowel: pre-test and Read vowel: post-test
N	375
Chi-Square value name	94.090
Asymp. Sig.	.000

(a). Mcnemar test, (b). Continuity corrected. *Note that:* Chi-square as used in Table 9 is different from chi-square test, but it is used as a value name.

The p-value obtained in Mcnemar test was .000, which is much less than the alpha value level specified for the test 0.05. This indicates that, there is a statistically significant difference in performance between pre-test and post-test results in the sense that some learners that were unable to read vowels on their entry into Grade One (in a pre-test) were able to read vowels by the end of Grade One (Post-test). The test statistics confirms that there was evidence of learning in between the two tests in Grade One. The change in the proportion of learners that were able to read following the completion of Grade One was statistically significant. It was likely that there was a meaningful change in learners' knowledge of vowel sounds on completion of Grade One as compared to the time when they started.

5.2.1.2 Learners' Ability to Identify Consonant Sounds (Variable 2 Assessed) in Nyanja Language

Using the same criteria as assessment item 1 on vowels, the descriptive statistics on consonant sounds as shown in Table 9 indicate that 52 learners (14%) of the total number of learners n=375 that took a pre-test on entry into Grade One already knew consonant sounds in Nyanja language, while 323 learners (86%) of the total number of learners entered Grade One with no knowledge of consonant sounds in Nyanja language. In the post-test results, 155 learners learnt consonants at the end of Grade One inclusive of those that read on entry, while 220 learners completed first grade without knowledge of consonants. When the number of readers (155) in the post-test results is subtracted by 52 (those that new consonants on entry into Grade One), only 103

learners remain. The 103 out of 323 (total number of learners that started Grade One unable to read consonants) times one hundred give us 31.9% as the actual percentage of learners that showed evidence of learning between the pre-test and post-test. Table 9 also shows that 220 learners (68.1%) of learners that were unable to read consonants on entry into Grade One, also failed to read consonants in the post-test at the end of Grade One.

To establish whether the difference in performance between pre-test and post-test was statistically significant, the study used Mcnemar's test as shown in Table 10 as the test statistics.

Table 10: Mcnemar's Test Statistics on Consonant Sounds

Read consonants: pre-test and Read consonants: post-test	
N	375
Chi-Square[b]	90.090
Asymp. Sig.	.001
a. Mcnemar Test b. Continuity Corrected	

The results in the Test Statistics in Table 10 revealed that the performance of learners between the pre-test and post-test improved significantly. The test statistics shows that there was a statistically significant difference in the proportion of learners that were able to read consonant sounds between the pre-test and post-test (p = .001). This means that the proportion of learners who were able to read consonants sounds increased significantly from the time learners started Grade One (pre-test) up to the time they completed it (post-test). Therefore, there is sufficient evidence to conclude that there was a significant improvement in learners' knowledge of identifying consonant sounds on completion of Grade One.

5.2.1.3 Learners' Ability to Read One Syllable Words, Two Syllable Words, Three Syllable Words, Consonant Clustered Words and Complex Words in Nyanja Language

Descriptive results comparing pre-test and post-test performance of all learners across all the seven assessment items (read one syllable words, two syllable words, three syllable words, consonant clustered words and complex words) in Nyanja language as shown in Table 8, shows that the number of learners that were able to read each of the items above increased in the post-test at the end of the year. For example, Table 8 indicates that 16 pupils read one syllable words on entry into Grade One in the pre-test and this number increased to 102 in the post-test at the end of the year. Similarly, 6 learners knew two syllable words on entry into Grade One and this number increased to 76 at the end of the year. Table 8 also shows that 5 and 4 learners knew three syllable words and consonant clustered words respectively on entry into Grade One and these numbers increase to 65 and 57 learners in the post-test at the end of the year. Consonant clustered words had comparable results to complex words as learners that read consonant clustered words also read complex words with a few exceptions (See table 8).

Table 8 also shows that more learners are completing Grade One without knowing the reading skills. For instance, 57.9% of learners completed Grade One without knowledge of vowels, 68.1% of learners completed first grade unable to identify consonants, 76% completed unable to read one syllable words, 81% failed to read two syllable words, 83.8 failed three syllable words, 85.7 failed to read consonant clustered words and, 86.8% completed the first grade unable to read complex words.

The Mcnemar test showed that there was a statistically significant difference in the performance of the same learners between the pre-test and post-test on all the assessment items (read one syllable words, two syllable words, three syllable words, consonant clustered words and complex words). For example, the Mcnemar test on one-syllable words as shown in Table 11 indicates that it gave (Asymp. Sig. is .000) or (p = .000), which shows a significant difference between the outcomes of the two tests.

Table 11: Mcnemar's Test Statistics on One Syllable

Read 1 syllable: pre-test and Read 1 syllable: post-test

N	375
Chi-Square[b]	81.103
Asymp. Sig.	.000
(a). Mcnemar Test, (b). Continuity Corrected	

Such outcomes were the same for all the remaining assessment items (read two syllable words, three syllable words, consonant clustered words and complex words) as they all gave a p-value of less than 0.05 that shows a positive correlation. These findings correlate with qualitative data where teachers in an interview reported that most learners acquire the basics of reading skills within three to twelve months of schooling. For example, teacher Tikambenji (Pseudo name) had this to share:

> **Tikambenji:** *Some learners come to school with literacy skills already. For those that do not know how to read and write, we begin teaching them and by the end of term two, almost every learner is able to read. Those that are behind or unable to read by term two, we ask them to remain after class for extra lessons so that they catch up. By the end of Grade One, we ensure that all learners can read.*

The views of teacher Tikambenji show that the number of learners that learn to read increases as they head towards the end of the year.

5.2.2 Reading Achievements of Speakers and Non-Speakers of the Language of Instruction in Multilingual Classes

Research question one, part (b), sought to compare the performance of speakers to non-speakers of the language of instruction in multilingual classes in both pre-test and post-tests. The numbers of speakers and non-speakers per school in multilingual classes are shown in Figure 7.
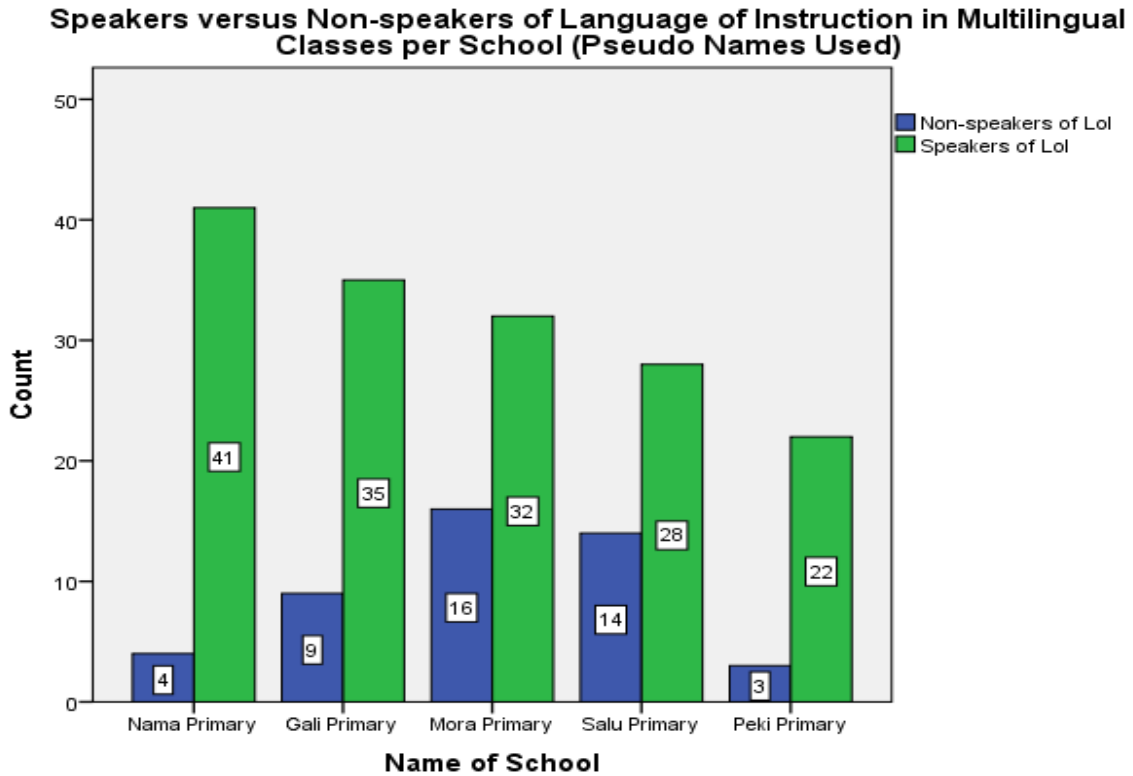
Speakers versus Non-speakers of Language of Instruction in Multilingual Classes per School (Pseudo Names Used)

Figure 7: Speakers versus Non-Speakers of the Language of Instruction in Multilingual Classes per School

Figure 7 indicates the distribution of numbers of speakers and non-speakers of the language of instruction per school involved in the study. Figure 7 shows 3 and 16 as the minimum and maximum number respectively of learners that were non-speakers of the language of instruction on entry into Grade One. The speakers and non-speakers of the language of instruction were assessed using the same tools and in the same class. Their results were compared on seven variables assessed (in both descriptive and inferential statistics).

The frequency in percentages of speakers and non-speakers of the language of instruction are shown in Figure 8.
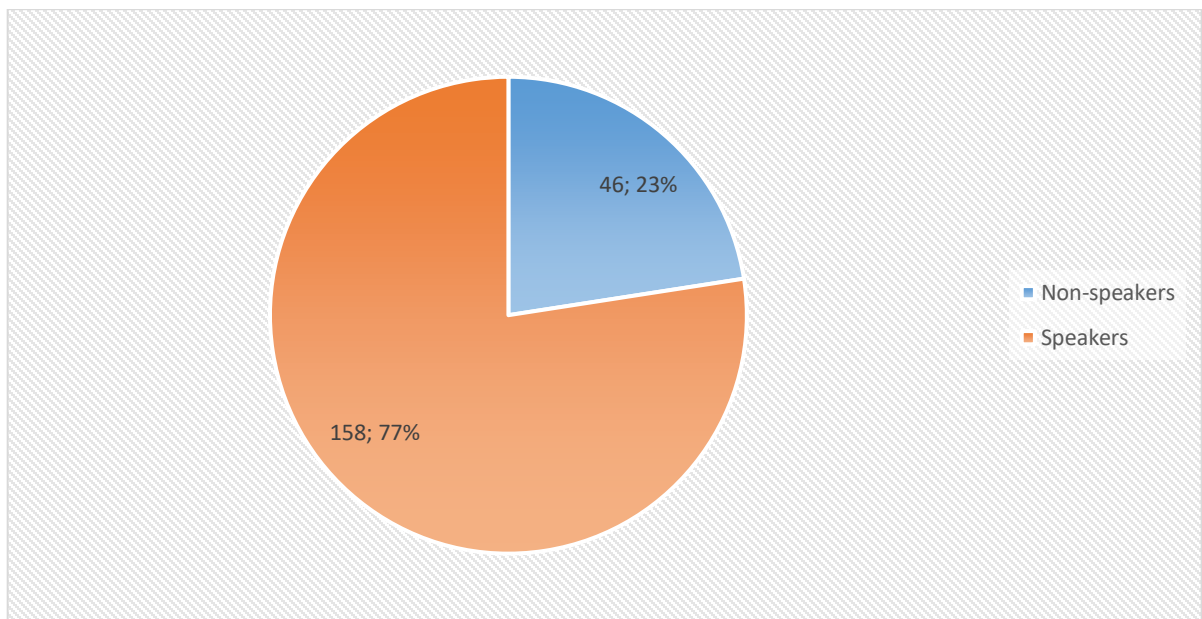
Figure 8: Speakers versus Non-speakers of Language of Instruction

Figure 8 shows the frequency and percentage distribution of learners according to speakers and non-speakers of the language of instruction. As indicated in the methodology chapter, 204 Grade One learner in multilingual classes that participated in this study. Out of that number, 158 learners (77%) were speakers of Nyanja the language of instruction. The remaining 46 learners (23%) were non-speakers of the language of instruction (Nyanja) but were speakers of one or more languages including Tonga, Bemba, Tumbuka, English, Lozi, Lunda, French, Swahili and Lamba.

In this section, the researcher used both descriptive statistics and inferential statistics. Descriptive statistics were used to provide basic quantities and percentages from SPSS. Inferential statistics used two non-parametric tests; the Mann-Whitney U Test and the Binomial logistic regression analysis for the discrete data. The Mann-Whitney U test was used to check whether the performance of speakers and non-speakers of the language of instruction in multilingual classes was statistically different or not in both pre-test and post-test through their average mean scores. The binomial logistic regression was used to measure the likelihood of speakers or non-speakers of the language of instruction performing better than the other in the assessed items.

5.2.2.1 Grade One Speakers and Non-speakers of the Language of Instruction that were Able or Unable to Read Vowel Sounds in a Pre-test and Post-test in Multilingual Classes

The performance of speakers and non-speakers of the language of instruction on the first assessed item is shown in Table 12 in form of descriptive statistics on learners' ability to read vowel sounds in Grade One.

Table 12: The Performance of Speakers versus Non-speakers of the Language of Instruction in a Pre-test and Post-test in Multilingual Classes on Reading Vowels

Read Vowels: Pre-test by Cross tabulation

Count

		Non-speakers versus Speakers of LoI in Multilingual Classes		
		Non-speakers	Speakers	Total
Read vowel: pre-test	no	26	91	117
	yes	20	67	87
Total		46	158	204
Percentage		Read: 43.5% Unable: 56.5%	Read: 42.4% Unable: 57.6%	Read: 42.6% Unable: 57.4%

Read Vowels: Post-test by Cross tabulation

Count

		Non-speakers versus Speakers of LoI in Multilingual Classes		
		Non-speakers	Speakers	Total
Read vowel: post-test	no	17	56	73
	yes	29	102	131
Total		46	158	204
Percentage		Read: 63% Unable: 37%	Read: 64.7% Unable: 35.4%	Read: 64.2% Unable: 35.8%

The findings on the 'read vowel' variable as depicted in Table 12 shows that, the performance of non-speakers of the language of instruction in multilingual classes was slightly better in pre-test where they scored 43.5% and slightly lower in post-test where they scored 63% in comparison to speakers that scored 42.6% and 64.6% in pre-test and post-test, respectively. This partly shows that there is some learning taking place and that one group of learners performed slightly better than the other.

The Mann-Whitney U Test on learners' ability to read vowel sounds in the pre-test and post-test in multilingual classes

The Mann-Whitney U Test was used to compare if there were statistically significant differences in performance between speakers and non-speakers of the language of instruction on their ability to read vowel sounds in the pre-test and post-test assessments. Table 12 shows Mean Ranks and Table 13 shows Test Statistics as generated by Statistical Package for Social Sciences (SPSS) version 25.

Table 13: Comparing the Mean Ranks for Speakers and Non-Speakers of the Language of Instruction in Multilingual Classes on Read Vowels

	Non-speakers of LoI vs Speakers in Multilingual	N	Mean Rank	Sum of Ranks
Read vowel: pre-test	Non-speakers	46	103.35	4754.00
	Speakers	158	102.25	16156.00
	Total	204		
Read vowel: post-test	Non-speakers	46	101.30	4660.00
	Speakers	158	102.85	16250.00
	Total	204		

When the mean ranks are compared, they show that, non-speakers of the language of instruction had a slightly higher mean rank (Mean Rank=103.35) in the pre-test assessment compared to speakers of LoI (Mean Rank=102.25). This means that non-speakers of the language of instruction performed slightly better in reading vowel sounds in the pre-test assessment compared to speakers of the language of instruction in multilingual classes. In the post-test assessment, speakers of LoI had a slightly higher mean rank compared to non-speakers. This means that in the post-test assessment, speakers of LoI performed slightly better in reading vowel sounds compared to non-speakers of LoI in multilingual classes.

To establish whether this difference in performance was statistically significant, the Mann-Whitney U Test Statistics was used as shown in Table 14.

Table 14: Test Statistics for Significance Using Mann-Whitney U Test on Read Vowels

	Read vowel: pre-test	Read vowel: post-test
Mann-Whitney U	3595.000	3579.000
Wilcoxon W	16156.000	4660.000
Z	-.129	-.188
Asymp. Sig. (2-tailed)	.897	.851

a. Grouping Variable: Non-speakers of LoI vs Speakers in Multilingual

The Test Statistics in Table 14 indicate that the differences in reading achievements on vowel sounds between speakers and non-speakers of LoI in multilingual classes in the pre-test assessment was not statistically significant (U = 3595, p = .897). This means that reading achievements of speakers and non-speakers of LoI in multilingual classes was not statistically significant. In the post-test, likewise, there was equally no statistically significant difference in learners' performance in reading vowel sounds between speakers and non-speakers of LoI in multilingual classes (U = 3579, p = .851).

Logistic Regression Analysis to Predict Learners' Performance Based on Language Background

Binomial Logistic Regression analysis (in STATA 14) was carried out to predict whether the performance in tests (read vowels = dependent variable) was based on the language background (independent variable) of the learners. The results are displayed in Table 15.

Table 15: Binomial Logistic Regression: Prediction of Reading Vowels in the Pre-test and Post-test Assessments Based on Non-speaker and Speaker of LoI

Categories	Read Vowel: Pre-test			Read Vowel: Post-test			
	AOR	P-value (95%)	95% CI		AOR	P-Value (95%)	95% CI
LoI				**LoI**			
Non-speakers of LoI	1			Non-speakers of LoI	1		
Speakers of LoI	0.96	0.897	[0.49, 1.86]	Speakers of LoI	1.07	0.851	[0.54, 2.11]
Observations		204		Observations		204	

The coefficient of non-speakers to speakers of the language of instruction in the read vowel variable in the pre-test model was not statistically significant (AOR 0.96, 95% CI 0.49, 1.86). This confirms that learners' ability to read vowels in the pre-test assessment cannot be predicted based on a pupil being non-speaker or speaker of LoI. Similarly, the coefficient of non-speakers to speakers in the read vowel variable in the post-test model was also not statistically significant

(AOR 1.07, 95% CI 0.54, 2.11). The table means that the language background of a learner did not influence their performance in reading vowel sounds in both pre-test and post-tests.

5.2.2.2 Grade One Speakers and Non-speakers of the Language of Instruction that were Able or Unable to Read Consonant Sounds in a Pre-test and Post-test in Multilingual Classes

The performance of speakers to non-speakers of the language of instruction was compared on their ability to read consonant sounds in Nyanja in pre-test and post-tests. Table 16 shows the descriptive statistics on pupils' ability to read consonant sounds.

Table 16: The Performance of Speakers versus Non-speakers of the Language of Instruction in a Pre-test and Post-test in Multilingual Classes on Reading Consonant Sounds

Read consonants: Pre-test by Cross tabulation

Count

	Non-speakers versus Speakers of LoI in Multilingual Classes		Total
	Non-speakers	Speakers	
Read consonants: no pre-test	32	130	162
yes	14	28	42
Total	46	158	204
Percentage	Read: 30.4% Unable: 69.6%	Read: 17.7% Unable: 82.3%	Read: 20.6% Unable: 79.4%

Read consonants: Post-test by Cross tabulation

Count

	Non-speakers versus Speakers of LoI in Multilingual Classes		Total
	Non-speakers	Speakers	
Read consonants: no post-test	25	85	110
yes	21	73	94
Total	46	158	204
Percentages	Read: 45.7% Unable:54.3%	Read:46.2% Unable:53.8%	Read:46.1% Unable: 53.9%

Table 16 indicates that in the pre-test, 30.4% of the learners that were non-speakers of the language of instruction were able to read much better than speakers of the language of instruction (17.7%). In the post-test, the results were that speakers of the language of instruction in multilingual classes performed slightly better 46.2% against 45.7% for non-speakers. The results also showed that 94 (46.1%) of the learners in multilingual classes were able to read consonants in the post-assessment. However, this figure was less than that of those who could

not read consonants 110 (53.9%). This means speakers of LoI slightly outperformed their counterparts in the post-test while non-speakers highly outperformed speakers in the pre-test.

Mann-Whitney U Test on learners' ability to read consonant sounds in the pre-test and post-test.

To compare the differences by average mean scores in performance between speakers and non-speakers of LoI on reading consonant sounds in the pre-test and post-test assessment in multilingual classes, the study used the Mann-Whitney U Test. The two tables 17 and 18 on Mean Ranks Comparison and Significance Test Statistics respectively show the complete output as run in SPSS version 25.

Table 17: Comparing the Mean Ranks for Speakers and Non-Speakers of the Language of Instruction in Multilingual Classes on Read Consonants

	Non-speakers of LoI vs Speakers in Multilingual	N	Mean Rank	Sum of Ranks
Read consonants: pre-test	Non-speakers	46	112.54	5177.00
	Speakers	158	99.58	15733.00
	Total	204		
Read consonants: post-test	Non-speakers	46	102.07	4695.00
	Speakers	158	102.63	16215.00
	Total	204		

In terms of performance in reading consonants in the pre-test assessment, the mean rank in table 17 shows that non-speakers had the highest mean rank (Mean Rank=112.54) compared to speakers of LoI (Mean Rank=99.85). This means that non-speakers performed better in identifying consonant sounds in the pre-test assessment compared to speakers of LoI in multilingual classes. In the post-test, the performance of both speakers and non-speakers of LoI was the same by mean ranks 102.07 and 102.63 respectively as shown in the mean rank table

above. To establish the level of significance, the researcher used the Mann Whitney U Test Statistics Table 18, which shows the complete output of results.

Table 18: Test Statistics for Significance Using Mann-Whitney U Test on Read Consonants

	Read consonants: pre-test	Read consonants: post-test
Mann-Whitney U	3172.000	3614.000
Wilcoxon W	15733.000	4695.000
Z	-1.872	-.066
Asymp. Sig. (2-tailed)	.061	.948

a. Grouping Variable: Non-speakers of LoI vs Speakers in Multilingual

The results as shown in the Significance Test Statistics table above revealed that the differences in pupils' performance regarding reading consonant sounds in multilingual classes between non-speakers of LoI and speakers of LoI in the pre-test assessment was not statistically significant (U = 3172, p = .061). This means that the performance of non-speakers in reading consonants in multilingual classes was not statistically significantly higher than speakers of LoI in the pre-test assessment in Mann-Whitney Test. Likewise, there was no significant difference in learners' performance in reading consonants between speakers of LoI and non-speakers of LoI in multilingual classes in the post-test assessment (U = 3614, p = .948).

Logistic Regression Analysis to Predict Learners' Performance Based Language in Reading Consonant Sounds

A binomial logistic regression was run in STATA 14 to determine whether learners' performance in reading consonants in the pre-test and post-test assessments in multilingual classes could be predicted based on speakers and non-speakers of LoI.

Table 19: Logistic Regression for Confirmatory Prediction of Reading Consonant Sounds in the Pre-test and Post-test between Non-speaker and Speaker of LoI

Categories	Read consonants: pre-test			Categories3	Read consonants: post-test		
	AOR	P-Value (95%)	95% CI		AOR	P-Value (95%)	95% CI
LoI				**LoI**			
Non-speakers of LoI	1			Non-speakers of LoI	1		
Speakers of LoI	0.49	0.064	[0.23, 1.04]	Speakers of LoI	1.02	0.947	[0.53, 1.98]
Observations		**204**		**Observations**		**204**	

Table 19 shows that in the pre-test assessment, the odds of being able to read consonants were 51% lower for speakers of LoI compared to non-speakers of LoI. However, the coefficient was not statistically significant (AOR 0.49, 95% CI 0.23, 1.04). Therefore, there was not enough evidence to conclude that being able to read consonants in the pre-test assessment could be predicted based on non-speaker or speaker of LoI. The coefficient in the read consonants post-test was also found to be not statistically significant (AOR 1.02, 95% CI 0.53, 1.98). This test also indicates that the language of instruction may not dictate learning to read consonants.

5.2.2.3 Grade One Speakers and Non-speakers of the Language of Instruction that were Able or Unable to Read One Syllable Words in a Pre-test and Post-test in Multilingual Classes

Descriptive statistics as shown in Tables 20 demonstrates the performance of multilingual learners on the third variable about learners' ability to read one-syllable words. Frequency and percentage distribution of learners according to their ability to read one syllable words in a pre-test and post-test are shown below.

Table 20: The Performance of Speakers versus Non-speakers of the Language of Instruction in a Pre-test and Post-test in Multilingual Classes on Reading One Syllable Words

Pre-test

	Non-speakers versus Speakers of LoI in Multilingual Classes		
	Non-speakers	Speakers	Total
Read 1 syllable: no pre-test	42	150	192
yes	4	8	12
Total	46	158	204
Percentage	Read: 8.7% Unable: 91.3%	Read: 5.1% Unable: 94.9%	Read: 5.9% Unable: 94.1%

Post-test

	Non-speakers versus Speakers of LoI in Multilingual Classes		
	Non-speakers	Speakers	Total
Read 1 syllable: no post-test	30	113	143
yes	16	45	61
Total	46	158	204
Percentage	Read: 34.8% Unable: 65.2%	Read: 28.5% Unable: 71.5%	Read: 29.9% Unable: 70.1%

Pre-test results in Table 20 show that, 8.7% of non-speakers of the language of instruction were able to read one syllable words while 5.1% of speakers of the language of instruction were able to read on entry into Grade One. Non-speakers of language of instruction performed slightly better than speakers of language of instruction in the pre-test. Table 20 also reveals that in the post-test results, 34.8% and 28.5% of learners that were non-speakers and speakers of the language of instruction respectively were able to read one syllable words at the end of the year. Again, non-speakers of language of instruction performed slightly better than the speakers of the language of instruction in the post-test as well.

Mann-Whitney U Test on learners' ability to read 1 syllable words in a pre-test and post-test in multilingual classes.

The Mann-Whitney U Test results compared the differences in performance between speakers and non-speakers of the language of instruction in reading one syllable words in the pre-test and post-test assessment in multilingual classes. The results are presented in Table 21 and Table 22.

Table 21: Mean Ranks for Speakers and Non-Speakers of the Language of Instruction on Reading One Syllable Words

	Non-speakers of the language of instruction vs speakers in multilingual	N	Mean Rank	Sum of Ranks
Read 1 syllable: pre-test	Non-speakers	46	105.37	4847.00
	Speakers	158	101.66	16063.00
	Total	204		
Read 1 syllable: post-test	Non-speakers	46	107.48	4944.00
	Speakers	158	101.05	15966.00
	Total	204		

Table 21 reflect that non-speaker of the language of instruction had the highest mean rank (mean rank=105.37) in the pre-test and (mean rank =107.48) in the post-test assessments compared to speakers of the language of instruction (mean rank=101.66 and 101.05) in the pre-test and post-test, respectively. This means that non-speakers of the language of instruction performed better in reading one syllable word in both pre-test and post-test assessments. To establish whether this difference was statistically significant, a Test Statistics as shown in Table 22 was generated.

Table 22: Test Statistics for Significance Using Mann-Whitney U Test on Reading One Syllable Words

	Read 1 syllable: pre-test	Read 1 syllable: post-test
Mann-Whitney U	3502.000	3405.000
Wilcoxon W	16063.000	15966.000
Z	-.919	-.820
Asymp. Sig. (2-tailed)	.358	.412

a. Grouping Variable: Non-speakers of the language of instruction vs Speakers in Multilingual

The results of the test statistics in Table 22 show that the pre-test (U = 3502, p = .358) and post-test (U = 3405, p = .412) indicating that there are no statistically significant differences in performance between speakers and non-speakers of the language of instruction in multilingual classes on reading of one syllable words. Therefore, there is enough evidence to conclude that

there were no significant differences in performance between speakers and non-speakers of the language of instruction in reading one syllable words in the pre-test and post-test assessments in multilingual classes.

Binomial Logistic Regression Analysis

To predict whether learners' performance in reading one syllable words (dependent variable) in the pre-test and post-test assessments was based on non-speaker or speaker of the LoI (independent variable), the binomial logistic regression analysis was used as shown in Table 23.

Table 23: Binomial Logistic Regression for Prediction of Reading One Syllable Word in the Pre-Test And Post-Test Assessments Based on Non-Speaker to Speaker of the Language of Instruction

Categories	Read 1 syllable words: pre-test			Categories3	Read 1 syllable words: post-test		
	AOR	P-Value (95%)	95% CI		AOR	P-Value (95%)	95% CI
LoI				LoI			
Non-speakers	1			Non-speakers	1		
Speakers of LoI	0.56	0.363	[0.16, 1.95]	Speakers of LoI	0.75	0.412	[0.37, 1.50]
Observations		204		Observations		204	

Table 23 indicates that in the pre-test model, the odds of being able to read one syllable words decreased by 44% for speakers of LoI compared to non-speakers of LoI. However, the overall results for pre-test indicated that this was not statistically significant (AOR 0.56, 95% CI 0.16, 1.95). This means that although non-speakers of LoI seemed to have performed better in reading one syllable words in the pre-test, the difference was not statistically significant. Similarly, the coefficient on LoI in the read one syllable words in the post-test model was not statistically significant (AOR 0.75, 95% CI 0.37, 1.50). This means that learning to blend sounds into one syllable words could not be predicted based one learners' language background.

5.2.2.4 *Grade One Speakers and Non-speakers of the Language of Instruction that were Able or Unable to Read Two Syllable Words in a Pre-test and Post-test in Multilingual Classes*

Table 24 shows the frequency and percentage distribution of learners according to their ability to read two syllable words in a pre-test and post-test in multilingual classes.

Table 24: The Performance of Speakers versus Non-speakers of the Language of Instruction in a Pre-test and Post-test in Multilingual Classes on Reading Two Syllable Words

Read Two Syllable Words: Pre-test by Cross tabulation

Count

	Non-speakers versus Speakers of LoI in Multilingual Classes		
	Non-speakers	Speakers	Total
Read 2 syllables: no pre-test yes	44	154	198
	2	4	6
Total	46	158	204
Percentage	Read: 4.3% Unable: 95.7%	Read: 2.5% Unable: 97.5%	Read: 2.9% Unable: 97.1%

Read Two Syllable Words: Post-test by Cross tabulation

Count

	Non-speakers versus Speakers of LoI in Multilingual Classes		
	Non-speakers	Speakers	Total
Read 2 syllables: no post-test yes	36	125	161
	10	33	43
Total	46	158	204
Percentage	Read: 21.7% Unable: 78.3%	Read: 20.9% Unable: 79.1%	Read: 21.1% Unable: 78.9%

The pre-test results in Table 24 show that 4.3% of the learners that were non-speakers of LoI were able to read two syllable words on entry into Grade One and 2.5% of learners that were speakers of the LoI in multilingual classes started Grade One with knowledge on how to read two syllable words. Post-test results showed that 21.7% of non-speakers and 20.9% of speakers of the language of instruction in multilingual classes completed Grade One able to read two syllable words. To establish whether the differences are statistically significant or not, the researcher used the Mann-Whitney Test as illustrated below.

Mann-Whitney Test on learners' ability to read 2 syllable words in a pre-test and post-test in multilingual classes between non-speakers and speakers of LoI.

To compare the differences in performance between speakers and non-speakers of LoI in reading two syllable words in the pre-test and post-test assessments in multilingual classes, the study used the Mann-Whitney U Test. The results are presented in the tables below.

Table 25: Mean Ranks for Speakers and Non-Speakers of the   Language of Instruction on Reading Two Syllable Words

	Non-speakers of LoI vs Speakers in Multilingual	N	Mean Rank	Sum of Ranks
Read 2 syllables: pre-test	Non-speakers	46	103.93	4781.00
	Speakers	158	102.08	16129.00
	Total	204		
Read 2 syllables: post-test	Non-speakers	46	103.17	4746.00
	Speakers	158	102.30	16164.00
	Total	204		

The mean rank as shown in Table 25 shows that non-speakers of LoI had slightly a higher mean rank (mean rank=103.93) in the pre-test assessment than speakers of LoI (mean rank=102.08), which means that in the multilingual classes non-speakers of LoI performed slightly better than speakers of LoI in reading two syllable words in the pre-test assessment. This was equally the case with the post-test assessment in the multilingual classes as shown in the mean ranks in the table above. To establish whether this difference was statistically significant, the researcher developed the test statistics table below which shows the complete output as run in SPSS.

Table 26: Test Statistics for Significance Using Mann-Whitney U Test on Reading Two Syllable Words

	Read 2 syllables: pre-test	Read 2 syllables: post-test
Mann-Whitney U	3568.000	3603.000
Wilcoxon W	16129.000	16164.000
Z	-.640	-.125
Asymp. Sig. (2-tailed)	.522	.901

a. Grouping Variable: Non-speakers of LoI vs Speakers in Multilingual

The results as depicted in the Test Statistics Table 26 indicated that the differences in performance between speakers and non-speakers of LoI in reading two syllable words in the pre-test (U = 3568, p = .522) and post-test (U = 3603, p = .901) assessments in multilingual classes was not statistically significant. This means that the performance of non-speakers of LoI in reading two syllables in the multilingual classes was not statistically significantly higher than speakers of LoI in both the pre-test and post-assessment using the Mann-Whitney Test. Therefore, there is enough evidence to conclude that there were no significant differences in performance between speakers and non-speakers of LoI in reading two syllable words in the pre-test and post-test assessments.

Binomial Logistic Regression Analysis

The study also used logistic regression to predict whether learners' performance in reading two syllable words in the pre-test and post-test assessment could be based on non-speakers to speakers of the language of instruction. The binomial logistic regression was run in STATA 14 to determine whether learners' performance in reading two syllable words in the pre-test and post-test assessment could be predicted based on non-speaker to speakers of the language of instruction. Table 27 shows the Binomial Logistic Regression for prediction of learners' ability to read two syllable words in the pre-test and post-test assessments based on non-speaker to speaker of the language of instruction.

Table 27: Binomial Logistic Regression for Prediction of Reading Two Syllable Words in the Pre-test and Post-test Assessments Based on Non-speaker to Speaker of the LoI

Categories	Read 2 syllables: pre-test				Read 2 syllables: post-test		
	AOR	P-Value (95%)	95% CI		AOR	P-Value (95%)	95% CI
LoI				**LoI**			
Non-speakers	1			Non-speakers	1		
Speakers of LoI	0.57	0.526	[0.10, 3.22]	Speakers of LoI	0.95	0.901	[0.43, 2.11]
Observations		204		Observations		204	

Table 27 shows that, in the read two syllable words pre-test model, the odds of being able to read two syllable words were 43% lower for speakers of the language of instruction compared to non-speakers of LoI. However, the overall results indicated that this was not statistically significant (AOR 0.57, 95% CI 0.10, 3.22). This means that although non-speakers of the language of instruction seemed to have performed better in reading two syllable words in the pre-test assessment, the difference was not statistically significant. Similarly, the coefficient on the language of instruction in the read two syllables: post-test model was not statistically significant (AOR 0.95, 95% CI 0.43, 2.11).

5.2.2.5 *Grade One Speakers and Non-speakers of the Language of Instruction that were Able or Unable to Read Three Syllable Words in a Pre-test and Post-test in Multilingual Classes*

Tables 28 shows the frequency and percentage distribution of learners according to their ability to read three syllable words in a pre-test and post-test in multilingual classes. Learners were further classified as either speaker or non-speaker of the language of instruction.

Table 28: The Performance of Speakers versus Non-speakers of the Language of Instruction in Multilingual Classes on Reading Three Syllable Words in Pre-test

Read Three Syllable Words: Pre-test by Cross tabulation

	Non-speakers versus Speakers of LoI in Multilingual Classes		
	Non-speakers	Speakers	Total
Read 3 syllables: no pre-test	44	156	200
yes	2	2	4
Total	46	158	204
Percentage	Read: 4.3% Unable: 95.7%	Read: 1.3% Unable: 98.7%	Read: 2% Unable: 98%

Read Three Syllable Words: Post-test by Cross tabulation

	Non-speakers versus Speakers of LoI in Multilingual Classes		
	Non-speakers	Speakers	Total
Read 3 syllables: no pre-test	37	128	165
yes	9	30	39
Total	46	158	204
Percentage	Read: 19.6% Unable: 80.4%	Read: 19% Unable: 81%	Read: 19.1% Unable: 80.9%

Table 28 shows that 4.3% of non-speakers of the language of instruction started Grade One with the ability to read three syllable words, while 1.3% of speakers of the language of instruction started Grade One with knowledge of reading three syllable words. Furthermore, 95.7% and 98.7% of non-speakers and speakers of the language of instruction respectively, were unable to

read three syllable words on entry into Grade One. Post-test results in Table 28 revealed that 19.6% of no-speakers of the language of instruction completed Grade One able to read and 19% of speakers of language of instruction completed Grade One able to read. Conversely, 80.4% of non-speakers of the language of instruction completed Grade One unable to read while 81% of speakers of LoI completed Grade One unable to read.

Mann-Whitney Test on Learners' Ability to Read 3 Syllable Words in a Pre-Test and Post-Test in Multilingual Classes between Non-Speakers and Speakers of LoI

The study used the Mann-Whitney U Test to compare the differences in performance between speakers and non-speakers of LoI in reading 3 syllables in the pre-test and post-test assessment in multilingual classes. The results are presented in the tables 29 and 30.

Table 29: Mean Ranks for Speakers and Non-Speakers of the Language of Instruction on Reading Three Syllable Words in Post-test

	Non-speakers of LoI vs Speakers in Multilingual	N	Mean Rank	Sum of Ranks
Read 3 syllables: pre-test	Non-speakers	46	104.93	4827.00
	Speakers	158	101.79	16083.00
	Total	204		
Read 3 syllables: post-test	Non-speakers	46	102.96	4736.00
	Speakers	158	102.37	16174.00
	Total	204		

Table 29 on mean rank shows that, non-speakers of LoI had the highest mean rank (mean rank=104.93) in the pre-test assessment compared to speakers of LoI (mean rank=101.79). This means that non-speakers of LoI performed better in reading three syllable words in the pre-test assessment compared to speakers of LoI in multilingual classes. However, there was not much difference in reading performance in the post-test assessment as shown in the mean ranks table above. To establish whether the difference was statistically significant, the researcher used the Test Statistics table below which shows the complete output as run in SPSS.

Table 30: Test Statistics for Significance Using Mann-Whitney U Test on Reading Three Syllable Words in Post-test

	Read 3 syllables: pre-test	Read 3 syllables: post-test
Mann-Whitney U	3522.000	3613.000
Wilcoxon W	16083.000	16174.000
Z	-1.324	-.088
Asymp. Sig. (2-tailed)	.186	.930

Grouping Variable: Non-speakers of LoI vs Speakers in Multilingual

Table 30 shows that the differences in performance between speakers and non-speakers of LoI in reading three syllable words in the pre-test (U = 3522, p = .186) and post-test (U = 3613, p = .930) among speakers and non-speakers of language of instruction in multilingual classes was not statistically significant. Therefore, there is enough evidence to conclude that there were no significant differences in performance between speakers and non-speakers of LoI in reading three syllable words in the pre-test and post-test assessment in multilingual classes according to the findings of this study.

Binomial Logistic Regression Analysis

A binomial logistic regression was also run in STATA 14 to determine whether learners' performance in reading three syllable words in the pre-test and post-test assessment could be predicted based on non-speaker to speaker of LoI. Table 31 shows the Binomial Logistic Regression results.

Table 31: Binomial Logistic Regression for Prediction of Reading Three Syllable Words in the Pre-test and Post-test Assessments Based on Non-speaker to Speaker of LoI

Categories	Read 3 syllables: pre-test				Read 3 syllables: post-test		
	AOR	P-Value (95%)	95% CI		AOR	P-Value (95%)	95% CI
LoI				LoI			
Non-speakers	1			Non-speakers	1		
Speakers of LoI	0.28	0.212	[0.04, 2.06]	Speakers of LoI	0.96	0.93	[0.42, 2.21]
Observations		204		Observations		204	

The coefficient on LoI in the read three syllable words in the pre-test model was not statistically significant (AOR 0.28, 95% CI 0.04, 2.06). This means that learners' ability to read three syllable words in the pre-test assessment was not based on pupils being non-speaker or speaker of LoI. Similarly, the coefficient on LoI in the read three syllable words in the post-test model was also not statistically significant (AOR 0.96, 95% CI 0.42, 2.21). This means that the language background of learners did not predict their performance in multilingual classes.

5.2.2.6 *Grade One Speakers and Non-speakers of the Language of Instruction that were Able or Unable to Read Consonant Clustered Words in a Pre-test and Post-test in Multilingual Classes*

Tables 32 shows the frequency and percentage distribution of learners according to their ability to read clustered words in the pre-test and post-test by speakers and non-speakers of the language of instruction in multilingual classes.

Table 32: The Performance of Speakers versus Non-speakers of the Language of Instruction in Multilingual Classes on Reading Consonant Clustered Words

Pre-test

		Non-speakers versus Speakers of LoI in Multilingual Classes		
		Non-speakers	Speakers	Total
Read cluster: pre-test	no	44	157	201
	yes	2	1	3
Total		46	158	204
Percentage		Read: 4.3% Unable: 95.7%	Read: 0.6% Unable: 99.4%	Read: 1.5% Unable: 98.5%

Post-test

		Non-speakers versus Speakers of LoI in Multilingual Classes		
		Non-speakers	Speakers	Total
Read cluster: post-test	no	38	134	172
	yes	8	24	32
Total		46	158	204
Percentage		Read: 17.4% Unable:82.6%	Read: 15.2% Unable:84.8%	Read: 15.7% Unable:84.3%

In the pre-test results as shown in Table 32, 4.3% and 0.6% of non-speakers and speakers of LoI respectively started Grade One with knowledge of reading consonant clustered words. However, 95.7% and 99.4% of non-speakers and speakers of LoI respectively, started Grade One unable to read consonant clustered words. The post-test results in the same table reflects that 17.4% of non-speakers of LoI in multilingual classes completed Grade One able to read while 15.2% of the speakers of LoI completed Grade One with knowledge of reading consonant clustered words. Table 32 also shows that 82.6% and 84.8% of non-speakers and speakers of LoI respectively, completed Grade One unable to read consonant clustered words. The Mann-Whitney U Test was used to check whether the differences in performance between speakers and non-speakers of language of instruction was statistically significant.

Mann-Whitney U Test on learners' ability to read words with consonant clusters in a pre-test and post-test in multilingual classes between non-speakers and speakers of LoI

The study used the Mann-Whitney U Test to compare differences between non-speakers and speakers of LoI in reading words with consonant clusters in the pre-test and post-test in multilingual classes.

Table 33: Mean Ranks for Speakers and Non-Speakers of the Language of Instruction on Reading consonant Clustered Words in Post-test

	Non-speakers of LoI vs Speakers in Multilingual	N	Mean Rank	Sum of Ranks
Read cluster: pre-test	Non-speakers	46	105.43	4850.00
	Speakers	158	101.65	16060.00
	Total	204		
Read cluster: post-test	Non-speakers	46	104.24	4795.00
	Speakers	158	101.99	16115.00
	Total	204		

Table 33 displays that non-speakers of LoI had a higher mean rank compared to speakers of LoI in both the pre-test and post-tests. This means that non-speakers of LoI in multilingual classes performed slightly better than speakers of LoI in reading words with consonant clusters in both the pre-test and post-test assessment. However, to establish whether this difference was statistically significant, the researcher used the Test Statistics table below.

Table 34: Mann-Whitney U Test Statistics on Reading Consonant Clustered Words

	Read cluster: pre-test	Read cluster: post-test
Mann-Whitney U	3499.000	3554.000
Wilcoxon W	16060.000	16115.000
Z	-1.838	-.360
Asymp. Sig. (2-tailed)	.066	.719
a. Grouping Variable: Non-speakers of LoI vs Speakers in Multilingual		

The results as shown in the Test Statistics Table 34 shows that the performance differences in reading consonant clusters words between non-speakers and speakers of LoI in both the pre-test (U = 3499, p = .066) and post-test (U = 3554, p = .719) in multilingual classes was not statistically significant. This means that although non-speakers of LoI in the multilingual classes performed better than speakers of LoI in reading words with consonant clusters in both the pre-test and post-test assessments, this difference was not statistically significant. Therefore, there is enough evidence to conclude that there were no significant differences in performance between speakers and non-speakers of LoI in reading words with consonant clusters in the pre-test and post-test assessment in multilingual classes as shown in the Mann-Whitney U Test results.

Binomial Logistic Regression Analysis

A binomial logistic regression was also run in STATA 14 to determine whether learners' performance in reading words with consonant clusters in the pre-test and post-test assessment could be predicted based on non-speakers to speakers of LoI. Table 35 shows this logistic regression.

Table 35: Binomial Logistic Regression for Prediction of Reading of Consonant Clustered Words in the Pre-test and Post-test Assessments Based on Non-speaker to Speaker of LoI

Categories	Read cluster: pre-test				Read cluster: post-test		
	AOR	P-Value (95%)	95% CI		AOR	P-Value (95%)	95% CI
LoI				LoI			
Non-speakers	1			Non-speakers	1		
Speakers of LoI	0.14	0.112	[0.01, 1.58]	Speakers of LoI	0.85	0.718	[0.35, 2.05]
Observations		204		Observations		204	

In the read clustered words of the pre-test model, the odds of being able to read words with consonants clusters were 86% lower for speakers of LoI compared to non-speakers of LoI. However, the overall results indicated that this was not statistically significant (AOR 0.14, 95% CI 0.01, 1.58). This means that although non-speakers of LoI seemed to have performed slightly better in reading words with clustered consonants in the pre-test assessment, the difference was not statistically significant. Similarly, in the read clustered words for the post-test model, the odds of being able to read words with consonants clusters decreases by 15% for speakers of LoI compared to non-speakers of LoI (AOR 0.85, 95% CI 0.35, 2.05). This imply that there was no statistically significant difference in performance between the two groups. The results mean that being able to read words with clustered consonants cannot be predicted based on non-speakers to speakers of LoI as noted in this study. The implication of the results in Table 35 is that learning to read consonant clustered words is not affected by the language background of learners (speakers and non-speakers of the language of instruction).

5.2.2.7 *Grade One Speakers and Non-speakers of the Language of Instruction that were Able or Unable to Read Complex Words in a Pre-test and Post-test in Multilingual Classes*

Table 36 shows the frequency and percentage distribution of learners according to their ability to read complex words in a pre-test and post-test in multilingual classes.

Table 36: The Performance of Speakers versus Non-speakers of the Language of Instruction in Multilingual Classes on Reading Complex Words

Pre-test

		Non-speakers versus Speakers of LoI in Multilingual Classes		Total
		Non-speakers	Speakers	
Read complex words: pre-test	no	44	157	201
	yes	2	1	3
Total		46	158	204
Percentage		Read: 4.3% Unable: 95.7%	Read: 0.6% Unable: 99.4%	Read: 1.5% Unable: 98.5%

Post-test

		Non-speakers versus Speakers of LoI in Multilingual Classes		Total
		Non-speakers	Speakers	
Read complex words: post-test	no	38	134	172
	yes	8	24	32
Total		46	158	204
Percentage		Read: 17.4% Unable:82.6%	Read: 15.2% Unable:84.8%	Read: 15.7% Unable:84.3%

Table 36 has related results with Table 32 on pre-test performance of speakers and non-speakers of the language of instruction. The pre-test results in Table 36 reflect that, 4.3% and 0.6% of non-speakers and speakers of LoI respectively, started Grade One with knowledge of reading complex words. However, 95.7% and 99.4% of non-speakers and speakers of LoI respectively, completed Grade One unable to read complex words. Post-test results indicates that 17.4% of non-speakers of LOI completed Grade One able to read complex words and 15.2% of speakers of LoI also completed Grade One with reading skills. Furthermore, 82.6% and 84.8% of non-speakers and speakers of LoI respectively, completed Grade One unable to read complex words.

Inferential statistics with Mann-Whitney U Test and Binomial Logistic Regression that was carried out on read consonant clustered words was the same as those for complex words. In

other words, inferential statistics did not show statistically significant results in performance between speakers and non-speakers of language of instruction. This meant that learners' language background for alphabetic languages like Nyanja and others do not predict learning to read complex words. For example, Table 37 shows the test statistics for reading complex words.

Table 37: Test Statistics for Significance Using Mann-Whitney U Test on Reading Complex Words

	Read complex words: pre-test	Read complex words: post-test
Mann-Whitney U	3499.000	3554.000
Wilcoxon W	16060.000	16115.000
Z	-1.838	-.360
Asymp. Sig. (2-tailed)	.066	.719
a. Grouping Variable: Non-speakers of LoI vs Speakers in Multilingual		

Table 37 shows that the performance differences in reading complex words between non-speakers and speakers of LoI in both the pre-test (U = 3499, p = .066) and post-test (U = 3554, p = .719) in multilingual classes was not statistically significant. This means that although non-speakers of LoI in the multilingual classes seemed to have performed better than speakers of LoI in reading complex words in both the pre-test and post-test assessments, this difference was not statistically significant. Therefore, there is not enough evidence to suggest that there were significant differences in performance between speakers and non-speakers of LoI in reading complex words in the pre-test and post-test assessments in multilingual classes as noted in this study. Table 38 shows the summary of the performance between speakers and non-speakers of language of instruction across the seven assessment items.

Table 38: Summary of the Differences in Performance Between Speakers and Non-Speakers of the Language of Instruction

Variable Assessed	Pre-test or Post-test	Performance of Non-speakers versus Speakers of LoI in Multilingual Classes			
		Non-Speakers N=46		Speakers N=158	
		Percentage	Mean Rank	Mean Rank	Percentage
Read Vowel Sounds	Pre-test	43.5%	103.4	102.3	42.4%
	Post-test	63%	101.3	102.9	64.7%
Read Consonant Sounds	Pre-test	30.4%	112.5	99.6	17.7%
	Post-test	45.7%	102.1	102.6	46.2%
Read One Syllable Words	Pre-test	8.7%	105.4	101.7	5.1%
	Post-test	34.8%	107.5	101.1	28.5%
Read Two Syllable Words	Pre-test	4.3%	103.9	102.1	2.5%
	Post-test	21.7%	103.2	102.3	20.9%
Read Three Syllable Words	Pre-test	4.3%	104.9	101.8	1.3%
	Post-test	19.6%	103	102.4	19%
Read Clustered Words	Pre-test	4.3%	105.4	101.7	0.6%
	Post-test	17.4%	104.2	102	15.2%
Read Complex Words	Pre-test	4.3%	105.4	101.7	0.6%
	Post-test	17.4%	104.2	102	15.2%

These results have already been presented in this section. However, Table 38 gives an overview of the performance with average means and percentages of readers.

5.2.3 Comparative Reading Achievements of Grade One Learners in Monolingual and Multilingual Classes in Pre-test and Post-Test

This sub-research question focused on comparing the performance of learners' reading skills between monolingual and multilingual classes in both pre-test and post-test assessment items. The comparison based on all the seven sub-independent variables measured (learners' knowledge of letters, reading of syllables, clustered and complex words). Data on descriptive and inferential statistics is provided with respect to specific variables as presented below. Figure 9 shows the distribution in terms of number of learners in monolingual and multilingual classes.
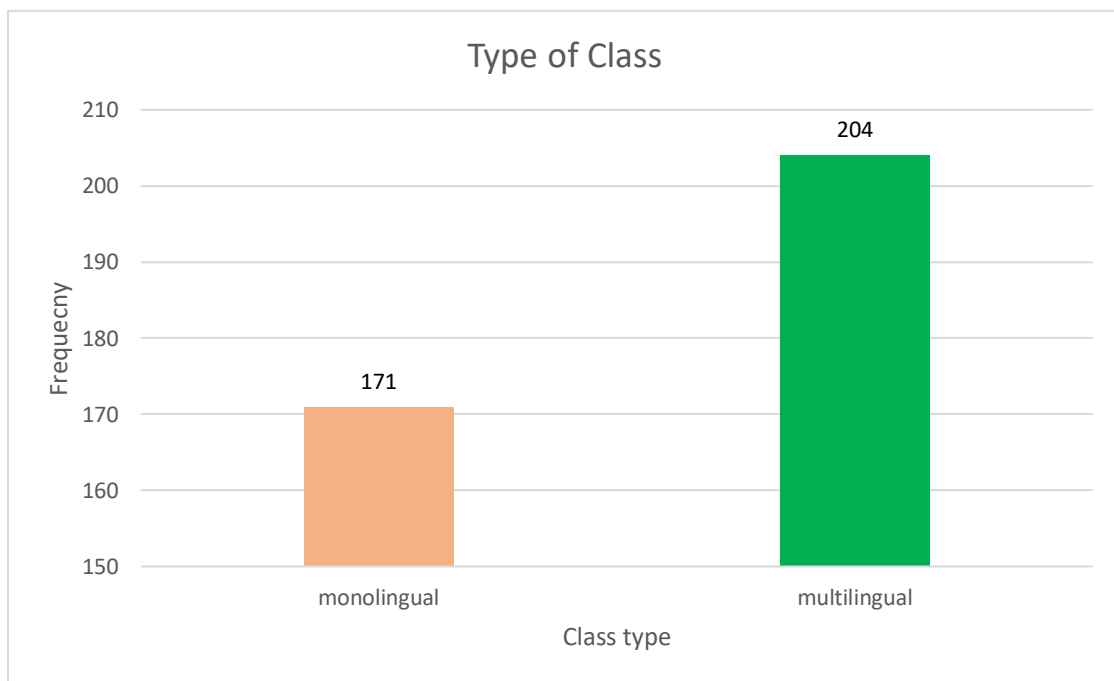

Figure 9: Distribution of Learners in Monolingual and Multilingual Classes

Figure 9 shows that, out of the total number of 375 Grade One learners that took part in the study, 204 of the learners translating into 54.4% were from multilingual classes, while 171 learners 45.6% were monolingual. This means that learners from multilingual classes were the majority in this study.

5.2.3.1 Grade One Learners that were Able or Unable to Read Vowel Sounds in a Pre-test and Post-test Assessments in Monolingual and Multilingual Classes

The performance of monolingual and multilingual learners on the first variable is shown in Table 39 where descriptive statistics on learners' ability to read vowel sounds in Grade One in both pre-test and post-test are presented.

Table 39: The Performance of Monolingual and Multilingual Classes on Reading Vowel Sounds in a Pre-test

Read Vowel Sounds: Pre-test by Cross tabulation					Read Vowel Sounds: Post-test by Cross tabulation			
	Type of Class					**Type of Class**		
	Monolingual	**multilingual**	**Total**			**Monolingual**	**multilingual**	**Total**
Read vowel: pre-test no	117	117	234		**Read vowel: post-test** no	63	73	136
yes	54	87	141		yes	108	131	239
Total	171	204	375		**Total**	171	204	375
Percentage	Read: 31.6% Unable:68.4%	Read: 42.6% Unable:57.4%	Read: 37.6% Unable:62.4%		**Percentage**	Read: 63.2% Unable:36.8%	Read: 64.2% Unable:35.8%	Read: 63.7% Unable: 36.3%

Table 39 shows that in the pre-test, 31.6% and 42.6% of the learners in monolingual and multilingual classes respectively started Grade One with knowledge of vowel sounds. While 68.4% of monolingual learners and 57.4% of multilingual learners started Grade One unable to identify or read vowel sounds. Table 39 also shows that, 37.6% of all Grade One learners that took part in the study started Grade One with knowledge of vowels already, while 62.4% started Grade One unable to read vowel sounds in Nyanja. Post-test results in Table 39 shows that, 63.2% of monolingual learners completed Grade One able to read vowel sounds, while 36.8% completed Grade One unable to read vowels. On the other hand, 64.2% of multilingual classes completed Grade One able to read vowels, while 35.8% completed Grade One unable to read vowels. Furthermore, 63.7% of all learners that took part in the study completed Grade One able to read vowels, while 36.3% were unable to read vowel sounds in Nyanja.

Mann-Whitney U Test on Learners' Ability to Read Vowels in a Pre-Test and Post-Test Assessment Based on Type of Class

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The study used the Mann-Whitney U Test to compare differences in learners' reading achievement (read vowels) between monolingual and multilingual classes in pre-test and post-test assessment. In other words, to understand whether learners' ability to read vowels differed based on type of class in pre-test and post-test, Table 40 provides details in response to the question.

Table 40: Mean Ranks for Monolingual and Multilingual Classes on Reading Vowels

	Type of Class	N	Mean Rank	Sum of Ranks
Read vowel: pre-test	monolingual	171	176.71	30217.50
	multilingual	204	197.46	40282.50
	Total	375		
Read vowel: post-test	monolingual	171	186.92	31963.50
	multilingual	204	188.90	38536.50
	Total	375		

The mean rank in Table 40 shows that the multilingual classes had the highest mean rank in both the pre-test and post-test assessment. This means that learners in the multilingual classes performed better in reading vowels in both the pre-test and post-test than learners in the monolingual classes. To establish whether this difference is statistically significant, the researcher had to run a test statistic as shown in Table 41.

Table 41: Test Statistics for Significance Using Mann-Whitney U Test on Reading Vowels

	Read vowel: pre-test	Read vowel: post-test
Mann-Whitney U	15511.500	17257.500
Wilcoxon W	30217.500	31963.500
Z	-2.201	-.212
Asymp. Sig. (2-tailed)	.028	.832
a. Grouping Variable: Type of Class		

Table 41 shows that the differences in performance on reading vowels between the monolingual and multilingual classes in the pre-test was statistically significant (U = 15511.5, p = .028). From this data, it can be concluded that learners' performance in reading vowels in the multilingual classes was statistically significantly higher than the monolingual classes (U = 15511.5, p = .028). Therefore, there was a significant difference in learners' performance in reading vowels between monolingual and multilingual classes in the pre-test assessment. The results suggest that multilingual classes performed better in reading vowels in a pre-test than monolingual classes using the Mann-Whitney Test. Regarding the post-test assessment in reading vowels, the difference in reading achievement between the monolingual and multilingual classes was not statistically significant (U = 17257.5, p = .832). Therefore, there is enough evidence to conclude that learners' performance in reading vowels in the multilingual classes was not statistically significant to the monolingual classes in the post-test.

Logistic Regression Analysis

The study sought to predict whether learners' performance in reading vowels in the pre-test and post-test assessment can be predicted based on type of class. Considering this, a binomial logistic regression was then run in STATA 14 as shown in Table 42.

Table 42: Logistic Regression for the Prediction of Reading Vowel Sounds in the Pre-Test and Post-Test Assessments for Monolingual and Multilingual Classes

Categories	Read vowel: pre-test				Read vowel: post-test		
	AOR	P-Value (95%)	95% CI		AOR	P-Value (95%)	95% CI
Class type				Class type			
Monolingual	1			Monolingual	1		
Multilingual	1.61	0.028**	[1.05, 2.47]	Multilingual	1.05	0.832	[0.69, 1.60]
Observations		**375**		**Observations**		**375**	

p<0.05**

The results as shown in Table 42 indicate that, in the pre-test assessment model, the odds of being able to read vowels were 61% higher for learners in multilingual classes compared to learners in monolingual classes (AOR 1.61, 95% CI 1.05, 2.47). Therefore, there was enough evidence to conclude that being able to read vowels in the pre-test assessment could be predicted based on type of class as multilinguals performed better than monolinguals. The coefficient on type of class in the read vowel: post-test model was not statistically significant (AOR 1.05, 95% CI 0.69, 1.60). This means that monolingual or multilingual classroom environments did not dictate learning to read vowels.

5.2.3.2 Summary of Differences in Performance between Monolingual and Multilingual Classes Across the Seven Assessment Items

Descriptive statistics as shown on Tables 43 shows the frequency and percentage distribution of learners according to their ability to read vowels, consonants, one syllable words, two and three syllable words, consonant clustered words and complex words in the pre-test and post-test in monolingual and multilingual classes.

Table 43: Summary of the Differences in Performance between Monolingual and Multilingual Classes

Variable Assessed	Pre-test or Post-test	Performance of Monolingual versus Multilingual Classes			
		Monolingual N=171		Multilingual N=204	
		Learners that Read	Mean Rank	Mean Rank	Learners that Read
Read Vowel Sounds	Pre-test	31.6%	176.7	197.5	42.6%
	Post-test	63.2%	186.9	189	64.2%
Read Consonant Sounds	Pre-test	7%	174.2	199.6	20.6%
	Post-test	35.7%	177.4	197	46.1%

Read One Syllable Words	Pre-test	3.5%	185.6	190	5.9%
	Post-test	24.6%	182.6	192.6	29.9%
Read Two Syllable Words	Pre-test	1.8%	186.8	189	2.9%
	Post-test	19.9%	186.8	189	21.1%
Read Three Syllable Words	Pre-test	0.6%	186.6	189.2	2%
	Post-test	15.2%	184	191.4	19.1%
Read Clustered Words	Pre-test	0.6%	187.1	188.8	1.5%
	Post-test	14.6%	186.9	188.9	15.7%
Read Complex Words	Pre-test	0.6%	187.1	188.8	1.5%
	Post-test	12.3%	184.5	190.9	15.7%

The results in Table 43 shows that multilingual classes outperformed monolingual classes on all assessment items. The mean rank for multilingual classes is higher than monolingual classes and the percentages of pupils that read assessment items are higher in multilingual classes than in monolingual classes. Inferential Statistics with Mann-Whitney U Test on most assessed items showed that although multilingual classes have outperformed monolingual classes, test statistics showed no significant differences existed in performance between monolingual classes and multilingual classes. Binomial logistic regression on all assessment items and the coefficient on type of class in each assessment item was not statistically significant. This means that reading achievements of learners in Grade One is not determined by being a monolingual or multilingual learner or operating in such an environment as all learners have the same learning opportunity.

5.3 Instructional Strategies Teachers in Multilingual Classes Were Using to Help Non-Speakers of the Language of Instruction Learn

The second research question sought to establish ways, which teachers in multilingual classes were using to help learners whose language of instruction was not their familiar or first language. Instructional strategies served as an independent variable that had an impact on the learners' reading achievements. The data on this question was collected through face-to-face interviews, focus group discussions and lesson observations. The findings of the study revealed that teachers in multilingual classes of Lusaka were using multiple strategies to help non-speakers of the language of instruction to learn. These ways are discussed in the subsequent section below.

5.3.1 Translanguaging, Code-switching and Translation

During interviews and focus group discussions, teachers indicated that they switched languages in class and others reported that code-switching and translation in early grade classes was a widespread practice. They noted that it was important to switch from one language to another in class to ensure that learners understand and followed the instructions. A teacher pseudo named Nyambezi had this to say when she was asked about the languages preset in her classes:

> *Nyambezi: Those that speak Bemba but do not understand Nyanja (LoI), I switch to the language that the learner speaks if I know it to emphasise what I am teaching and if I do not, I ask them to say it in their language after showing them an image or something on some lessons.*

The response from Nyambezi acknowledges that she did code-switch or practice translanguaging principles in her classes. Teachers (pseudo named) Belita and Mwangala also reported that they code-switched from Nyanja to other languages when teaching to make learners feel that their familiar languages were present in their classes and this increased their focus, interest and concentration when learning:

> *Belita: Sometimes, we use different languages, like Bemba, Nyanja, English and others that are known to me as a teacher. Provided there are learners in class that speak those languages so that they feel they are not ignored in the learning process.*

> *Mwangala: What is important is that learners understand what they need to learn using a language that they know and appropriate methodologies.*

The two statements from Belita and Mwangala support the idea of code-switching in their classes and that their focus was on students' learning, rather than the use of a particular language. In fact, three more in-service teachers below (pseudo names used) shared their views and described how they frequently drew on several languages within their own language repertoire in the classroom:

> *Masiye: This one [pointing at a learner] just came from Chingola and when I deliberately use Nyanja throughout without switching to Bemba, she would not understand anything. So, I must switch to Bemba and emphasise the task that she must do.*

> *Mathews: If I can speak English and a learner can understand it but the policy say we use Nyanja which the learner cannot understand, why should I stick to Nyanja to communicate to this learner? Then what is the purpose of education? We need to be realistic and help children learn and that is what I do in my classes.*

> *Nata: Learners themselves use different languages in my class. So, even if I wanted to use Nyanja only, it may not be possible because the children come from various places where they speak different languages and I must support them by using their language so that they are encouraged to take part in my lessons. Switching from one language to another does not happen all the time, it is just when emphasising certain unclear points to some learners who may not have understood due to language barrier and this is more common in the first few weeks when they report for class.*

These teachers categorically supported the idea of using multiple languages in class to support learning and pupil participation in their lessons. As indicated, the three teachers shared one principle and that was to help learners learn even if it meant switching from one language to another as a way of helping certain learners with official language difficulties. These results agree with what researchers noted during lesson observation in class. Several teachers code-switched from one language to another during instruction and in some cases, this was more pronounced when talking to specific learners in class.

5.3.2 Remedial Work (Remediation)

Fourteen (14) out of twenty-three (23) teachers interviewed referred to remedial work or extra lesson activities for some learners during and after class. Remedial work was given to learners that had challenges in understanding a teaching point or those that were quick at completing normal class tasks but made errors in their work. Although remediation is a common strategy applicable to different context, it was included in this study as it benefited diverse learners. Remedial work was an interaction between the teacher and certain learners that showed signs that they did not understand a teaching point for a particular lesson. When teachers were asked how they helped learners whose familiar language was not the language of literacy instruction, they had this to say:

> **Penda (Pseudo):** *mmmmm I spend about 15 to 30 minutes extra on some days to help learners that do not understand what I teach them in class. Many times, these are those who have problems in understanding Nyanja but at times, it is just learners who knows Nyanja (LoI) very well that I sit down with for extra coaching like those who usually finish exercises too early but incorrectly.*

> **Nyambezi:** *My class has so many learners (76), so to do remedial work with everybody that does not understand is really difficult, but I do have some sessions occasionally especially with new learners or those that do not fully understand Nyanja. Like yesterday, after class, I met that girl (pointing at learner) there who speaks Tumbuka - I think - but does not write class work many times so, I sat down with her and tried to talk about class exercises and I realised that this child does not understand Nyanja very well. So, I will have to do more with her next time.*

> **Chanda:** *I help my learners that are behind to do some catch up activities within the class and at times, outside class hours. I have dealt with eight learners on catch up activities so far this term and this helps them many times.*

The responses from the teachers indicated that they gave extra work or catch-up activities in their classes and at times, outside classes to help learners with challenges and more so, with multilingual learners than others. However, what teachers reported during interviews and focus

group discussions disagreed with the observations made by researchers during lesson observation. In all the lessons observed, none of the teachers requested some learners for extra lesson or meeting for them to catch-up despite the presence of learners that had difficulties in understanding a teaching point. Maybe they met them when researchers were not present in the school premises.

5.3.3 *Parents as Resources for Teaching Multilingual Classes*

A few teachers reported the use of parents and caregivers as resources for teaching their children that had challenges with the language of instruction in multilingual classes. Some teachers stated that they used multiple strategies to engage parents, siblings and caregivers in the education of their children. Some teachers used the following strategies to engage family members, *replicating a literacy lesson by parents at home, parent teacher co-teaching, giving homework, class visit, Parental Teachers Association meetings, Parents' Day and open days.* These were the common ways in which home-school partnerships involving parents, guardians or siblings were used to help early grade learners learn. Two schools reported two separate unique ways in which parents, guardians and siblings were used to help teach multilingual classes and the other ways were common involving parents, guardians and siblings towards the education of their children. These are presented as cases 1, 2 and 3.

The particulars of the first case were that a class teacher pseudo named Masiye, received a pupil in her class. This pupil could not speak any Zambian language including the official language of literacy instruction (Nyanja) and did not have knowledge of English language either which was the official language of the country. The teacher learned about these facts after realising that a certain pupil in her class was always quiet and when he spoke, his peers or the teacher did not understand him comprehensively. The teacher confirmed the language status of this boy with school authorities who were aware about the case. The teacher afterwards, started involving and interacting with the child's parents by discussing ways to help the child learn. When teacher Masiye was asked how she helped learners that did not understand or speak the language of instruction, she had this to say:

> *Masiye: There are other learners like that one who just came from Congo (Country) and does not know English or any Zambian language. He only speaks French and Kiswahili, so it is hard for him to interact and learn from*

others. Unfortunately, I have scant knowledge of Kiswahili and French, I just know numbers and a few words which are not enough for teaching. So, many times after class, I must share my teaching materials with the parents to this boy so that they can also go through the lesson for the day in a language the child understands. In my discussion with parents, I was reminding and asking them repeatedly to help the child learn the language of instruction.

Masiye involved parents to a pupil with language difficulties by handing over some teaching and learning materials that she used in her class on a teaching point three to four times a week so that parents can help their child learn as he was trying to learn language of literacy instruction. This was Masiye's own initiative to help the pupil learn by partnering with parents to a language handicapped pupil.

The second case on how parents, guardians and siblings to learners were involved in educating their children including those in multilingual classes was through a school policy. One of the schools that was involved on this study had a conceptual policy called the *'the family pack'* where they invited parents or guardians to some learners that had difficulties in understanding lessons or topics in class. The purpose of this invitation was for the school and parents to partner by sharing notes on how they can help a child learn. When asked whether the school had measures put in place to help learners that did not speak the language of instruction in multilingual classes learn, Mwila (pseudo name) reported the following:

> **Mwila:** *...the idea is that, for us to help some learners learn effectively, we believe in partnering with parents to those learners that have difficulties in class. We invite parents to those learners in a certain class who are not performing well in a subject or area such as literacy may be due to language problems or other factors. We first give them progress reports of their child and later, invite them to sit on the same desk with their child and learn together. They serve as observers on lesson delivery and how we teach. After the lesson, we sit down somewhere and ask them on how we can improve our teaching to help learners learn. After we get their views, which are helpful many times, we also ask and share notes with them on how they can help their child to learn at home and then share tips on things they can do such as*

helping with homework, reading and telling stories, going through a child's notebooks and revising lessons seen in the books. Later, we ask individual parents to learn with their child again any time they want and some parents come back for this while others do not. When they do come back, we discuss how they are helping their children at home and so forth. In some subjects, we even ask some parents or guardians to help teach certain topics to the class as visiting teachers from children's homes while the class teacher sit with learners to ensure that all is well. So, this helps learners many times and parents like it. At our school, we call this parental involvement in the education of their children "A Family Pack."

In the extract above, Mwila provided a detailed account on how they involved parents or guardians in the education of their children. The school believed that the effective education of learners, at times, needed active involvement of parents.

The third way parents or guardians were involved in their children's learning was through homework or take away assessment items. When children were given homework, they were urged to consult their parents, guardians and siblings to help them answer some questions where they were stuck. In response to this, some teachers observed that certain parents helped their children learn but other parents refused to help their children. For example, Chanda (Pseudo name) had the following to say:

> **Chanda***: Some parents refused to help their children do their homework as they said they did not know the information required or how to help them because they were not well educated. Selected educated parents with capacity to help their children with homework indicated that they were busy with work and got home tired. Others complained and scolded us by saying 'we teachers are lazy to do our work because parents pay us money to educate their children, but we send work back to them.'*

Teachers noted that the giving of homework was a customary practice across schools and was reported to be a standard practice at various levels of education. However, parents responded to homework differently.

Other common ways parents were involved in school matters was through class visits where: some parents were invited to make appointments with teachers to visit classes where their children were learning from, and Parents Teachers Association meetings where all parents to the children at a particular school would be invited to discuss various matters including ways of helping their children to learn at home. The same discussion would be repeated and reinforced on Parents' and Open days so that parents get interested in the education of their children.

5.3.4   Compel New Students to Learn the Language of Instruction First

Some teachers interviewed in this study reported that it was important for learners that did not know the language of instruction in class to learn it first before they could be allowed into a classroom. This way, the pupils would not have the trouble of engaging parents actively or as substitute teachers but play their usual roles in helping with homework and other necessities. Masiye in her narrative contended that:

> **Masiye:** *In my discussion with parents, I was reminding and asking them repeatedly to help the child learn the Nyanja language of instruction. This is a language that most learners use and speak in class. This would reduce their intensive involvement in the teaching of the child or replicating my lessons at home as substitute teachers. We already involve all parents and guardians in their children's schoolwork such as homework but, for this learner, it goes beyond the usual business.*

The teacher in the narrative was of the view that learners that do not understand the official language of instruction in class or in an area, must first learn it before they can be allowed to learn or sit in class with other learners because they would create unnecessary pressure for the teacher and the parents or guardians. This was seen in a few classes during lesson observation where some teachers used the official language of instruction consistently without switching to another language even when their learners came from diverse backgrounds.

5.3.5   Teaching with Real and Diverse Materials that can Facilitate Learning

Seven (7) teachers in a focus group discussion referred to the use realia and diverse teaching and learning materials to help learners from different language backgrounds learn. They stated that it may be hard to meet all the needs of diverse learners in class but believed that the use of

real and diverse materials can help facilitate learning in multilingual classes. Some teachers expressed concern over chronic lack of basic teaching and learning materials such as learners and teachers' books in early grade classes in Zambian schools. In echoing on materials, Soko, Themba and Moto (Pseudo names) reported the following:

> **Soko:** *Actually, we have a problem on teaching and learning materials. Because I have 61 learners in class, but only three copies of the learners' book for the whole term and we do not have a teachers' handbook at this school.*

> **Themba:** *The materials I bring to class are not found in these books you are seeing here but I create my own to fit the topic am teaching. Without materials, sometimes it is hard to teach children from diverse cultures. Apart from teachers' handbook and learners' textbooks, there is nothing else that the school or the government provides to teach literacy in primary schools.*

> **Moto:** *I use different materials like charts, flash cards, pupils' books, self-created materials and those NBTL kit. Some of them are still around and they are very good aids when explaining or demonstrating on sound combination and words.*

> **Mate:** *We need to have a lot of books for literacy so that each learner will have his or her copy because it will enable them to follow the lesson.*

These teachers understand that teaching and learning materials are important in facilitating the teaching and learning processes. They also acknowledge that teacher creativity and eclecticism in the use of diverse and real materials in multilingual classes ease the learning processes by learners. During lesson observation, some teachers were seen bringing in a few improvised materials that aided their teaching in class.

5.3.6   Use of Improvised Bilingual Materials

One of the teachers interviewed indicated that she used some materials that were written in two languages Nyanja and English because she assumed that some learners could have come from pre-schools where English language was used as medium as instruction, while others that directly came from home had ideas about the official language of instruction. Furthermore, the teacher noted that materials written in two languages helped teachers to teach by linking and comparing terms, names and concepts from one language to another. Penda, one of the participants of the interview had the following to say:

> **Penda:** *uuh (sighs)… it is not easy to find materials written in two languages like English and Nyanja for us to use in class, that is why you see that (pointing*

at a bilingual teaching aid stuck on a classroom wall) and that one, I just created them myself to remind learners of the names of days of the week in Nyanja and English and the other one to remind them of names of months in Nyanja and English. I, sometimes, bring in real objects or display some images of objects with names in English and Nyanja if they help with what I want learners to learn for day.

Teacher Penda believed that bilingual teaching materials such as the ones shown in Figure 10 helps in the teaching and learning process of certain aspects in class because some learners can relate and easily connect with them. The researcher captured the material shown in Figure 10 during lesson observation visit and it depicts the representation of an improvised bilingual material by teachers in a class setting.

Figure 10: Sample Improvised Bilingual Materials Found in Multilingual Classes

The use of bilingual teaching and learning materials as reported by respondents in an interview made it easy for learners that already knew one language to learn in the target or language of instruction.

5.3.7   Teaching with Diverse Instructional Methods

In-service teachers believed that multilingual classes needed various instructional methods to facilitate the learning processes. Some teachers interviewed explicitly reported that teachers needed to be exposed to various instructional methods for teaching literacy. One teacher observed that.

> *Masiye: uuumm…I use diverse ways to teach lessons in my class. I do not know if that what you mean by methods… I usually start my lessons with either a song or a narrative story to revise or introduce a new sound, then question and answer, learner centred and teacher exposition. I give individual work to learners as well and group work when playing games.*

Although the teacher was not sure what instructional methods were, she outlined specific activities she carries out in her classes. The researcher also noted the use of multiple strategies when teaching in class that included teacher exposition, question and answer, demonstration and problem-solving.

5.3.8   Use of Bilingual Learners as Resources for Multilingual Classes

Teachers reported two cases where learners in class were used as resources for teaching multilingual classes on lessons or topics. The first case was where the teacher herself was not remarkably familiar with the language of instruction in which she was teaching, but some learners had detailed knowledge of the language or dialects. So, in some lessons, the teacher would show an image, for instance of a girl called Alita who was sweeping. The teacher would ask learners in class to state what Alita was doing in the picture. The teacher's handbook would show a word used in urban areas, but some learners would use a different Nyanja word. The two versions of the same word were confusing to teachers lacking fluency in the LOI, who relied on the knowledge of learners. In another situation, the teacher paired up learners deliberately to facilitate peer tutoring.

> *Chanda: Sometimes, I find two learners that speak deep Nyanja in my class challenging me on some issues. These learners use detailed words, which I do not even understand sometimes. So, last week on one of the days, there was an issue in class. Am not sure what really happened but one of the two learners came to me and said that: John (pseudo name) aliufuna kamba. Meaning*

"John wants food for journey." So, I thought he said, "John wanted to talk."
So, after asking John and what he said to this pupil, it is like they were talking
and the conflict was on the use of the word Kamba and Lankhula/nena.
Speaking to that boy was supposed to be lankhula or nena and kamba was
speaking for town boys, which meant food for journey to that pupil. Later after
asking my colleagues, that is when I realized that kamba and lankhula or nena
are the same and kamba as known in towns is not even in the Nyanja taught
in schools.

The experience of Chanda points to the issue that a teacher must be well knowledgeable about the subject they are teaching. While using learners help, it may be hard at times to understand them as the case was for Chanda.

The second case was where the teacher knew the language of instruction well but did not know the other languages spoken by learners in class. So, in some lessons, the teacher identified learners that spoke the same languages to work together in pairs. Learners that were familiar with both language of instruction and another language were used as resources for translating or finding equivalents of certain information to their fellow learners that were not familiar with language of instruction. In other words, there was an issue of peer tutoring in class, where the teacher would ask one pupil to say a certain message from one language to another language for the benefit of another pupil that did not understand the official language of instruction, especially in the early days of their entry into school. For instance, Melisa reported that:

> **Melisa:** *When they just reported in my class, I first established the languages*
> *each child is speaking. Then, I deliberately made those that knew two*
> *languages (one for instruction and another) sit with those that knew the other*
> *language only. When teaching, I made sure that the one who knows the two*
> *languages knows the matter and what to do as an exercise so that she can*
> *explain it to the other child that does not understand Nyanja well enough. For*
> *example, last year, I had a Lozi child in my class in term 1, so each time I*
> *taught something using Nyanja, I would tell her friend who was also familiar*
> *with Lozi and Nyanja to by explaining to her friend in Lozi where the child*
> *was not clear. I did this because I do not know Lozi and I thought that could*
> *help.*

Peer-tutoring was reported to be helpful for some teachers as it bridged the gap in language barrier among culturally and linguistically diverse learners. During lesson observation, only one teacher used a bilingual learner to explain something to another learner in a different language in two of her lessons observed. Most teachers did not use peer tutoring as a resource in multilingual classes.

5.3.9   Use of Multilingual Teachers as Resources

Three (3) out of twenty-three (23) teachers interviewed, reported that they involved other teachers before that were familiar with learners' languages whenever they had a situation where, they could not understand the languages spoken by a certain learner in their classes. Multilingual teachers were used as resources for multilingual classes. In support of this case, the two teachers with pseudo names had the following to say:

> **Chomba:** *This pupil speaks deep Nyanja (Chichewa) as she recently came from Eastern province and I do not understand what she says sometimes because I only know Lusaka Nyanja. So, whenever that happens, I go to the next door to ask for the meaning from another teacher who also speak deep Nyanja so that I can know and guide the child.*

> **Mwangala:** *I had a child who was speaking Tonga in Term 1, she did not understand Nyanja language of instruction and I did not know the Tonga language either. Whenever this child spoke or asked a question, I would go to a certain teacher within the school to help me interpret what the child was saying and eventually, this helped the child learn.*

In these quotes, Chomba, Tikambeji and Mwangala displays a flexibility to meet the needs of other language speaking students and use the resources available within the school to support learning by students. Furthermore, some teachers improvised by learning from other teachers while others such as Tikambenji moved a learner to another class where there is a teacher that could frequently support the child. The teachers demonstrated an openness to draw on a wide repertoire of their linguistic resources to facilitate students' learning. In cases where the teachers were not proficient in the languages in question, they would not hesitate to involve other teachers in the class to make sure that the student could comprehend the content.

5.3.10 Use of Multilingual Teachers to Teach Multilingual Classes

Two (2) out of twenty-three (23) teachers interviewed in multilingual classes only reported that multilingual teachers were necessary for teaching multilingual class so that learners that speak certain languages are taught by teachers who understand them or speak learners' languages. The two teachers shared this:

> ***Tikambenji:*** *I had one child last year who was speaking a language from this side uuuh … may be Lunda or Kaonde I cannot remember, but this child could not follow instructions or speak to others for almost three weeks and I realized he was speaking a different language, I asked the head to move the child to another class where there was a teacher who could speak many languages including that of the child.*

> ***Mathews:*** *I think learners that speak certain languages should be taught by teachers who have an idea or know that languages. They can even be those teachers that speak many languages because they may have ideas on how to help multilingual children like themselves*

The view from teachers suggests that other teachers with certain language skills within a school were used as resources for multilingual classes.

5.3.11 Use of Visual Aids on Talking Walls

The use of visual aids and talking walls (see Figure 11) were reported to be common in multilingual classes and what was reported during focus groups and interviews was consistent with what the researcher observed. Visual aids such as pictures, actual frying pan, pot and a pick were reported to be important as they helped learners learn quickly by seeing what the teachers were referring to in their lessons. For example, in one of the lessons, the teacher brought actual objects to the classroom (pick, pan and a pot) and these images were also drawn on paper. The teacher was teaching on the sound /p/ in Nyanja and she used a pot, a pan and a pick. These names in Nyanja were labelled as poto, pani and piki borrowed with modifications from English.

Figure 11: Visual Aids and Talking Wall Sample

When teaching sounds such as vowels and consonants, some teachers in grade 1 classes improvised multiple materials to help learners master the sounds. In addition, they displayed multiple materials stuck on classroom walls to remind learners on what they were learning. These materials included alphabet letters (See Figure 12) printed on classroom walls or written on a wallpaper as shown in Figure 12. Talking wall materials such as vowel charts, consonant charts, syllable charts and others stuck on classroom wall were reported by teachers during interviews and they were also observed in classrooms during lesson observation by the researcher. Furthermore, the researcher noted that some teachers used diverse materials stuck on their classroom walls than others. The materials that the researcher found stuck on classroom walls were not restricted to literacy only but included other subject areas such as social studies and science related subjects. Figure 12 shows alphabet chart written and stuck on classroom walls.

Sample Improvised Charts on Vowels and Consonants from one of the classes

Vowels

MAFUMU

a e i o u

Consonants

Makapaso

g c q r
b d j s
m t h k
n x f l
y w p z

Figure 12: Improvised charts on Vowels and Consonants

Teachers reported that visual aids on talking walls also reminded learners on what they had learnt previously and this gave them an opportunity to revise themselves even when their class teacher was not there with them.

5.4 In-Service Teachers' Language Ideologies and Experiences about Teaching Culturally and Linguistically Diverse Classes

The third research question sought to establish in-service teachers' language ideologies, beliefs and experiences about teaching in multilingual classes and project how long learners take to learn reading skills in schools based on their experiences. Data on this question was collected through face-to-face interviews and focus group discussions. The results showed that multilingual teachers in Lusaka had different views and beliefs about teaching in multilingual classes based on their experiences. Teachers' views from the analysis have been presented in themes below. Similarly, they had divergent views on how long learners take to learn reading skills. The specific voices from these teachers are presented in themes below.

5.4.1 In-Service Teachers' Beliefs about Teaching Multilingual Classes

In-service teachers' beliefs and experiences are presented in this segment.

5.4.1.1 Challenges of Teaching Multilingual Classes

Four of the teachers interviewed indicated that multilingual classes were complex, demanding and time-consuming to teach. They require a teacher to spend so much time on preparing lessons with appropriate teaching and learning materials and the delivery of lessons is equally a mountain to climb. When asked how easy or difficult it was to teach children from different language background, different views from various teachers were provided as indicated below, with each teacher using a pseudo name.

Chela: It is not easy because children that speak different languages learning in the same class have different levels of understanding, interpret information differently, have low self-esteem and shyness thus, affecting their performance. So, you need to deal with these issues for them to gain confidence and learn together with other learners that speak the language.

Penda: Some learners in my class were following the lessons even though they were not very familiar with the language of instruction, whilst others are absent minded during teaching and learning as they are shy to open if they were not understanding the lesson because of language or something else.

Chanda: It is very difficult to teach these Lusaka children because everybody wants to speak some different language even though most learners speak Nyanja. The major problem is that I was transferred to come here recently and am not fluent in Nyanja, which most children use.

Esther: It is difficult for me to teach multilingual learners because I am not familiar with the language of instruction in Lusaka but the few learners that speak my language, I do help them very well in class. I think that the employment or posting of teachers should also be based on the languages they speak in places where they are familiar with the language of instruction to avoid what am going through now because it is embarrassing. If not, they should teach us the language first before we go to teach in class.

Nyambe: Teaching multilingual classes is very interesting because we get exposed to different languages as teachers and at the same level, we get to

know different behaviours and traits from our learners in class. This arrangement gives us alternative ways of looking at multilingual problems.

Masiye: *It is quite a challenge because most learners do not know how to read and write plus language problem is worse for them.*

Teddy: *Teaching multilingual is very difficult because learners were a lot in class and we were using Nyanja, which was not understood by everyone. Nyanja itself is hard to use in class because the Nyanja in books is different from the one, we speak in towns. If you add too many learners on top of this, you see that it is very difficult to teach thus, we should start using English as a medium of instruction from Grade One to university.*

The overall message that came from these teachers was that teaching multilingual classes in Zambia was not an easy task due to variations in language experiences and backgrounds where learners come from. Some teachers lacked adequate knowledge of the language of instruction in the area and they were recommending that the posting of teachers should, among other things, take into consideration their proficient languages. If this was not possible, teachers should be trained to speak key languages in the area before they get into classes. While most teachers reported problems with multilingual classes, teacher Nyambe saw something positive about multilingual learners. She noted that multilingual classes provided chance for her to look at a problem from a unique perspective and that those multiple languages and cultural backgrounds helped her to be aware of what was available in Zambia.

When asked in an interview what her experiences were in teaching learners that spoke different languages in one class, Diana (pseudo name) had the following to say:

Diana: *uuummm hehehe (sighs and laughs) … sometimes, I feel like giving up on teaching this class because it is too much work. At times, I would finish my lesson and one learner asks one question, I would answer it but then, another pupil asks the same question as the previous learners and another… and then I must repeat the same things several times especially for those learners that do not understand Nyanja (aawee mayo – laments). In my class this year, there are about six languages spoken by learners. These are Nyanja, English,*

Chewa, Congolese, Bemba and Tonga. For all of them to understand a lesson,
it is very difficult and tasking compared to a class I had two years ago where
all learners were speaking Nyanja. That class was enjoyable to teach with
small problems but not this one.

Diana, like other teachers reported that handling of multilingual learners posed challenges for her due to the diverse nature of the class. She further noted that, even though she used several languages in class within her exposure to help learners learn, it was not an easy matter. Her experience of teaching a multilingual class was that they were not easy to teach in comparison to monolingual classes, which she taught before. Teacher Diana further noted that part of the challenges reported in multilingual classes was having too many learners in class. Although she did not categorically state how many learners was 'many,' her concern was that overcrowded multilingual classes were more difficulty to teach. This was noted by the researcher during classroom lesson observation where most teachers had a tough time managing and getting their learners focused on the teaching point.

5.4.1.2 Languages Use in Multilingual Classes

There were three groups of teachers offering alternative language use in multilingual classes in Zambia. The first group recommended the use of one main language in class and allow other available languages to be used, when necessary, through code-switching from one language to another. The second group recommended to use the designated regional official language without digression or reference to another language and the third group recommended the simultaneous use of English and Zambian languages as media of instruction so that where Zambian languages fail, English can come in and vice versa. When asked to comment on language use in multilingual classes, teachers provided responses under the following three themes.

5.4.1.2.1 The Demand for Use of One Main Language for Assessments but Allow Other Available Languages to be Used in Class

The interview and focus group data analysed showed that some teachers recommended the use of one main language in class and allow other available languages to be used, when necessary, through code-switching from one language to another. Teachers reported the following views:

Masiye: I realised that switching from one language to another, like those languages used by learners in class help them learn somehow especially when different activities like songs, word cards, play, games, picture reading and stories are well prepared by the teacher. The only problem is that the teacher needs to know many languages, which is not possible for some teachers.

Mathews: Am sure some teachers switch from one language to another when teaching but in my case, I cannot switch to languages, which I do not understand. This is not because I want to disadvantage those children but, I am not competent in those languages and in any case, am not forced to do that because it is not in the framework [National Literacy Framework of Zambia].

Sebo: Yes, I allow the use of multiple languages through code-switching because not every learner knows Nyanja and even me as a teacher, I use different languages to ensure that learners are following my lesson.

Diana: ...even if I use several languages in class, which I do sometimes, because I can speak four languages, for you to make all these children understand goes beyond the language issues especially that they are too many in class.

The teachers cited; Diana, Sebo and Masiye, reported that code-switching in multilingual classes helped in facilitating the teaching and learning processes especially when the teacher was gifted with multiple languages. Teachers indicated that they used code-switching, interpreting and others preferred that English Language be used from grades one to university and other Zambian languages such as Nyanja should be used through translations or interpreting in classes.

5.4.1.2.2 Usage of the Designated Official Language without Changing in Class

Another group of teachers also shared their experiences on how they confined themselves to the official language as guided by the policy when teaching a multilingual class.

Esther: I think it is not a good idea to be changing from one language to another in class because the policy says we should teach using a regional language. So, why should I be switching languages in class…. If there are learners that do not understand the official language of instruction, they

should learn it first before coming to class. It is the same with us teachers, if am posted to a new area, I must learn the language of that place than asking people to be switching to my language, no way.

Deko: *It is not necessary to start changing the languages in class because our aim is to make the children breakthrough to reading and writing. So, changing languages will just confuse them more. In any case, it is impossible for a teacher to start learning all the languages of her learners in class so that they can be used.*

Masiye: *In my discussion with parents, I was reminding and asking them repeatedly to help the child learn the Nyanja language of instruction. This is a language that most learners use and speak in class. This would reduce their intensive involvement in the teaching of the child or replicating my lessons at home as substitute teachers...*

Esther, Deko and Masiye indicated that it was impossible for teachers to switch to all the languages spoken by learners in class because it would make learning cumbersome considering that most classes in Zambia were crowded with learners that spoke similar languages. Furthermore, teachers Esther and Masiye also explicitly indicated that switching from one language to another was not a promising idea in multilingual classes, but learners should be required to learn the official language before they start school and this also applied to teachers posted to unfamiliar places.

Some teachers had divergent views related to the use of monolingual languages as media of instruction in multilingual classes and these are shared below.

Kama: *I think government should just start using English from Grade One because there used to be uniformity in bringing children together when using English as a medium of instruction unlike this pure Chichewa from Malawi that we are finding in books and is being used here in Lusaka as a medium of instruction. Chichewa is found in Eastern Province; thus, it should be used there not here in Lusaka where there is Nyanja because it is bringing a lot of confusion to us teachers and learners.*

Masiye: I think we should continue using the local language as a media of instruction because it is so cool as most children easily catch-up. Although a few have problems with Nyanja, they are not a serious factor and by the end of first grade, they catch-up.

Hara: We should be using English and interpreting the information to Zambian languages as it would make movements from one place to another easier. We just need to be finding an interpreter for Zambian languages.

5.4.1.2.3 Simultaneous Use of Nyanja and English in Education

When asked about their experiences on language use in multilingual classes, four teachers indicated that they preferred and recommended that both English and Zambian languages be used simultaneously from the first grade to Grade 7 so that where one language fails, another language can be used as the medium of instruction. Furthermore, these teachers noted that the system should be quick to address language matters in the country to help children learn. The following teachers with pseudo names shared their views on the subject matter.

Labani: It is a good thing to be teaching children in local languages because children easily catch up. However, there is a problem at grade 7 level where learners must write the Grade 7 examinations in English language after learning in it for two to three years only because most of them fail to translate the local language into English if they did not breakthrough by the time they reach in Grade 5. In this case, it would help if government can allow the use of English and Zambian languages at the same time from Grades 1 to 7.

Munthuzi: I would recommend that both English and Zambian languages be used simultaneously from Grade 1 to 7. Teachers can be teaching in both Nyanja and English right from Grade One so that issues of translation, interpretation and others can all come in.

Mate: In my classes, I do translation and interpreting from English to Nyanja and again from Nyanja to English on materials in class. I think we should also start using English as a medium of instruction again because only a few

learners do breakthrough to literacy when you are using local languages as media of instruction.

Mathews: Local languages are delaying us thus they should introduce the use of English as a medium of instruction from Grade 1 to 12 and local languages should just be taught as subjects or may just be helping English as it used to be since independence.

The idea of using local Zambian languages and English as media of instruction in classes at the same time seems to be highly recommended by teachers. Their thinking was that if Zambian languages and English can complement each other in education, it would facilitate learning and the acquisition of reading and writing skills faster. During lesson observation, some teachers were seen switching from one language to another. This can be supported at a large scale with available resources.

5.4.1.3 The Creation of a Favourable Environment for all Present Languages in Class
Some teachers preferred that those handling multilingual classes should learn to create favourable environments in class where all learners' languages can be used or supported even if they were obliged to use the designated official languages. This was important as noted by Munthuzi and Mathews that:

Munthuzi: The advantages of creating a favourable environment for multiple languages to be supported is that it breaks the barriers of tribalism, promotes unity and sharpens learning abilities in classes. Furthermore, children can learn other ways of looking at issues. Languages and children are young thus; it is very easy for them to follow your lesson.

Mathews: In my view, it is just important to make learners feel like they are valued in class by not giving bad examples from their languages or cultures but treat them like they are all the same as if they come from the same family. Otherwise, it is not necessary, if possible, to use too many languages to teach in class unless when helping individual learners to understand.

Mathews and Munthuzi supported the creation of favourable language use in multilingual classes when teaching. They recommended that other languages should only be used when

having one on one conversation with those learners that speak different languages for purposes of helping them understand what was not clear to them. However, teacher Mathews favours the creation of a favourable environment in class where all multilingual learners are treated the same by not making bad or negative examples from their languages or cultures. During lesson observation, the researcher noted different practices among teachers and their beliefs about multilingualism. Others supported diversity and others were not incredibly supportive of this move and favoured monolingual ideologies.

5.4.1.4 Decrowding Multilingual Classes

Some teachers expressed concern that it was difficult to teach multilingual classes on their own and it was more challenging when classes were overcrowded. They further noted that multilingual classes needed to be smaller so that the teacher can give each pupil adequate attention. Teacher Diana noted that part of the challenges faced in multilingual classes was having too many learners in class as if one were teaching a community. This according to her was a problem in terms of sharing teaching and learning materials, diversifying teaching strategies and instructional methods without carefully planning for what to do in class. The overall recommendation was that smaller classes of about 15 to 30 learners in class was preferred for multilingual classes.

5.4.1.5 The Call for Teachers to be Fluent with the Language of Instruction

Teachers that were not familiar with Nyanja language of instruction expressed concern that it was a mockery to them by standing in front of a class where most learners were fluent with the language of instruction while the teacher could barely utter a correct sentence in that language. Such teachers found multilingual classes more difficulty to handle that those teachers that were familiar with the language of instruction. Teacher Esther reported the following in trying to express displeasure with her language situation.

> **Esther:** *It is difficult for me to teach multilingual learners because I am not familiar with the language of instruction in Lusaka but the few learners that speak my language, I do help them very well in class...*

5.4.1.6 The Demand for Diversification of Instructional Strategies in Classes

When asked about the strategies and useful teaching techniques used by teachers to teach in multilingual classes, teachers reported the following:

> *Mathews: In my class, I frequently use songs, rhymes, dances, group discussions, a simple field trip, demonstrations, explanations which are in line with what am teaching about. Sometimes, I explain in their local language which they understand rather than force them to use English which is hard for them.*

> *Labani: I teach phonics so that learners can formulate their own words but first I begin by introducing the sound of the day. Also, I slash the word and ask learners to read syllable by syllable then combine it later.*

> *Penda: Use a language that embraces everyone and the current syllabus we are using is one of the best because it helps them to understand and enhances their reading because when learning subjects like literacy, they must deal with sounds in local languages so that it helps them to read English in a better way.*

> *Masiye: On some days, I use learner-centred method, pair works, group works, songs and games to deliver my lessons.*

> *Mate: When there are no books, I create my own materials like flash cards, chats, concrete objects and stories.*

> *Munthuzi: I begin by introducing the vowels and then blending vowels with consonants. Later, give them simpler work.*

The messages learnt from the responses of the teachers above, shows that they were using various strategies or classroom techniques to deliver their lessons in multilingual classes. These techniques varied from teacher to teacher and what was reported by the teachers was also observed in their lessons.

5.4.2 In-Service Teachers' Views About How Long Learners Take to Learn Technical Reading Skills of Letters and Words

As a theme that emerged from data, this segment sought in-service teachers' experiences and views on how long learners took to begin reading from the time they started Grade One. Some teachers reported that learners learnt to read in the first three to four months from their entry into Grade One, while others indicated six to nine months from their entry into Grade One. Five teachers out of thirty-six interviewed indicated that, some learners may take the entire year to be able to read letters and words. When teachers were asked to state how long learners took to begin reading skills, the following were the views of the teachers Tikambenji and Mate.

> *Tikambenji: Some learners come to school with literacy skills already. For those that do not know how to read and write, we begin teaching them and by the end of term two, almost every learner is able to read. Those that are behind or unable to read by term two, we ask them to remain after class for extra lessons so that they catch up. By the end of Grade One, we ensure that all learners can read.*

> *Mate: Most learners learn to read by the end of Grade One. Some learners fail to read by the end of Grade One but continue to Grade 2 like that. Last year, I was teaching a Grade 2 class, I found some learners there that were not able to read and write. So, yah, there are some that take more than one year.*

Furthermore, when asked in an indirect way whether there are learners that could enter Grade 2 or 3 unable to read letters and words in Nyanja or English, the following views were reported in verbatim statements.

> *Masiye: I do not think so because most learners learn to read and write by the end of term two. By the end of the Grade One, all learners would have learnt how to read and write. I do not think learners start Grade 2 or 3 failing to read. May be for learners who were transferred from another school to this one.*

> *Soko: Our learners here learn to read in the first three to six months and by the end of Grade One, most learners are fluent readers. In this class, for*

example, most learners have already developed reading skills in Nyanja. I am sure that when you (referring to the researcher) come back later, very few learners will be failing to read and write.

Tikambenji: *All learners at our school know how to read and write by the end of Grade One. The other further grades just consolidate Grade One skills and move ahead with other things.*

Mathews: *They take long to learn literacy skills. Others take as far as a year while others may go beyond one year to Grade 2. Last year, I had about eleven learners who could not read anything until they went to Grade 2.*

Teachers that took part in a focus group discussion indicated that very few learners completed Grade One unable to read letters or words in Nyanja. However, most learners begin reading by the end of Grade One. These views were consistent in both face-to-face interviews with teachers as well as the group discussions we had. Only four teachers noted that some learners go beyond Grade One failing to read and write. The views presented by most teachers about how long none readers take to learn reading skills disagreed with test results obtained in research question one. Test results showed that some learners complete Grade One unable to read vowels and consonants and this was contrary to most in-service teachers views that were teaching the children.

5.5   Phonics Instructional Approaches Used in Monolingual and Multilingual Classes

The fourth research question sought to establish the phonics instructional approaches in Grade One during literacy lesson observation and as reported by some teachers during interviews and focus group discussions. Phonics instructions are established pedagogical approaches for teaching reading and this was one of the independent variables studied that has an impact on learners reading achievements. The concept of phonics instructional approaches in this section may include approaches, methods, procedures, strategies and techniques that teachers were using in their classes to deliver literacy lessons. During lesson observation, it was noted that multilingual and monolingual classes were using the same approaches to the teaching of phonics except for a few cases where more phonics approaches were noted in some multilingual classes.

The researcher sat in ten different Grade One classes two to three times in a year. Five of the classes were monolingual and the other five classes were multilingual in nature. A total of thirty-six in-service teachers (23 from multilingual classes and 13 from monolingual classes) that were involved in teaching Grade One in the past two years were interviewed and involved in a group discussion. Some of these teachers had their lessons observed by the researcher as discussed in the methods chapter. The following phonics approaches to the teaching of reading were noted.

5.5.1   The Synthetic Phonics Approach

All the ten classes observed on the study from both multilingual and monolingual classes used the synthetic phonics approach to the teaching of reading. Teachers taught alphabetic knowledge of Nyanja language emphasising on letter sounds. They taught letter sound association (Phoneme-grapheme association). Furthermore, learners learnt vowels first, then consonants, followed by blending of these sounds into syllables and then learnt to sound out the blended sounds and words. The narratives provided below are sampled descriptions of three of the lessons observed from teachers pseudo named Meka, Chisempa and Macha.

Lesson 1: Descriptive Narrative by Teacher Meka

During lesson observation, teacher Meka started her lesson by revising vowel sounds that were already taught in her previous lessons [/a/, /e/, /i/, /o/, /u/]. She did this with the whole class and then focussed on small groups of learners seated in columns and later, individual learners. This was followed by an introduction of the new sound of the day /t/. The teacher printed this sound on the board in lower and upper case, one after another and asked the class to state what was written on the board T/t. Learners responded with different sounds. Others got it right and the teacher stressed on the right sound as /t/. She then asked learners to repeat after her in pronouncing the sound /t/ several times. This activity was followed by examples of words that begun with the same sound /t/. The teacher provided two images one at a time that described words or activities that started with the sound /t/ in Nyanja language as shown in Figure 13.

Figure 13: Images on Reading Lesson that Started with the Sound /t/

After modelling the sound of the day /t/ followed by repetitions and drilling from learners, the teacher displayed image 1 as shown in Figure 13 to the class. The teacher had a question-and-answer session with learners about the images in class as follows.

> **Teacher Meka:** Ndani angatiuze zili pa cithunzi? "Who can tell us what is in the picture?" [Pointing at image 1].

> **Learner 1:** Mwana na TV. "A child and a TV"

> **Teacher Meka:** Wacita bwino. "Well done." Winangu? "Any other?"

> **Learner 2:** Mwana atamba TV. "A child is watching TV"

> **Teacher Meka:** Wakonza. "Good job" [Teacher wrote the word 'Tamba' on the board] and asked the class. Tamba ni chani? "What is the meaning of Tamba?"

> **Learner 3:** Tamba nikutamba TV olo…olo kuyangana pa tv. "Tamba is watching TV or looking at TV."

The teacher then asked the class to start what sound they hear at the beginning of the word 'Tamba.' Some learners responded /ta/ others said /t/… and the teacher stressed on the sound of the day. The same procedure was followed on Image 2 about the use of the word "Tenga" picking up something. The teacher later asked the class to state any other words that they know that starts with the sound /t/. Learners responded with various responses. Soon after learners mastered the sound of the day, the teacher revised the vowels again and proceeded to blending demonstration where the sound /t/ was blended with vowels /a/ and /u/ to form one syllable words /ta/ and /tu/. After this blending of sounds, she tried to blend syllables /ta/ plus /tu/ to form /tatu/. This was followed by an exercise that included previously covered sounds such as /m/ and /s/. She then started marking and checking learners works and this was the end of the reading lesson.

Meka used synthetic phonics as where learners begin with individual sounds and move to blending of the sounds to syllables and words and sentences. This practice was observed in several classes. However, most teachers interviewed did not say they used synthetic phonics, but some stated they used phonics in general.

5.5.2 A Combination of Analytic, Synthetic and Embedded Phonics

Some teachers combined phonics approaches in one lesson unknowingly. For analytic phonics, some teachers started their lessons by identifying a familiar word first. This word could come from a story or a song that they may have used to start a lesson and then the teacher write the word on the board. Teachers proceeded to introduce a particular sound with its symbol within the word listed. For example, the teacher may write a word *ameta* on the board in class and tell learners that the sound that follows a- in the word is /m/. The teacher picked more words with similar sounds for practice with learners. Analytic phonics related lessons were noted in a few lessons observed and used with other approaches.

Some teachers interviewed used embedded phonics in part of their lessons. Such teachers narrated that in their lessons about social studies or other subjects offered, when reading to learners a passage and there is a word or part of a word that a particular learner does not understand, the teacher paused the reading session and explained the sound of that word where there is a problem and stated what it means. After explaining the words, the teacher would ask the learner or class to state words with similar sounds for them to practice. When this was understood, the reading session would continue. Examples of lessons where phonics approaches were combined are exemplified below.

Lesson 2 Description by Teacher Chisempa

The teacher walked into a class with the researcher and greeted the class using Nyanja language as the official medium of instruction.

> **Teacher Chisempa:** Mwauka bwanji? "Good morning?"

> **Class:** Tauka bwino aphunzisi mwauka bwanji? "Good morning teacher (We woke up well teacher) good morning"?

> **Teacher Chisempa:** Lelo talandila aphunzisi asopano amene tizakhala nao lelo ndi masiku ena azabwela. "We have received a new teacher who will be with us today and some days to come" …

She further introduced the researcher as a new teacher for that lesson and other lessons in future and then she asked the researcher to greet the class. Afterwards, the teacher asked learners to take their sits. Then after, she asked learners to sing a song, which the learners already knew in Nyanja. In that song, vowels in Nyanja language were mentioned in the order they were taught. The song was used to revise vowels taught in the past lessons. The teacher then narrated a short story in less than four minutes in Nyanja and then asked learners in class what selected words from the narrative meant. She also asked about other issues such as characters in that story and names of places or setting of the story. She further singled out certain words that started with the letter sound 'w' and wrote them on the board. She asked the class to state what sounds they heard at the beginning of each of the words listed on the board after reading them and learners repeated after the teacher several times. The learners responded to the teacher's questions and the teacher guided them where they were wrong. Some learners stated that they heard a sound like "W" others said "Wa" syllable and others. The teacher then stressed on the sound "W". After several examples using the letter sound /w/, with learners' imitations, the teacher went further to merging of letter sounds with vowels to form syllables. She demonstrated in a question-and-answer session as she asked:

> **Teacher Chisempa:** Mukasankhaniza uyu /a/ na uyu /w/ pamodzi mozapeza chani? "When you add the vowel /a/ to /w/ what do you get?"

> **Class:** Some learners stated /wa/, while others said other syllables.

> **Teacher Chisempa:** Wacita bwino "Good." You get 'wa.' Nanga mukayika pamozi /w/ na uyu /o/ muzapeza chani? "What about adding /w/ and /o/, what would you get?"

> **Class:** Some pupil responded /wo/.

> **Teacher Chisempa:** Very good. Tiyeni timutoteleko xx (Name of a pupil) "Let us clap for this pupil" (Teacher mixed three languages: English, Nyanja and Bemba) …

After this part, syllables were formed with all vowels: Wa   We   Wi   Wo Wu. The teacher read and learners repeated after her a few times. Then the teacher provided examples of words from learners' home environments that started with each of the syllables such as (wafa, welela, wise, wongo, wuta). The teacher further asked learners to give more examples of words in Nyanja language that started with each of the syllables one after another from their homes. She further

went into writing where she drew boxes on the board with letters inside and demonstrated in Figure 14.
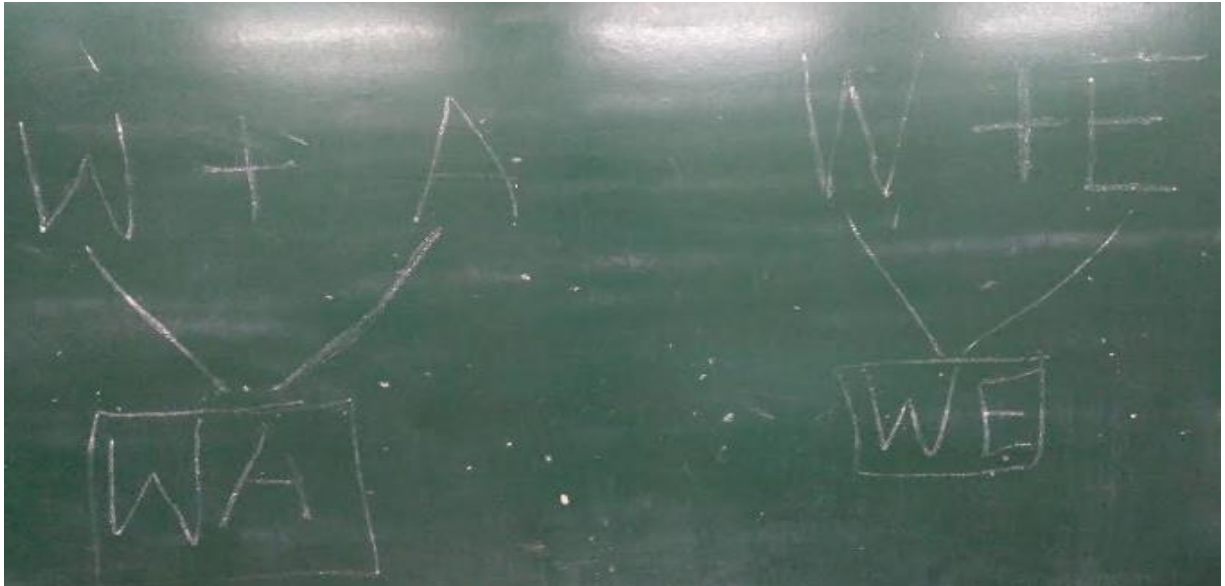
Figure 14: Blending of Sounds to Form Syllables

After this individual activity, learners were given a writing activity with guidance from the teacher and in some cases, the teacher checked individual learners for their responses. Learners were heard chatting and requesting for objects in class in three languages. The procedure in this lesson was common in several lessons observed across schools in multilingual settings.

Lesson 3 Description by Teacher Macha

The lesson by teacher Macha started with a prayer where all learners recited the prayer "Our Father in Heaven." It was a Nyanja lesson, but the prayer was cited in English. This was followed by a song led by a teacher to attract pupils 'attention. The song was accompanied by actions depicting vowels that were covered previously. Furthermore, the song was extended to the formation of syllables with consonants that were covered in the past.

Macha further drew an image on the board of a ball and asked the class to state the name of the object shown on the board. Learners responded and stated the following responses to the teachers' questions.

> **Teacher Macha:** Ichi timaitana bwanji? "What do we call this?" (Pointing at one of the drawn images on the board).

Pupil 1: A ball 'English'

Pupil 2: Umupila "Football in Bemba Language"

Pupil 3: Bola "Football in Nyanja"

Pupil 4: Football

Pupil 5: Mupila "Chewa"

The teacher was writing the responses from learners on the board. Later she said that all learners were right and acknowledged that in other languages such as those mentioned in class, the image on the board was called by different names and then asked some learners that stated other names to state which language that was and later affirmed. The teacher explained that Bola was the common name in Nyanja in Lusaka and that she wanted learners to focus more the Nyanja word Bola. Then she erased other names on the board and remained with Bola.

The teacher then asked learners to state the sound they heard at word initial of the word Bola and learners responded differently. Others were correct while others were not. The teacher later stressed on the correct sound /b/ and ignored wrong responses. In this class, the teacher continuously guided learners on how to sit like a leo, as she was pointing at an image stuck on the side wall on effective way of sitting in class. The teacher then introduced the new letter B as a teaching point for that day. The teacher told the class the name of the letter and how it sounded. After this part, she   then wrote syllables associated with letter b as in ba be bi bo bu. After drilling and repetitions by the class, she asked learners to stress more on certain syllables with example words.

She further asked individual learners to state the syllables in several words that were written on the board. The teacher continued with reading task where learners in columns were asked to read sentences of two words on the board and this part was followed by an individual exercise.

The two lesson descriptions involve the teaching using the Phonics approach with more emphasis on the synthetic phonics method. After lesson observation, teachers were asked in an interview about the teaching methods they employed in their classes. When asked which pedagogical methods, strategies or classroom activities teachers were using to teach reading in

their classes, there were various responses from in-service teachers. These responses included the following:

> ***Tikambenji:*** *On the method, the government already indicated in the framework [National Literacy Framework of Zambia] and PLP [Primary Literacy Programme] that we use phonics to teach literacy but, in addition to that, I also use group work, pair work and individual work when teaching reading and writing.*

> ***Tamara:*** *It is written in PLP that we use build up phonics methods or something when teaching reading and writing, but I can say that teachers should not be restricted in terms of the method to be used to teach literacy in Grade One. We should be allowed to choose or mix methods for teaching literacy so that the weaknesses of one method are made up for by another to help learners read.*

> ***Chisempa:*** *I use the phonics methods as it helps children to quickly learn how to read and write. It is easier because most people use it and it is a traditional method of teaching.*

The voices of the three teachers indicates that teachers used the phonics approach because it was the prescribed method of instruction in the policy and that it was easier to help learners learn to read and write. Teacher Tamara has a different view about prescribing teaching methods to teachers. She does not support the idea that teachers should be told which teaching methods they should be using in their classes. Instead, she prefers that teachers choose which methods to use to teach various aspects outlined in the syllabus.

5.5.3   The Multisensory Approach with Aspects of Phonics

Four (4) out of the twenty-six (26) lessons observed in multilingual classes and monolingual classes exhibited multisensory traits in the teaching of literacy. During lesson observation, the four lessons taught literacy in a creative way. For instance, in one of the multilingual classes, a teacher wanted learners to learn the sound /p/. This was the teaching point for that day. She started the lesson with revision of vowels that were written on the wall in front of the class. After the revision was concluded, the teacher displayed a chart as shown in Figure 15, which

contained three hand drawn images: a pot, a pan and a pick. The teacher further brought these three objects with her to class to supplement the drawings.
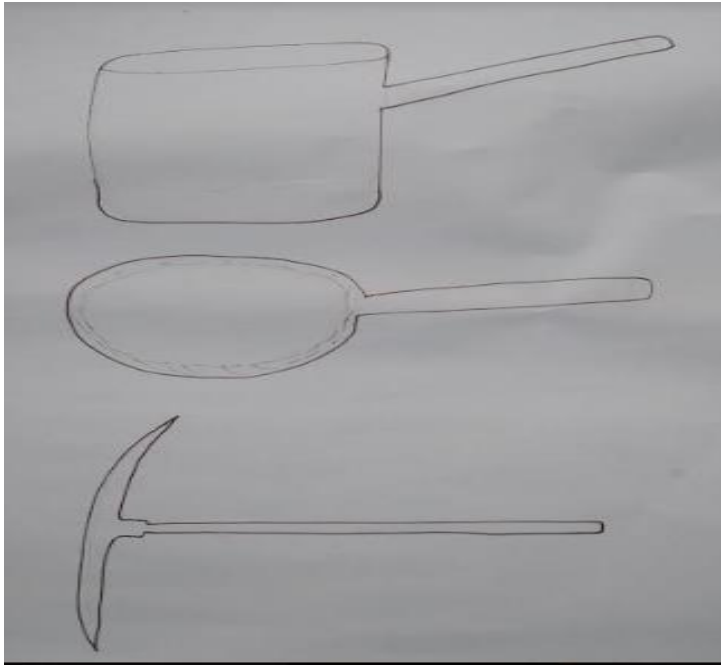
Figure 15: Teaching Aid for Sound /p/

The teacher went further and asked the learners to state the names of the objects in the chart one after another. When covering each of the objects in the chart, the teacher showed a real object to the learners. When covering a pot, she would show them a physical port and then the learners would respond by stating the name of the object. The teacher would then write the name down next the image in the chart. After stating each object, she would pass the object to the learners to touch and all the three objects were passed to the pupils, one at a time. At the end, the teacher asked learners to state what sounds they heard starting with each of the three words written next to the images. Learners would make different proposals, wrong and correct ones. The teacher then agreed with learners that produced a correct sound and then dwelled much on the sound of the day by writing it down on the board several times in upper and lower cases. She asked some volunteers to go in front to write the letter P on the board and some learners went to write. This was followed by asking learners to state names of objects in their communities that started with the sound /p/ and learners responded. After this, the teacher went ahead this time to blend vowel sounds with consonant of the day /p/ to form syllables. She demonstrated how the syllables would be formed by blending P+A to get PA. At each syllable formed, she would ask the

learners to state a word that start or end with the syllable formed in their communities and learners would respond. This was followed by an exercise where learners would write in their books the sound of the day and the blending of syllables and how they would be pronounced.

During the interview with teachers, none of the teachers mentioned that this is a case of multisensory approach to literacy teaching but some of them were using them in their classes. However, a few teachers indicated that teaching reading demanded the use of several methods to teach in class so that learners have different approaches to teaching, but they did not state which specific methods would be used.

5.5.4   Look and Say Method

There were seven (7) lessons out of the twenty-six (26) observed that used the look and say method as part of the whole lesson. In these lessons, the customary practice was that, when teachers wanted their classes to learn a sound of the day, for instance the sound /t/, seven of the lessons first used the look and say method. These teachers could write a list of words on the board starting with the same sound. In one of the lessons observed, a teacher was teaching a sound /t/ or alphabet letter T. This teacher, after the revision of vowel sounds of the day, decided to write the following words on the board one after another. After writing each word, she read the word loud to the class and asked the learners to repeat after her. The words written were as follows: Tuma, Tolo, Tamba, Tentha, Thumba and Thandizo. After stating the sounds of the words, the teacher asked learners in class to state what each word meant. She further asked for examples from learners regarding word usage. The following happened in her class:

> **Teacher:** Tikanena kuti 'Tuma,' titathauza chani? "When we say 'tuma' what do we mean?"

> **Pupil 1:** Ndiyekuti makolo mwina atituma kukagula mchele. "It means parents at times send us to buy salt."

> **Pupil 2:** Aphunzitsi akutuma kwa aphunzitsi anzao. "Teacher sends you to another teacher."

> **Pupil 3:** Tuma mbale tokongola. "Small plates that are beautiful."

After learners' explanations, the teacher would emphasise on the meaning of the words. Later, the teacher asked which sounds were heard in front of each of the words written on the board and learners would respond. The teacher would read the words again to guide learners and later, agree with the correct responses from some learners and stressed on the correct sound. After the sound of the day was stressed, the teacher erased all the words on the board and asked the class to state which words in the community starts with the sound /t/. The teacher added that learners could start with the words that were written on the board and add more words from their communities. This helped learners to master the deleted forms of written words so that when they see certain symbols, they would say out the sound of the word.

5.5.5   The Syllabic Method

All the 26 lessons observed on the study from both multilingual and monolingual classes used the syllabic method at a stage when sounds were being blended into syllables. All literacy lessons observed started with revision of vowel sounds and when a sound of the day was taught, it was used to form syllables with all vowel sounds. For instance, if the sound of the day was /m/ or letter M, this letter was used to form syllables with the vowels as in:

MA ME, MI, MO, MU. After learners have mastered these syllables, the teachers would extend the syllables to sounds previously covered as shown in Table 44.

Table 44: Making Syllables

Ma	Me	Mi	Mo	Mu
La	Le	Li	Lo	Lu
Ka	Ke	Ki	ko	Ku
Ba	Be	Bi	Bo	Bu

In some cases, some teachers at this stage could switch to a chart stuck on a classroom wall containing all or some of the syllables in Chiyanja to help learners revise on the syllables. Figure 16 shows the chart of syllables to help learners learn on the syllabic method.
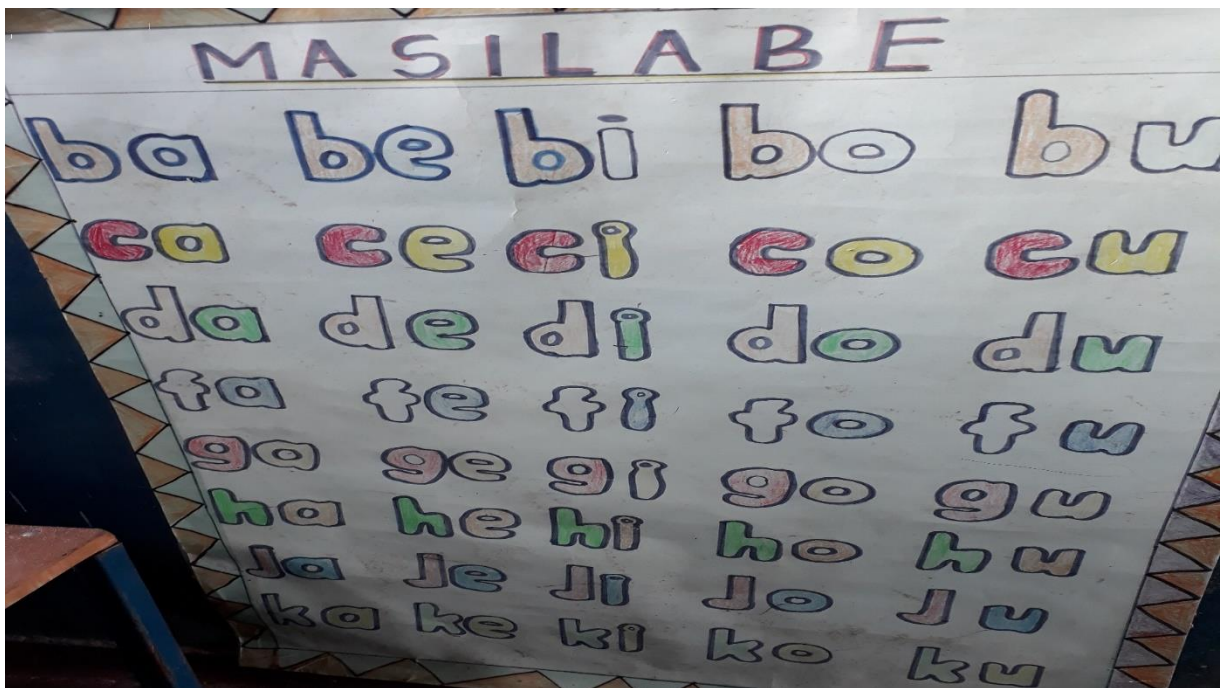
Figure 16: The Syllable Chart as Part of the Talking Walls

Some teachers could go further to create two to three syllable words so that learners could see how words are formed as shown in Table 45. Some syllables including a teaching point of the day would be used to form simple words for learners to read.

Table 45: Formation of Two Syllable Words

Mama	Mamo	Boma	Mimu
Buku	mika	Beka	kimu

The syllabic method was one of the common methods applied in all the lessons observed. The method is used as a stage in literacy lesson delivery.

5.5.5 New Breakthrough to Literacy (NBTL) Method

During the face-to-face interview interactions with respondents, in-service teachers were asked which instructional or teaching methods they were using to teach reading or literacy in their classes. Four (4) out of the thirty-six (36) teachers interviewed indicated that they were using the New Breakthrough to Literacy (NBTL) teaching method. When asked why they opted to use an old programme instead of the Primary Literacy Programme (PLP) that was in existence, the following were their verbatim voices from the in-service teachers whose pseudo names have been used for confidentiality purposes:

> *Teacher Diana: ...I started teaching in primary school in 2003 and at that time, before I could walk into a class to teach children, they took me and others as new teachers to the district resource centres for training on how to use the NBTL, ROC (Read on Course) and some other courses. When the training ended in two to three weeks, I was happy and proud to go and teach because I knew that all was well and ready to teach. Now this new PLP, no one has taught me anything not even a CPD meeting for it. I just found books waiting for me to use. Fortunately, a lot of things in those books were like the NBTL course and that is how I mix some things to teach in my class.*

> *Teacher Nyambezi: There were people that invited us to attend a training for two days at the district offices so that we can know more about this new programme soon after it*

started in 2015. We went there and learn something but ...I think it was not noticeably clear... That is why I find NBTL teaching good though there are no materials to use.

Teacher Esther: I mix both NBTL and this PLP. Yah, because in NBTL we teach starting with words or sentences and then analyse them by breaking them into syllables and sounds but in the new programme, is it not the opposite?... Yes, it is... because we start with the names of letters and their sounds and they blend them to make syllables in our lessons...

The three voices show that some teachers in primary schools still use aspects of the NBTL method. During lesson observation, it was noted that several features that were prominent in NBTL classes were seen in PLP classes. These traits included *putting learners in performance or pace groups labelled by colour, fruit, or animals*. This trait was seen in several classes. *Inviting all learners to sit on a carpet in front of a class* as the teacher was teaching was another trait observed in literacy classes, yet it was a typical procedure under NBTL. In terms of teaching and learning materials, some teachers were seen in class using scant materials from the NBTL kit such as *a sentence marker with the syllables and sounds on the* chart. These were indications that aspects of the NBTL course was still prominent in PLP literacy class at the time of this study.

5.5.6 Primary Literacy Programme Method (The New Method)

All the teachers interviewed indicated that they were using the new method of teaching literacy (PLP) and most of them went further to explain that in each of their lessons every day, they had to teach the five key competencies (*Phonological awareness, phonics [alphabetic principle], oral reading fluency, vocabulary and comprehension)*. When asked about what was involved in the new method, some teachers said.

Teacher Chanda: ... it is different. In PLP, every day we have a lesson in literacy, we must include the big five skills- phonics, fluency, phonemic awareness, comprehension and vocabulary and that is why they are called the big five.

Teacher Melisa: It is written in PLP that we must teach the five skills every day so it is not possible to forget them.

Teachers Chanda and Melisa indicated in their quotes that they must teach all the five big skills in every day of their classes as it was a policy matter. Their interview data contradicted with the data from lesson observation. The lessons observed from most teachers in their early grade classes indicated that most of their lessons did not cover the big five components as they most of them ended on blending of sounds without covering fluency, vocabulary and comprehension. A few of the classes covered all the five key competencies in their teaching in a mixed order.

5.5.7   Mixed Methods Used to Teach Literacy

Four (4) out of the 36 teachers interviewed indicated that they used a mixture of instructional methods to teach literacy in their classes. All the four teachers indicated that they used aspects of NBTL and PLP in their classes. However, the data noted from interviews was inconsistent with what was collected during lesson observation. While it was true that they mixed NBTL and PLP, they went further to include other instructional methods such as the phonics approach, syllable method and look and say method in the same lesson. In other words, the use of NBTL and PLP was an understatement regarding the number of methods they included in their classes to deliver a literacy lesson. Furthermore, other general instructional methods were observed being used in class and these included the talking walls, teacher exposition (Lecture), question and answer, discussion, individual tasks, peer partner learning, case study, chalk board instruction, reading aloud, vocabulary lists, learning stations by putting learners in ability groups labelled by colour or animals, storytelling, singing and games.

During lesson observation activity, the researcher noted that in-service teachers used different approaches, methods and techniques to deliver their lessons in class. The most common method that was observed that teachers were using to teach reading was the Phonics Approach. This is where synthetic phonics were prominent with a little of analytic phonics in a few classes that followed the routine procedure of the New Breakthrough to Literacy (NBTL). Therefore, some teachers during the interview indicated that they were using the NBTL method to teach literacy. The second common method noted was the syllabic method which every teacher used as an embedded method when blending sounds into syllables. Most teachers spent a little more time in covering syllables or blended sounds and words based on a sound of the day and at that stage, they would also cover syllables and sounds that they taught in the past. The multisensory approach to teaching literacy was also noted in some lessons where teachers would use teaching

techniques that employed learners to use multiple senses on one lesson such as hearing, touching, sight and kinesthetic or movement for learners to connect with what they were learning in class. Look and Say method was also observed in some lessons where teachers would show some words by writing them on the board and using them for a teaching point and then erased those words and asked learners to say or state the same erased words and more to help explain a teaching point. The other method reported during interviews with some teachers was the New Breakthrough to Literacy (NBTL) method. It is important to note that the NBTL method as described by some teachers is not a definitive standard method, but teachers called it a method because they followed several aspects of the NBTL lesson procedures, classroom setup, pupil classification and other aspects. It is documented in this section because it was prominent in more than 50 per cent of the classes observed. The last method teachers described during an interview was what they called the Primary Literacy Programme (PLP) where they equally called it a method because of the rigid lesson procedure to be followed when teaching literacy that involved the five key skills or competencies namely, *phonemic awareness, phonics (alphabetic principle), oral reading fluency, vocabulary and comprehension.* In most lessons, teachers combined NBTL and PLP classroom practices together to deliver lessons and design their classes. In other words, teachers in their classes combined teaching strategies as they used aspects of the New Breakthrough to Literacy (NBTL) and the newly introduced Primary Literacy Programme (PLP) which some teachers referred to as the new method.

The summary provided highlights an observation made that early grade teachers used a variety of teaching approaches and methods for reading instruction in Zambian primary schools. The details of these methods and how teachers applied them in their classes have been discussed in the next chapter. It is important to note that the methods being discussed in this segment were noted in both monolingual and multilingual classes.

5.6   Summary

This chapter has presented the findings of the study by answering specific research questions that the study sought to address. Some emerging themes were also presented for easy reference of main points. The next chapter discusses findings of the study.

CHAPTER SIX: DISCUSSION

6.0   Overview

In the previous chapter, research findings with respect to the research questions as outlined in Chapter One were presented. Data from each research question with emerging themes was presented with required details. In this chapter, the data presented in the previous chapter are discussed. The discussion is arranged with respect to the main emerging themes and research objectives that the study sought to address. Emerging themes coupled with relevant data and information from existing findings on the study and the literature reviewed are also considered in this chapter

6.1   Reading Achievements of Grade One Learners

The first study objective as presented in Chapter One, sought to establish reading achievements of Grade One learners in a pre-test and post-test as presented in the previous chapter. The data on research objective one was grouped in three:

   a.   Learning progress of all learners in the pre-test and post-test results;

   b.   Reading achievements of Speakers and Non-speakers of the language of instruction in multilingual classes;

   c.   Reading achievements of Lusaka's multilingual classes and Katete's monolingual classes.

The discussion of the findings on objective one is presented below following specific groups created under the main objective and themes.

6.1.1   Learning Progress of All Learners in the Pre-test and Post-Test Results

Learners were tested on their knowledge of vowels, consonants, one syllable words, two syllable words, three syllable words, consonant clustered words and complex words (See Appendix 1). The reason for testing was to compare learning progress of all learners and specifically the progress seen in terms of numbers of learners that were able to read before Grade One instruction (Pre-test) and after instruction (post-test) at the end of Grade One in binary manner as explained in the binary opposition theory in Chapter Two.

The results as presented in the previous chapter in Table 8 showed that there was learning taking place in Grade One. For example, the high numbers of learners that started Grade One unable to read vowels, consonants, one syllable words to complex words decreased by the end of the year as some learners learnt to decode or read the assessed items. This reading progress between pre-test and post-test results was confirmed by inferential statistics using the Mcnemar test that was run across all the items assessed. Inferential statistics showed that there were statistically significant differences in performance of learners between pre-test and post-test as $p < 0.05$. The alpha value was slightly greater than the test scores between pre-test and post-test implying that there was some learning taking place in Grade One. However, several learners completed the first grade unable to read vowels, consonants and words. For instance, out of 235 learners that started Grade One unable to read vowels, 136 completed the same grade unable to read vowels. From 323 learners that started Grade One without knowledge of consonants, 220 completed the first grade without knowledge of consonants. This trend was common for most assessed items as 273 learners completed Grade One unable to read one syllable words, 299, 310, 318 and 322 completed Grade One unable to read two syllable words, three syllable words, consonant clustered words and complex words respectively as shown in Table 8 of the findings chapter.

The results imply that very few Grade One learners were learning to read or decode in Zambia's primary schools as the number of learners that showed evidence of learning to read across the seven items assessed in the pre-test and post-test was abysmally small. This also means that more than 70% of Grade One learners completed the first grade unable to read and write. The Zambian people should be concerned about the high numbers of learners completing the first grade unable to read and write.

The results of this study were in line with (Chipili, 2016; Kafata, 2016; Pali, 2020) who reported that most learners in Zambia complete grades 1 and 2 unable to read and write. This inability is triggered by many factors ranging from school factors to national matters as reported in Section 1.1.6 about existing literature on factors contributing to low literacy levels in Zambia. The findings by Simfukwe (2019) also correspond with the present study that learners in grades 1 to 4 record poor reading skills due to multiple factors such as unavailability of teaching and learning materials, lack of monitoring and supervision of Grade One teachers, high pupil and

teacher ratios, motivation to learn and teach language beliefs by learners and teachers. The findings of this study were also supported by the USAID/Zambia (2018) baseline survey, which showed that over 30% of Grade 2 learners across the five regional languages that were involved in the baseline survey were unable to identify letter sounds and read simple words. By extension, this means the inability of Grade One learners to know letter sounds goes beyond Grade 2.

The results of objective one contradicts those in objective three in this study. The data was collected using different methods for triangulation of methods purposes but both objectives were centred on learners reading achievements. Research objective one findings as presented in the previous chapter reported that more than half the total number of learners that enrolled into Grade One completed the first grade unable to read as shown in quantitative test scores in Table 8. In contrast, qualitative data through interviews and focus group discussions with in-service teachers reported that Grade One learners learnt to read within three to twelve months of reading instruction. Teachers indicated that Grade One learners took three to twelve months to learn reading skills, while other teachers said three to six months. Test results and statistics showed that more than 60% of Grade One learners across all the assessed variables completed Grade One unable to read in all the ten schools. These findings also agree with the Early Grade Reading Assessment (EGRA) among Grade 2 learners in 2015, where they reported that 65% of Zambian schoolchildren scored zero in reading, indicating that they could not read any of the words given to them for assessment. The findings of this study were also supported by the World Bank (2018) development report, which found that 55% of Grade 2 children in Zambia could not read a single word of a text. These results call for serious attention to literacy instruction in early grade classes in Zambia. USAID/Zambia (2018) baseline survey also showed that over 30% of Grade 2 learners across the five regional official Zambian languages that were used for literacy instruction were unable to identify single letter sounds after researchers showed them 100 letters. The same study further indicated that over 50% of Grade 2 learners that were involved in the study "could not correctly identify any of the 100 syllables given to them to read" (p.x).

6.1.1.1 Alternative Explanation for Poor Performance of Grade One Learners in Test Scores
(a) Teachers as a Contributing Factor

During lesson observation with in-service teachers as reported and illustrated in the previous chapter section 5.5.2, most lessons observed did not teach all the six key competencies emphasised in the pre-scripted literacy lessons as shown in Figure 17. The Ministry of Education, Science, Vocational Training and Early Education (2014, pp. 6-7) provided a sample pre-scripted lesson that teachers were expected to use daily when teaching reading to Zambian children. The six competencies outlined were phonemic awareness, phonics, fluency, vocabulary, writing and comprehension.

Figure 17: Pre-Scripted Literacy Lesson of Zambia

Source: Ministry of Education, Science, Vocational Training and Early Education (2014)

The major contributing factor for most teachers' failure to implement the pre-scripted literacy lesson effectively as exemplified in the findings chapter Section 5.5.2 was lack of knowledge on what to do in class to execute each of the six components effectively. Several teachers omitted phonemic awareness component but covered phonics, vocabulary and writing. A few teachers covered comprehension once in seven lessons. Teachers that covered the six components did not cover the depth or did not know what to do on each of them but did what

they could to the best of their abilities. This lack of knowledge highly contributed to poor performance of learners in reading. The lack of adequate knowledge by teachers to teach literacy was also reported by Mwandya (2021); Pali (2020) Kombe (2017); Kafata (2016); Kamalata (2016); and Chunga (2013). This implies that teachers were not implementing the primary literacy framework well on grounds that they lacked adequate knowledge of what to do in class. The absence of adequate knowledge to teach among teachers in early grade classes was also noted in a survey about early grade reading by USAID/Zambia (2018). While inadequate teacher knowledge may be associated with multiple related factors such as college training, lack of continuous professional developments in schools on literacy and hasty implementation of the primary literacy framework. Teachers need to do more research on each of the key competencies that they teach in their classes so that learners are guided well. "The majority of the teachers lack access to regular in-service training and coaching visits" (USAID/Zambia, 2018, p. 43) and this highly contributes to low performance among early grade learners as noted in the present study.

(b) Limited Time for Literacy Instruction

Limited time for literacy instruction as reported in the findings chapter was part of the contributing factors and this was also noted by the researcher during lesson observations. Teachers in schools complained that the time allocated for literacy lessons in schools was too little for teachers to teach the five to six key competencies (Phonemic awareness, phonics [alphabetic principle], oral reading fluency, vocabulary, writing and comprehension) as outlined in the prescripted literacy lesson (MoESVTEE, 2014; See Figure 19). Limited reading instruction time has negative implication for curriculum implementation in schools (Mwanza, 2020). This partly contributed to the low reading achievements of learners on this study. While reading skills are a precursor to academic success for all learners across subject areas in schools (McCardle & Chhabra, 2004), limiting the teaching or contact time between learners and teachers may produce poor results. This was the case in the present study. Deficient performance in reading was partly attributed to limited time allocated to the teaching of reading in school.

(c) Chronic Lack of Teaching and Learning Materials

The findings chapter cited lack of teaching and learning materials as a factor that may have contributed to the inferior performance of learners in early grade classes. During

lessons observation in the ten classes, the researcher observed that all schools did not have sufficient teaching and learning materials for teachers and learners to the extent that at a certain school, there were only three copies of Grade One learners' textbooks against sixty-two (62) learners in class. Additionally, there was no teachers' handbook. The lack of teaching and learning materials in Zambian classes was in tandem with multiple previous studies (Mbewe, 2015; Mutale, 2016; Mwanza, 2019). The inadequate and lack of teaching and learning materials has been one of the contributors to low literacy levels and deficient performance of Grade One learners as observed in this study.

(d) Learner and Teacher Absenteeism

Learners and teachers' absence from classes was cited to be among the reasons for low reading achievement levels among Grade One learners in Zambia. Pupil absenteeism was noted to be more pronounced, especially in the rural schools but teachers' absence from work was also reported in a few schools. This may have contributed to the low performance of learners because the lessons missed could have counted to learners' knowledge. In the pre-test, 476 learners participated but, in the post-test, only 375 participated. Meaning that about 100 learners that took the pre-test at the beginning of the study did not take the post-test. Some teachers reported high rates of absenteeism, urbanisation and domestic chores as contributing factors for learners' absenteeism. The data on pupil absenteeism are in tandem with Kabanga and Mulauzi (2020, p.53) who "identified ways in which absenteeism affected the teaching and learning processes including inferior performance, fostering indiscipline, insufficient comprehension of concepts and the difficulties experienced by teachers. Interventions to curb pupil absenteeism were ascertained by calling for parents, teachers and all stakeholders in education to make firm decisions to stop absenteeism among the learners by avoiding early marriages, fostering collaboration and being flexible in time management." Absenteeism of learners is one of the major contributors to low reading levels among early grade learners as noted in this study.

6.1.2 Reading Achievements of Speakers and Non-Speakers of the language of Instruction in Multilingual Classes

Research objective one and part (b) of the research question sought to compare the performance of speakers against non-speakers of the language of instruction in multilingual classes in both

pre-test and post-test. The purpose was to establish whether language background of learners influenced learning to read or decode using the lens of pre-test and post-test (See Appendix 1). The learners tested in this category were all in multilingual classes and they were exposed to the same teaching and learning materials and teachers. The numbers of speakers of language of instruction were (n=158, 77%) and non-speakers of the language of instruction was (n=46, 23%). The total number of learners in multilingual classes was (n=204).

Findings on Table 39 as presented in the previous chapter showed that the average mean ranks in performance between speakers and non-speakers of the language of instruction in multilingual classes across all the seven assessment items differed by 1 to 3 points in favour of either non-speakers or speakers of the language of instruction. For example, on the reading of vowels assessment item, the mean rank for non-speakers of the language of instruction in pre-test was 103.4 against 102.3 for speakers. In the post-test, non-speakers had 101.3 against 102.9 for speakers. On read complex words item, the mean ranks in the pre-test were 105.4 for non-speakers and 101.7 for speakers of LoI. For post-test, the mean ranks were 104.2 and 102 for non-speakers and speakers, respectively. These were the common mean ranks between the two groups in the seven assessed items. The results for tables 12, 16, 20, 24, 28, 32 and 36, as stated in the previous chapter, showed that although non-speakers had outperformed speakers of the language of instruction in most assessed items, there were no statistically significant differences in performance between speakers and non-speakers of the language of instruction across all the seven variables assessed as shown on inferential statistics tables 14, 18, 22, 26, 30, 34 and 37.

The findings imply that the language background of learners is not a barrier to the learning of vowels, consonants and blending of such sounds into one syllable words or complex words in Nyanja and alphabetic languages like those found in Zambia. This also means that learners in multilingual classes (both speakers and non-speakers of the language of instruction) when they are provided with the same opportunities and equal learning chances can acquire the same basic reading skills such as vowel sounds, consonant sounds and blended sounds into words regardless of their language background.

These findings contradict the views of teachers during interviews, which indicated that speakers of the language of instruction performed better as reported in the previous chapter. It is not clear

why teachers held such a view that contradicts the findings of this study and other studies such as USAID/Zambia (2018); Chipili (2016). The findings on this objective were supported by the three-language orientation theory by Ruiz (1984) which purported that if language is viewed as a resource, all learners would be treated equally and they would perform in the same ways as confirmed by the findings on this objective. In this case, the language of instruction is not viewed as a problem by learners (McNelly, 2019). The national policy implication for the results is that learners' ability to read or know vowels or the language of instruction does not negatively affect consonant sounds. While understanding of what words mean in a language may have a bearing on the nature of the language of instruction, the language background of learners in class does not influence decoding. Results as noted in tables 22 and 24 indicated that the performance of children that did not speak Nyanja in Grade One was the same as those who spoke Nyanja in both pre-test and post-test with minor variations in descriptive statistics. Meaning that the language background of a pupil is not a factor in learning or teaching vowels and consonant sounds in multilingual classes. These results disagree with the findings of Muzata (2015) and Mwanza-Kabaghe (2015) who contended that the language of instruction was a hindrance in teaching or learning reading skills among Grade One learners. These findings are in concession with Nkolola-Wakumelo and Simwinga (2008) who noticed that children in schools did not have learning difficulties in the language of instruction but, the problem was with their parents and guardians who raised concerns against the use of Zambian languages as media of instruction. Parents preferred their children to learn in English, arguing that English had more job opportunities than Zambian languages. This view partly reflects the three-language orientation theory by Ruiz (1984) where some members of the society view language as a problem, as a right or as a resource. The findings of this study did not view the language of instruction as a problem that would hinder the learning of basic reading skills. If it was a problem, the performance of speakers and non-speakers of the language of instruction would have been different in the tests as shown in tables 12, 16, 20, 24 and 28.

6.1.2.1 Alternative Explanation for the Results

(a) Non-speakers of the language of instruction worked harder than speakers

The slight differences in performance in favour of non-speakers of language of instruction as shown in tables 12, 16, 20 and 24, may have been caused by hard working but non-speakers of

the language of instruction. Due to language barrier, non-speakers of the language of instruction may have worked twice as hard as their counterparts that knew the language of instruction that might have taken advantage of their language background. Furthermore, non-speakers of the language of instruction may have paid more attention in class when learning to read as they had two barriers to learning; they were burdened by the language of instruction and the content. Tembo (1975) reported that children that learn in a non-familiar language are disadvantaged with the language and they also must equally think about the content to be learnt. This burden may compel them to work twice as harder as their counterparts that are familiar with the medium of instruction.

(b) Zambian Languages may have shared similarities as part of the Bantu language family
The performance of learners from different language backgrounds may have been the same because the so-called different language backgrounds may not be so different at all as far as the learning of vowels, consonants and words is concerned in alphabetic languages. The fact that all learners already spoke one or more Bantu languages which have shared similarities with Nyanja language could have contributed to the sameness of results across language backgrounds of learners. This is because skills learnt in one Bantu language can easily be transferred to another language. In the case of Zambia, it is expected that reading skills learnt in Zambian languages are to be transferred into English under a transitional bilingual language policy. Mwansa (2017, p. 122) described the expectation of Zambia's bilingual transitional language model when he reported that "… children are expected to transfer reading skills to English and a focus on this unit can help them to decode English words later." Furthermore, Kim and Piper (2018) noted that language skills can be transferred by learners from one language to another, which can help them in the learning process. For children, there is an interdependence between first language (L1) and second language (L2) that children learn afterwards.

> The linguistic interdependence hypothesis by Cummins states that children's second language (L2) proficiency is a function of their first language (L1) competence. Previous studies have examined this hypothesis with a focus on a unidirectional relation from L1 to L2 and others have addressed the bidirectional influences of literacy skills in multilingual contexts and whether the nature of relations varied as a function of literacy instruction environment (p. 839).

Results in tables 14, 18, 22, 26, 30, 34 and 37 confirmed that there was no statistically significant difference in the performance of speakers and non-speakers of language of reading instruction. Meaning that as far as the teaching of technical reading skills was concerned, the findings of the study revealed that the performance of speakers to non-speakers of the language of instruction was the same.

6.1.3 **Comparative Reading Achievements of Grade One Learners in Monolingual and Multilingual Classes in Pre-test and Post-Test**

The data presented in the previous chapter as shown in Table 43 showed that learners in multilingual classes performed slightly better in all the variables assessed. Multilingual classes had a higher mean rank in both pre-test and post-test. For example, on reading vowels, the mean rank for monolinguals was 176.7 and 186.9 in pre-test and post-test, while multilinguals had 197.5 and 189 in pre-test and post-test. Pre-test results for read consonants showed 174.2 for monolinguals against 199.6 for multilinguals. In the post-test, monolinguals had a mean rank of 177.4 against 197 for multilinguals. Such results were obtained on all assessed items as shown in Table 43 of the previous chapter. Despite the slight advantage of multilinguals in performance, inferential statistics using Mcnemar test showed that there were no statistically significant differences in performance between monolinguals and multilinguals across all the items assessed.

These findings imply that the performance of multilingual classes was slightly better in all the variables assessed in both the pre-test and the post-test. Learners in multilingual classes outperformed their counterparts in monolingual classes despite the language advantage of monolinguals. Under normal circumstances, monolinguals whose home language was the same as language of play and language of instruction in schools were expected to outperform multilingual classes that had learners from culturally and linguistically diverse backgrounds. The fact that multilingual classes outperformed monolingual classes may imply that being familiar with the language of instruction does not always lead to better results in the acquisition of basic reading or decoding skills. Although descriptive statistics showed that multilingual learners performed slightly better in all the variables assessed, inferential statistics indicated that there was no statistically significant difference in performance between multilingual and monolingual classes especially across all the variables assessed.

The findings concur with existing literature that multilingual or bilingual children perform better than monolingual learners in diverse ways as they have extra metacognitive abilities that allow them to cross check data from one language to another (Mcnelly, 2019). Furthermore, Marian and Shook (2012) reported that "one of the key advantages of being bilingual or multilingual is literacy acquisition and the reason ties back to metalinguistics. Bilingual learners develop metalinguistic skills at an earlier age than most other children." This is contrary to a common belief among some teachers, for example, that multilingual learners have a harder time learning to read than monolingual learners. Research, including the current study, points to the exact opposite because multilingual learners pick up certain pre-reading skills faster than their monolingual counterparts do. Furthermore, multilingualism is associated with many other cognitive benefits such as stronger multitasking skills, creativity and active working memory (Baker, 2011; Neuner, 2004). Furthermore, Blom, Küntay, Messer, Verhagen and Leseman (2014, p.106) noted that multilinguals have a wider vocabulary range that plays a critical role in literacy development. "Bilingual learners are usually exposed to more words in both languages than children who only speak their native language. For this reason, they are more likely to learn the equivalent of any word they pick up in the opposite language." This justifies the higher performance of multilingual classes in comparison to monolingual counterparts.

The idea that multilingual classes performed better on all variables in comparison to monolingual classes is supported by the three-language orientation theory. Ruiz (1984, p. 16) contended that the three-language orientation theory is many times viewed and interpreted differently. Those that support language as resources also support multilingualism and those that support language as a problem, many times, problematise multilingualism. The Zambian language for literacy instruction policy views language as a problem and, therefore, supports monolingualism in education. García (2009, p. 120) distinguishes between two competing theoretical frameworks regarding multilingualism in education. "Educational programmes founded on monoglossic language ideologies and educational programmes founded on heteroglossic language ideologies." Zambia is a monoglossic example, which supports a single language use in education despite the existence of multiple languages in some towns. As indicated in this study, multilingual speakers performed better on all the variables and this is an indication that as a nation, there is need to diversify the instructional strategies and the policy

on language of literacy instruction. As stated in the three-language orientation theory, Zambia views multilingualism as a problem through its policy that favours monolingual language ideology, yet the findings of this study prove the contrary. The study showed that multilingualism should not be viewed as a problem but as a resource that can help children learn. Therefore, children need an opportunity to learn in the languages they are familiar with as part of their right (Ruiz, 1984).

6.1.3.1 Alternative Explanation for the Results

(a) Urban Schools versus Rural Schools

There is a high possibility that the slight difference in performance in favour of multilingual classes is a matter of school location and the advantages and disadvantages associated with it. Urban schools have quick access to alternative teaching and learning materials than rural schools. Furthermore, well trained teachers are also fond of urban areas and all these are factors that could have contributed to better performance of multilingual learners in the pre-test and post-test. Litheko (2012) noted that schools located in urban areas have multiple advantages compared to those in the rural and, therefore, they should record and exhibit higher performance to reflect this advantage.

(b) Exposure to Pre-schools

It is possible that multilingual classes performed slightly better in the pre-test and post-test than learners in the monolingual classes due to exposure to preschool education. Lusaka has multiple pre-schools than Katete and learners in cosmopolitan environments are exposed to a higher rate of phonics and phonemic awareness in the multilingual communities located in urban settings than monolinguals. It is possible that most urban children are exposed to pre-schools than those in the rural due to the availability of resources and places where the pre-school type of education can be accessed (Mwanza-Kabaghe, 2015).

(c) High Cognitive and Metalinguistic skills

Multilingual learners are alleged to have higher cognitive and metalinguistic abilities than monolinguals and this may have contributed to the higher performance recorded in the tests. Haukås (2015) noted that multilinguals can actively engage in metalinguistic and metacognitive abilities by making comparison of structural frames such as cognate words and phrases from

previously learnt languages to the target language of instruction. This helps multilinguals and bilinguals to decipher and adapt in various context and this adaptation helps them yield positive educational outcomes (Baker & Wright, 2017; Jessner, 2008; De Angelis, 2007; Cenoz, 2003).

6.2 Instructional Strategies Teachers in Multilingual Classes were Using to Help Non-Speakers of Language of Instruction to Learn

The second research objective sought to establish ways which teachers in multilingual classes were using to help learners whose language of literacy instruction was not their familiar or first language. The data on this question was collected through face-to-face interviews, focus group discussion and lesson observation. The study findings were presented in the previous chapter and cited eleven strategies and these were; *translanguaging vis-à-vis code-switching and translation, remedial work, use of parents, guardians and siblings as a resource, compelling new students to learn the language of instruction first, teaching with real and diverse materials, use of improvised bilingual materials, teaching with diverse instructional methods, use of other learners in class as resources, use of other teachers that speak learners language or using multilingual teachers and use of talking walls.*

These results imply that most teachers in multilingual classes used multiple instructional strategies to help non-speakers of language of instruction to learn and some of these were beyond the scope of monolingual classrooms. Pedagogical strategies intended for monolingual classes may not address the educational needs and aspirations of culturally and linguistically diverse learners, as multilingual and bilingual learners differ from monolinguals. Instructional strategies such as translanguaging or code-switching, use of bilingual materials, bilingual and multilingual teachers and among unique instructional strategies for culturally and linguistically diverse class. Studies have shown that promoting diverse learners require the use of multiple pedagogical learning strategies. Multilingual pedagogies and practices include tapping into learners' prior knowledge and their linguistic repertoire that subsequently helps them yield positive reading outcomes (García & Sylvan, 2011; Baker, 2011).

Translanguaging as extrapolated by Garcıa (2009a); Lewis, Jones and Baker (2012); Mazak (2017); Sayer, 2013 "*is a range of practices that include code-switching"*. In this study, translanguaging including code-switching and translation were reported in the previous chapter to be used in multilingual classes to help children learn. Arguments that translanguaging is a

strategy used in multilingual classes are investigated and reported by Garcia and Kleyn (2018) and Garcia (2014). These scholars reported that translanguaging classes in multilingual settings performed better than monolingual classes as they outperformed their counterparts in all assessments in the United States America. In other words, the studies cited above acknowledges that translanguaging inclusiveness of code-switching and translation is a strategy that multilingual teachers are using in various parts of the world, Zambia included, as observed in this study, to help non-speakers of language of literacy instruction learn. Poza (2017) reported that classes, which practice translanguaging, perform better than monolingual classes several times. Furthermore, Shifidi (2014) reported that translanguaging practices brought about improved academic performance in different subject areas. Pacheco (2016) further contended that "translanguaging leads to improved learner achievements in multilingual classes where the language of instruction is not familiar to that of learners". A study by Wei (2011) also confirmed that "translanguaging supports multi-literacy development and reinforces learners' cultural identity through first language literacy development". In principle, translanguaging as a pedagogic practice in multilingual classes is producing exceptionally reliable results proved in literature and this study as well. This segment is further supported by the theory of translanguaging used in this study, which saw the existences of translanguaging practices in several multilingual classes of Lusaka. This has implication for policy in the case of Zambia. Teachers may face challenges in executing translanguaging practices in Zambia due to the absence of sufficient policies. García, Johnson and Seltzer (2017) also reported that lack of explicit policy makes it difficult for teacher educators to train teachers in appropriate methods to teach in multilingual contexts.

Remedial work was cited several times as one of the strategies multilingual teachers were using to help non-speakers of the language of instruction to learn. Several teachers in multilingual classes in Zambia used this strategy to help various categories of learners learn. A study by Musongole (2019) supports the finding that multilingual and monolingual classes in Zambia use remedial work to help students that failed to grasp a concept or a teaching point in class. This was supported by Scott-Clayton and Rodriguez (2015, p.5) who observed that "remedial education, or "developmental" education as it is called in the field, may be the most widespread and costly intervention aimed at addressing a perceived lack of preparation among learners". Arguments also proliferate that remedial is good, but its effect is not highly felt. Furthermore,

Voge (2008, p.88) contended that "remedial education implies that students' educational deficiencies are being remedied, that students are being re-taught what they should have learned previously in order to be prepared for an institution into which they are matriculating". Grade One teachers in most multilingual classes gave remedial work to different students. However, the non-speakers of the language of instruction were more. Remedial work was given to learners that had challenges in understanding a teaching point or those that were quick at completing normal class tasks but executed them wrongly. Musongole (2019, p.1) agreed with essence for remedial work when he asserted that "remedial work is a form of cooperative and supportive learning between teachers and learners". Shield and Morgan (1998) also reported that "remedial work is intended to help learners who fall behind grasping lessons during normal learning time". Remedial work is a one-on-one interaction between the teacher and a pupil(s) that showed signs that they did not understand a teaching point for a particular lesson or complete tasks effectively early or on time. Remedial work or catch-up activities according to teachers, were more prominent among learners who did not understand Nyanja, the official language of literacy instruction in the study catchment area.

Multilingual teachers of Lusaka used parents and guardians as resources for teaching children in multilingual settings. Teachers used parents and guardians as home-school relationship in several ways to help non-speakers of the language of instruction including struggling learners to learn. First, they were invited to learn with their children occasionally in class in a controlled manner. Second, some parents were asked to co-teach with a class teacher on certain days where they could prepare a lesson together with a class teacher and teach it. Third, in cases where a child had no knowledge of the language of instruction, teachers gave some lesson materials to parents or guardians for them to consider replicating the lesson at home to such learners so that they can learn in a language familiar to them. Forth, multilingual teachers also gave out homework to learners for parents to help their children learn as a way of strengthening home-school partnership. Teachers also used parents' day, open days, literacy clubs and parent teacher association meetings. These findings were supported by a study by Danbolt, Banda, Klein and Tambulukani (2017) who reported that home–school mutual and collaborative partnership between parents/caregivers, teachers and school management help a child learn and move positively in education. "Parental involvement in children's education has been proved to have positive effects on learning achievement and there is much evidence that good home–school

relations are conducive for learner well-being" (p. 207). Despite the importance of home school partnership, a study that took place in the Southern Province of Zambia by Clemense (2011) reported that most parents were not keen in helping their children with schoolwork. In a qualitative study by Kangómbe (2013), which "sought to investigate the strategies or techniques that teachers use to promote partnership with parents in home-school partnerships meant for literacy development in selected basic schools of Lusaka District", Kang'ombe reported multiple strategies used by teachers to strengthen home-school partnership in education of a child. These included the following:

> … teachers used various techniques to partner up with the parents. These were: homework policy, open days, Parents' Day, Parent Teacher Association meetings, Literacy Clubs, extra lessons, class visits and remedial work. The study also discovered the importance of home-school partnerships meant for literacy development: teachers were able to know the health as well as family background of learners and how these affected literacy development, continuation of learning from home to school and vice versa and home-school relations were strengthened. Constraints of home-school partnerships were also revealed by this study (Kang'ombe, 2013, p. v).

The findings by Kang'ombe agreed with this study. Teachers used home school partnership as one of the strategies that helped multilingual learners learn by engaging parents and guardians. The use of parents as resources for teaching monolingual and multilingual classes received mixed feelings among teachers. Some teachers refused citing lack of means to help children while others felt were tired from work and others felt teachers were paid enough money to teach the children on their own. Swanson (2019) in a publication titled, 'I've Opted Out of Homework for My Young Children' noted that each year, there are multiple complaints from friends and co-workers right around the second week of school:

> Little Johnny has so much homework. In first grade! He is exhausted already. I spend all my free time after work trying to help my third grader figure out his math homework. It leaves us both in tears. There is just too much. Why is there so much? When I was a kid, we did not have this many work sheets" (p.1).

Swanson (2019) noted that some parents opted out of helping their children due to huge workload and family policy of not helping with homework for children in elementary or early grade classes. In her narrative, she quoted a response of a parent to a teacher in the following letter:

> Dear [teacher], my little guy sure adores you! I want to let you know that our family does not support homework for children in elementary school. Research indicates that it does not improve school performance and I would rather my children have time for free play after a long day at school. As such, we are opting him out of homework. Please do not bother to send the work sheets home.

Some parents opted out of school homework for family reasons, pressure of work and that some schools gave too much work to their learners.

Some multilingual teachers reported that one way of helping non-speakers of the language of instruction to learn is by compelling new students to learn the language of literacy instruction first before they are allowed in class. This was not a popular view among teachers as most of them believed in using alternative strategies available to help such children learn. The argument of compelling new students that were non-speakers of the language of instruction to learn the official language of instruction supported the monoglossic language ideology as explained by Garcia (2009). This practice was also reported in a study by Iversen and Mkandawire (2020) where they reported that the Norwegian pre-service teachers in schools recommended that new students that were going to Norway were expected to learn the language of instruction first before they could be allowed in the education system. Their classroom practice was different from that of the Zambian in-service teachers where most teachers allowed multiple languages to be used in class and criticised the current policy of using one regional language in classes.

> Zambian in-service teachers repeatedly criticised the current language policies in Zambia. About the authorities' strict regulation of literacy instruction, several teachers mentioned this as an issue in relation to support of multilingual students … the Norwegian pre-service teachers tended to express support of current policies and frequently referenced official policies in support of their own practices (pp. 42-43).

Multilingual teachers as reported in the previous chapter also used real and diverse materials. In some cases, they used improvised bilingual materials in two languages. The use of realia and diverse teaching and learning materials to help learners from different language backgrounds to learn is recommended in literature. Teaching and learning materials that were written in two languages Nyanja and English, for example, as reported in Figure 10 in the previous chapter are recommended resources in multilingual classes. García, Sylvan and Witt (2011) observed that multilingual classes need a variety of bilingual teaching and learning materials present in class in different languages to support learners from diverse language backgrounds. In addition, "In a multilingual-plurilingual model, an observer will hear several languages at once and may see materials in many languages" (p. 393). The use of diverse teaching and learning materials in multilingual classes helps learners understand the teaching points from diverse perspectives. Semingson, Pole and Tommerdahl (2015) contended that bilingual books are important as they help in developing local languages and help learners in developing literacy use of the language prominent in class. Bilingual and multilingual materials must address various genres. "Bilingual books, also known as dual language books, are available across genres and age groups, including classics and picture books in fiction and nonfiction" (p. 133). Bilingual materials are encouraged worldwide to be used in multilingual classes.

The use of other learners (peer tutoring) and teachers as resources for teaching multilingual classes were reported in this study. Other learners in class and teachers within the school that were familiar with languages spoken by some learners that were non-speakers of the language of instruction in multilingual classes were used as resources in the teaching and learning of non-speakers of the language of instruction. This finding agreed with Calhoon et al., (2007); Spencer, (2006) who noted that peer mediated teaching helps learners understand certain concepts and teaching points from a diverse point of view. Peer-tutoring helps in comprehension and understanding in different contexts. In their comparison of three case studies, Conteh, Copland and Creese (2019, p. 167) reported that as a multilingual teacher, "Meena recognises the benefits of her own multilingualism, as well as that of the children, for their learning because of her individual experiences as a pupil in a system she now teaches..." This study further indicated that multilingual teachers were used as resources in schools to help non-speakers of the language of instruction learn. In her reflective study titled "*Teaching of Literacy in First Grades in*

Zambia and Norway" Chibamba (2020) reported that some school authorities in Norway engaged multilingual teachers to supplement the teaching of bilingual children.

> The school manager further revealed that at her primary school, they have a strategy which proved to be working out very well in helping children from different language background. The school engaged multilingual teachers who were a link between the two languages (Norsk and the child's mother tongue). These teachers were always there for the children to explain certain concepts from their mother tongue languages into Norsk and the children were doing very well although there were some challenges. She explained that the number of teachers engaged to assist learners that are not Norwegians is determined by the number of learners in school with different mother tongue languages (p.133).

In other words, Norway has a team of multilingual teachers that go around schools to offer "bilingual subject teaching. The subjects are taught in Norwegian and in the pupils' mother tongue by bilingual teachers. The purpose is to make it easier for the pupil to understand the subject teaching and to improve his/her Norwegian learning." Furthermore, some schools in Zambia use learners as resources for the teaching of other children that are non-speakers of the language of instruction. This was done in such a way that after the teacher explains a concept in class, they asked individual bilingual or multilingual learners to be paired with students that had difficulties in understanding the language of instruction with a view of allowing such learners to use other languages to explain to their peers on the teaching point. They teacher did this after ensuring that the bilingual learners understood the teaching point to the extent that they can share the knowledge with other learners. Some teachers in Zambia also paused in the middle of the lesson to consult some multilingual teachers who were conversant with certain languages on what a child who spoke or asked a question in class meant. While this move may have disturbed the flow of the class and other learners, it speaks to the fact that the use of other teachers as resources in schools was an available option to help non-speakers of the language of instruction learn. This explains why some teachers recommended that multilingual classes should be taught by multilingual teachers as reported by Conteh, Copland and Creese (2019). This view is supported by the multilingual pedagogical approach as discussed by De Angelis (2011) and Otwinowska (2014). The multilingual pedagogical approach is a set of principles and guidelines

that are used in different contexts to address various issues in multilingual classes including the features that teachers in multilingual classes should be multilingual themselves and serve as models for their learners. They should also have a highly developed cross-linguistic and metalinguistic awareness.

The use of visual aids on talking walls was also reported in the previous chapter as aiding in the teaching of multilingual classes to help non-speakers of the language of instruction learn. Chileshe et al., (2018) reported that talking walls were used in early grade classes to aid learners' understanding of teaching points by sticking various teaching and learning materials on classroom walls. In other words, visual aids stuck on classroom walls based on a teaching point are important as they helped learners learn quickly by seeing what the teachers were referring to in their lessons. Thompson (2004) noted that common talking walls are in form of word walls. "A word wall is a collection of words which are displayed in large visible letters on a wall, bulletin board, or other display surface in a classroom. The word wall is designed to be an interactive tool for students and contains an array of words that can be used during writing and reading."

6.3 In-Service Teachers' Beliefs about Teaching Multilingual Classes and Their Experiences on How Long Learners Take to Learn Reading Skills

The third research objective sought to establish in-service teachers' views or beliefs and experiences about teaching in multilingual classes and project how long learners took to learn reading skills in schools based on their experiences. Data on this question was collected through face-to-face interviews and focus group discussions. The results showed that multilingual teachers in Lusaka had different views and beliefs about teaching in multilingual classes based on their experiences. Teachers' views from the analysis have been presented in themes that follow. Similarly, teachers had divergent views on how long learners take to learn reading skills.

6.3.1 In-Service Teachers' Beliefs about Teaching Multilingual Classes

Teachers had different beliefs as presented in the previous chapter. Some teachers believed that multilingual classes were difficulty to teach as they presented multiple challenges. While other in-service teachers indicated that multilingual classes required a teacher to spend a lot of time on preparing lessons with appropriate teaching and learning materials, and the delivery of lessons equally require thoroughness, patience and back and forth guidance to the learners.

Some teachers reported that multilingual classes were interesting and fascinating as they provided an opportunity for teachers to think creatively. These beliefs reflected the three-language orientation theory (language as a problem, a right and a resource) by Ruiz (1984) in the sense that teachers that saw multilingual classes as a problem, in most cases they advocated for the monoglossic language ideology as discussed by Garcia (2009). In this case, such teachers preferred all learners to learn in one language and without interference from any other language. Some teachers under this ideology pinpointed that it was not a good idea to be changing from one language to another in class because the policy says they should teach using a regional language.

Teachers that encouraged multilingualism believed in heteroglossic language ideology (p. 120). In other words, teachers that encouraged and benefited from multilingualism regarded language as a right and a resource that can be used in education simultaneously in form of translanguaging as extrapolated in the three-language orientation theory (Ruiz, 1984) and (Hult & Hornberger, 2016). The sentiments by teachers that supported the use of multiple languages in class were also supported by the translanguaging theory (Nkhata et al., 2019, p. 102) who noted that "translanguaging is a theory, which supports bilingual or multilingual speakers to use their languages simultaneously as part of a communication process." Multilingual teachers realised that switching from one language to another in class, helped learners especially when different activities such as songs, word cards, play, games, picture reading and stories were well prepared by the teacher. Teachers that were able to switch from one language to another among the available languages in classes met the requirements of the multilingual pedagogical approach. Code-switching in multilingual classes helped in facilitating the teaching and learning processes especially when the teacher was gifted with multiple languages. Teachers' use of code-switching, interpreting and others to help multilinguals learn is the realm of the translanguaging theory (Garcia, 2009). Furthermore, using different languages to achieve a goal is what Simwinga (2014) described as language in complementation, where the weaknesses or limitation of one language is supplemented by another language.

Using the theory or principle of language in complementation (Simwinga, 2014), some teachers as reported in the previous chapter proposed that Zambian languages and English be used simultaneously from grades 1 to 7 as media of instruction. In this case, the weaknesses noted in

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using either language can be supplemented by another language. While the principle of language in complementation encourages code-switching as a realisation of translanguaging (Lewis, Jones & Baker, 2012; Mazak, 2017), for a teacher to address the principle of language in complementation where for instance both English and Zambian languages can be used simultaneously in education, the teachers need to be multilingual themselves or create an environment where multilingualism can be used and supported. In other words, for teachers to use both English and Zambian languages simultaneously in education as reported in the previous chapter, they need to address all or some of the principles the multilingual pedagogical approach as discussed by Otwinowska (2014). In other words, the multilingual pedagogical approach demands that teachers of language should ideally be able to meet several, if not all, of the following requirements:

> Teachers should be multilingual themselves and serve as models for their learners. They should also have a highly developed cross-linguistic and metalinguistic awareness. The third reason is that teachers should be familiar with research on multilingualism. They should know how to foster learners' multilingualism. The other issue is that teachers should be sensitive to learners' individual cognitive and affective differences and finally, they should be willing to collaborate with other (language) teachers to enhance learners' multilingualism (Haukås, 2015, p. 3).

The idea of the multilingual pedagogical approach is for teachers to create an environment in their classes that would support multilingualism to flourish so that learners could feel represented in class.

Some teachers as reported in the previous chapter equally indicated that there was need for multilingual teachers to create a favourable environment where all available languages in class can be represented without creating language hegemony where some languages are treated more important than others. Although the national language in education policy does not favour minority languages (Tambulukani & Bus, 2011), teachers strive to have all languages respected in class with creating language hegemonies. Conteh and Meier (2014, p. 4) observed that "which languages are taught and through which language content is taught … in schools are based on socio-political discourses and ideology". Furthermore, Iversen and Mkandawire (2020, p. 37)

contended that "language ideologies define which languages are prestigious and valuable. Often, the valuable languages belong to the dominant groups of society, while the languages of minorities and suppressed groups are disvalued." This hegemony is "linguistic hegemony and the English language. Linguistic hegemony has been identified and defined as what is achieved when dominant groups create a consensus by convincing others to accept their language norms and usage as standard or paradigmatic" (Flores & García, 2014). In classes, it is recommended that teachers handling multilingual classes should create an environment where all languages are present for learners to use where necessary.

Some teachers also believed that 'multilingual classes should not be overcrowded like a community.' Teachers raised concerns as reported in the previous chapter that it was difficult to teach multilingual classes on their own and it was more challenging when classes were overcrowded as if one was teaching the whole community. They preferred smaller multilingual classes for learners to be given adequate attention. While this preference may be a good practice for teachers to have more time with individual learners, the reality on the ground is contrary. Most classes in Zambia, especially in government schools, are overcrowded (Chipili, 2016; Mwanza-kabaghe, 2015). Isingoma (2014) reported that overcrowded classrooms can impede effective teaching and learning in classes. Instead of focusing on the content to be delivered for learners to learn, the teacher spends more time on classroom management and by the time the class is quiet, much time is lost. Although some teachers have better strategies for managing huge classes, they are limited in giving certain class activities, which may be beneficial to the class for fear of confusion and noise making in class. Studies have shown that teaching overcrowded classes in early grades does not produce effective reading outcomes among learners (Sampa, 2015; Tambulukani, 2001).

As reported in the previous chapter, some teachers believed that teachers needed to use various teaching strategies and literacy activities when handling multilingual classes. Teachers teaching multilingual classes needs to be flexible, vary teaching strategies, and use diverse literacy activities to accommodate the needs of different students or learners in classes. Early grade literacy activities may include songs, rhymes, dances, group discussions, a simple field trip, demonstrations and explanations which should be in line with what teachers may be teaching about on a particular day or lesson. Kaunda (2019) noted that there are multiple literacy activities

that may help children develop literacy skills and these include games, scribbling, singing and simulations via child play and all these contribute to literacy development. In a study, Serpell (2020) reported that unsupervised multi-stage games and rhyming activities could contribute to literacy development, which many researchers in Zambia ignore.

The emphasis in this segment is that multilingual teachers that are teaching multilingual classes need to use various strategies and literacy activities to facilitate the teaching and learning of reading and literacy in general.

6.3.2   In-Service Teachers' Views about How Long Learners Take to Learn Technical Reading Skills of Letters and Words

This was part two of the third research objective, which sought in-service teachers' experiences and views on how long learners took to begin reading from the time they start Grade One. Teachers here had different views as reported in the previous chapter. In summary, teachers stated that Grade One learners learnt how to read by the end of Grade One year. This finding contradicted the data obtained from tests, which indicated that over 70% of learners completed Grade One unable to read. For each of the variables assessed, most learners performed below teachers' expectations. The findings were also in contradiction with USAID/Zambia (2018) survey, which indicated that over 35% of Grade 2 learners could not identify letter sounds. If Grade 2 learners could not read letter sounds, it is worse for first graders. Chipili (2016) also indicated that most learners completed Grade 2 unable to read and write and all these studies contradicted the views of teachers on how long learners took to begin reading. This is an indication that what teachers report about their classes is not always true.

Teachers that took part in a focus group discussion as presented in the previous chapter indicated that very few learners completed Grade One unable to read letters or words in Nyanja. However, most learners begin reading by end of Grade One. These views were consistent in both one-on-one interviews with teachers as well as the group discussions we had. Only four teachers noted that some learners go beyond Grade One failing to read and write. The test results contradicted the teachers' views and claims about the performance of their classes. Learners in Grade One classes in Zambia are not learning much, at all, as far as reading tests in this study has reported.

6.4   Instructional Methods Used in Multilingual and Monolingual Classes

The fourth research objective sought to establish the instructional or teaching methods that teachers in multilingual and monolingual classes were using for teaching Grade One classes. In the previous chapter, findings showed that during lesson observation, multilingual and monolingual classes were using the same methods to teach reading and writing except for a few cases where strategies in multilingual classes were varied due to the presence of pre-scripted literacy lesson. Despite having a pre-scripted literacy lesson for uniformity and consistency (MoESVTEE, 2014), some teachers used various instructional strategies to teach reading within and outside the prescripted literacy lesson. These strategies as reported in the previous chapter were as follows:

The phonics approach where synthetic phonics and a little bit of analytic phonics and whole words approach were observed as described by Rodger (2001) and Chall (1989). Synthetic phonics is also known as the alphabetic principle. Blomert and Froyen (2010) reported that "Alphabetical decoding is a key skill for developing reading fluency in early elementary. This skill refers to the knowledge and application of letter-sound relationships, which helps students, learn to recognise and sound out different words. Without the ability to translate letters into sounds, students cannot develop more advanced skills later." Some teachers in Zambian primary schools used the innovative approach to teaching reading (synthetic phonics) while others used analytic phonics and whole language approaches that were common in the New Breakthrough to Literacy (NBTL). The findings on this objective agreed with Kombe (2017, pp. 49-50) who reported that the primary literacy framework:

> …used the phonic approach to teaching literacy that is, learners are taught how to read using letter sounds, which are then blended to form syllables, from syllables learners are encouraged to make words then sentences while the old methods used the whole language approach to teaching literacy. The teacher started by introducing a sentence to the learners, which was, then broken into words, from words to syllables then finally, these syllables were segmented into sounds.

Synthetic phonics where learners learnt sounds first then proceeded to blending them into syllables and words and sentences was the recommended teaching strategy in the Primary

Literacy Framework (2013). According to Chileshe et al., (2018), this approach was contrasted to the analytic phonics, which was pronounced the NBTL of the primary reading programme. Furthermore, a few classes as reported in the previous chapter of this study followed the routine procedure of the NBTL. Therefore, some teachers during the interview indicated that they were using the NBTL method to teach literacy. The reported data in this segment corresponds with what was observed during lesson observation. Different teachers were using different methods of teaching that included synthetic and whole language approach.

Every teacher reported the syllabic method as a product of the blended sounds. Rodgers (2001) described the syllabic method as part of the synthetic phonics, which stresses on teaching the blended sounds based on a sound of the day, and at that stage, they would also cover syllables and sounds that they taught in the past. Syllable charts were seen on classroom walls during literacy lesson observations, which was an indication that the syllable method is universally used and preferred for use by teachers in schools. The *multisensory approach* to teaching literacy was also noted in some lessons as reported in the previous chapter. In this approach, some teachers were seen applying teaching techniques that compelled learners to use multiple senses on one lesson such as hearing, touching, sight and kinesthetics or movement for learners to connect with what they were learning in class. Shams and Seitz (2008) contended that "to understand why multisensory learning is one of the most effective student engagement strategies, it is important to understand how our minds work. The human brain has evolved to learn and grow in a multisensory environment." Davis, Christodoulou, Seider and Gardner (2011) noted that if well employed, the multisensory approach to teaching might help children learn to read faster than expected. *Look and Say Method* was also observed in some lessons where teachers would show some words by writing them on the board and using them for a teaching point. Those words were then erased and the learners were asked to say or state the same erased words and more to help explain a teaching point.

The summary provided in this section highlights an observation that early grade teachers used a variety of teaching approaches and methods for reading instruction in Zambian primary schools. The details of these methods and how teachers applied them in their classes have been discussed below. It is important to note that the methods being discussed were noted in both monolingual and multilingual classes.

6.5   Summary

In this chapter, the discussion of findings of the study was made under specific research objectives and main themes that were presented in the previous chapter. Some emerging themes were also discussed for easy reference of main points. Some proposals on reading interventions in Nyanja were made. It was noted that for many learners, the current language policy in Zambia does not function as intended. Although the regional official languages are familiar and understandable by most learners in rural provinces, some learners in cosmopolitan settings do not understand the regional language of instruction in multilingual classes (Banda & Mwanza, 2017; Muzata, 2019). This means that the "familiar" language of instruction, referring to one of the seven regional official languages, is not necessarily familiar to diverse learners and this calls for a diversified pedagogical practice. The next chapter concludes the study by providing summaries on the findings with some recommendations for further action and future studies.

CHAPTER SEVEN: CONCLUSIONS AND RECOMMENDATIONS

7.0   Overview

In this chapter, conclusions have been made about the study with respect to each of the research objectives as presented in chapter one of this study. Recommendations have also been made by the researcher for further action and research by various stakeholders on reading instruction in Zambia. The specific research questions and objectives that were addressed in this study focused on the following:

(i) Reading achievements of Grade One learners in the pre-test and post-test;

(ii) Instructional strategies teachers in multilingual classes were using to help learners that were non-speakers of language of instruction in multilingual classes; and

(iii) In-service teachers' beliefs or language ideologies about teaching in multilingual classes;

(iv) Phonics instructional approaches used in monolingual and multilingual classes

7.1   Conclusions

The general conclusion provides specific key findings on each of the research questions or objectives as presented in the chapter on findings. The objectives have been presented in form of themes summarising the key findings.

7.1.1   Reading Achievements of Grade One Learners

Findings of this study established that Grade One learners in the ten schools studied were not learning much as most learners completed Grade One unable to read. For example, more than 60% of Grade One learners failed to identify letter sounds by the end of Grade One, which they are expected to know as planned in the National Literacy Framework (Ministry of Education, Science, Vocational Training and Early Education, 2013) and the subsequent primary literacy programme. More than 70% completed Grade One unable to read one syllable words to complex words in Nyanja.

It, therefore, can, be concluded that the performance of speakers and non-speakers of the language of instruction in multilingual classes was not different. Test statistics showed no statistically significant difference in performance between speakers and non-speakers of the language of instruction in both pre-test and post-test assessments. Although speakers of the

language of instruction seemed to have a language advantage during learning in class, the test results showed that non-speakers of the language of instruction performed slightly better in most assessed items. Since the test statistics showed no differences in performance, the study concludes that the factor of language was not a hindrance in learning to decode alphabetic symbols, which are a precursor to reading development in children in early grade classes.

It can be concluded that in descriptive statistics, multilingual classes performed slightly better in all the variables assessed in comparison to their counterparts in monolingual classes. The factors that led to this different in performance was not categorically stated in the study, but existing literature suggests the presence of more qualified teachers in towns, exposure to phonics or phonemic awareness through preschools by children in cosmopolitan towns, linguistic diversity and close supervision by senior education officials. The difference in performance between monolingual and multilingual classes on all the assessed items in both pre-test and post-test was not statistically significant. This means there was no major difference in performance between the two groups assessed.

7.1.2 Instructional Strategies Teachers in Multilingual Classes Used to Help Non-Speakers of the Language of Instruction Learn

The study reported different instructional strategies, which teachers in multilingual teachers were using to help non-speakers of the language of instruction to learn. Teachers in multilingual classes used translanguaging and code-switching, improvised bilingual materials, bilingual learners, multilingual teachers, parents and/or guardians as resources, realia, diverse instructional strategies, remedial work, visual aids and talking walls. While talking walls and remedial work were also seen in monolingual classes, they were more stressed in multilingual classes.

It can be concluded that multilingual classes demand teachers that support diversity and can create an environment that is supportive of multilingualism. An atmosphere where diversity and cultural differences are appreciated and respected as means of inclusion. Multilingual teachers should embrace principles of diversity, inclusion and oneness in classes by allowing other languages to flourish. Allowing and appreciating the differences in multilingual classes is a good starting point for multilingual pedagogy. This means that multilingual teachers should play

diversity-blind thinking, which is denial that differences exist in communities that reflect the societal ethos, values and practices in schools and communities. Diversity-blind thinkers hold the notion that bilingual and multilingual learners have split-identity, cultural dislocation, low self-esteem, alienation, emotional vulnerability, poor self-image and language anxiety, which are mere stereotypes and veneer serving monolingual language practices. In contrast, teachers working in multilingual classes should promote diversity-powered consciousness, a belief that becoming aware and being supportive of diversity and inclusion helps dispel biases, negative stereotypes, appreciate and understand differences and this helps in providing diverse solutions to diverse problems in communities, schools and people's lives. Multilingual classes founded on diversity-powered consciousness are supportive and inclusive as noted in some multilingual classes on this study.

7.1.3   In-service Teachers' Language Ideologies

Teachers' language ideologies or beliefs influenced their classroom practices and how they viewed language in the process of teaching. Those that viewed language as a problem had beliefs, which viewed multilingual classes to be difficult to teach, and focussed on using the official language of instruction only in class without code-switching. Teachers that believed in multilingualism advocated for creating a favourable environment in class where all languages were supported disproportionately in the teaching and learning process. Some teachers believed that multilingual teachers needed to be fluent or have an idea about the languages spoken by learners in class. Teachers believed that multilingual classes should not be overcrowded, as they would make teaching more difficult. Teachers also believed that instructional strategies for teaching multilingual classes must vary to reflect the needs of culturally and linguistically diverse learners.

Some teachers believed that all learners learnt how to read by the end of Grade One, while others stated that some learners were able to read even before the end of first grade. While it is true that some learners learn to read by the end of the first grade, the majority do not. The study proved such teachers wrong as most learners completed Grade One unable to read or identify letter sounds. The present study has shown that more than 70% of learners take more than a year to learn reading skills.

It is, therefore, concluded that teachers in multilingual classes held diverse beliefs and some of these were positive, while others were negative. Their views resonated well with the three-language orientation theory in the sense that teachers that viewed multilingualism as a problem mainly supported the one language philosophy, the official language to be used in classes for instruction. Those that viewed multilingualism as a resource, created a conducive environment for other languages to be used in class during instruction. In the latter, language was also viewed as a right. It is imperative that teachers in multilingual classes should be supportive of multilingualism for effective learning in classes.

It was also concluded that more than 70% of Grade One learners completed the first grade unable to read and write. This is worrying because learning the art of reading and writing is more effective in younger children but if most children complete early grades unable to read and write, it might be a problem for Zambia in future. If literacy levels are declining or stagnant in a country and the population growth is escalating, such a country is headed for trouble from its own citizens. In future, Zambia may have a huge population that is unable to read and write. If the situation is left unchecked to by the state, it might create a social, economic, security and public health problem for Zambia. The government through the Ministry of Education should promptly take a decisive action on improving literacy levels in Zambia. The government and other stakeholders should immediately work on addressing the factors contributing to low reading levels in Zambia which include the socioeconomic factors (poverty), familial or environmental factors, the teacher factor, teacher trainers' factor, school factor, policy and political will, material factor, instructional or teaching factors, hasty implementation, limited time for teaching reading, high enrolments, neurological factors (brain metabolism), teacher recruitment policy, learner factor and the language factor. While these factors may not be addressed at the same time, a one-by-one step in addressing them may see an improvement in literacy levels.

7.1.4   Phonics Instructional Approaches

The study revealed that Grade One classes in Zambia used a prescripted literacy lesson, which used synthetic phonics. However, a few selected Grade One teachers used different phonics instructional approaches when teaching their monolingual and multilingual classes. These included synthetic phonics, analytic phonics, embedded phonics, look and say, syllabic method, the New Break Through to Literacy (NBTL) approach and aspects of general mixed

instructional methods. The multisensory approach to the teaching of literacy was also rarely used.

The study concludes that the use of prescripted literacy lesson for teaching reading is a good approach in controlling what teachers need to cover in their literacy lessons. However, it should not be the only way of teaching reading. Teachers should be given the freedom to choose the approaches, strategies, or instructional techniques to use in their classes based on their experiences, observations and pace of their classes. Reading classes are diverse and prescribing one way of teaching them may not be the best approach but it can be one available alternative for teaching reading. This implies that teachers should be encouraged to use diverse approaches to teach reading and establish what works for them and their classes. The Ministry of Education should just provide guidelines on strategies or approaches available for teaching reading to early graders and let teachers decide what to use. Alternatively, more available prescriptions on the teaching of literacy should be provided so that teachers have the freedom to choose what may work for them. Furthermore, the teaching of reading needs to be given more time in early grades. When children learn the art of reading early enough, they will have less difficulty in learning other subject areas because reading skills are predictors of academic success in education.

7.2 The Contribution of this Study and Relevance of Theories Used

In this section, the researcher explains the major lessons and contributions that this study made to the world of scholarship and to Zambia.

7.2.1 The Contribution of the Study and Lessons Learnt

This study made the following contributions:

(a) Some previous studies claimed that speakers of language of instruction perform better in literacy, but the present study noted that there is no difference in performance between speakers and non-speakers of language of instruction as far as descriptive and inferential statistics is concerned. There was no statistical evidence to suggest that speakers of the language of instruction perform better in decoding in a test. Therefore, the language of instruction may not have an impact on learning to decode among early graders for alphabetic languages in Zambia.

(b) Test scores showed that multilinguals performed slightly better and the reasons are not stated. However, based on existing literature, multilinguals have a higher metacognitive ability to draw comparisons from previous languages learnt than monolinguals, and they might have worked twice as hard as monolinguals. It is also possible that the language of instruction had a similar structure with the languages known by non-speakers as Bantu group of languages.

(c) The reports from class teachers in Lusaka and Katete districts about what was happening in their classes on learner performance was not the correct record. Therefore, data collection involving teachers' views about the performance of their learners should be crosschecked with formative or on-sport class tests, lesson observation and summative tests.

(d) Teachers' beliefs have an impact on what they do in their classes.

(e) Favouring monolingual language ideologies may be detrimental in multilingual classes and, therefore, multilingual classes need diverse support and practices.

(f) The study proposed some reading interventions in form of recommendations to help aid the teaching of reading in Zambia.

(g) Literacy levels in Lusaka and Katete will continue to be low if recurring contributors such as materials, limited time for reading instruction, lack of specialised and well-informed reading instructors, teachers' unfamiliarity with the language of instruction and limited support for early grade classes continue in the current trajectory. Government and other stakeholders need to address these issues as soon as possible.

7.2.2   The Relevance of the Theories Used in the Study

The relevance of the three theories used on this study (Binary Opposition, Translanguaging and the three-language orientation) are highlighted in Chapter 2. The abridged version of the relevance is highlighted below.

The binary opposition theory guided the data collection process and the nature of the data to be collected on research objective one of this study. It also helped in the analysis and presentation of data. It is either a pupil knew reading or decoding the letters and words or they did not. It is either multilinguals perform better, or they do not and similarly, its either speakers of language

of instruction perform better or they do not. All these aspects derived from research question one and they are the focus of the binary opposition theory.

The translanguaging theory and the three-language orientation theory (Language as a problem, as a right and as a resource) helped inform research objectives 2, 3 and 4. The translanguaging theory covered diverse language practices in multilingual classes, while the three-language orientation theory highlighted policy issues and the decisions for arriving at specific language that Zambia made on language in education with their implications. In both objectives, the focus was on practices where more than one language was used in class intentionally or not, and this is part of the translanguaging theory. The practice of switching from one language to another intentionally or not was reported in several classes and those are issues that were either related to code-switching as a subsidiary of translanguaging or addresses translanguaging proper. The switching from one language to another in multilingual classes was discussed as a pedagogical practice on how teachers and pupils in multilingual classes helped non-speakers of language of instruction to learn reading skills. In objectives 3 and 4, the study looked at language beliefs that teachers held and that the phonics instructional approaches used in multilingual and monolingual classes have a bearing on language as a problem, as a resource and as a right. The three-language orientation theory was directly related to this study as far as policy issues were concerned. The decision by policymakers to settle for the seven regional official languages, one for each province with exception of North-western Province was founded on the three-language orientation theory. They viewed multilingualism as a problem and not as a right or resource. Generally, all the three theories used in this study were relevant as they are addressing specific research objectives.

7.3   Recommendations
The study made the following recommendations:

7.3.1 Administrative Recommendations
(i) The Ministry of Education should carry out a programme review for the Primary Literacy Programme with a view of identifying weaknesses and strengths so that the weaknesses reported perennially such as lack of teaching and learning materials can be improved upon by providing the missing links for learners in Grade One to improve their reading performance.

(ii) The Ministry of Education should allow translanguaging practices during teaching and assessment so that learners can be free to interact with others in class using diverse languages. The idea of choosing one language as medium of instruction advantages one group of learners during teaching and learning process even though there is no major difference in technical reading achievements between speakers and non-speakers of the Bantu language of instruction.

(iii) The Teaching Service Commission of Zambia should be deploying early grade teachers to places where they are familiar with the language of literacy instruction so that they are not burdened by the language. Some teachers in the study reported that they were not familiar with the language of instruction yet, they were assigned a Grade One class to teach. This is an anomaly that needs immediate attention.

(iv) The Ministry of Education should diversify literacy-teaching strategies so that teachers are not just confined to the pre-scripted literacy lessons, which uses synthetic phonics. Instead, teachers should be free to choose any of the phonics instructional approaches including synthetic phonics, analytic phonics, analogy phonics, embedded phonics, syllabic methods and multisensory approaches. Prescribing one approach may not work in some contexts considering lack of basic teaching and learning materials and inadequate teacher training.

(v) Teachers in primary schools should make a deliberate effort to understand what the policy demands and what is involved in implementing it effectively so that learners do not pay the price for not learning to read because of the negligence or incompetence of their teachers.

(vi) School authorities should frequently monitor early grade teachers and the progress early graders are making in learning to read. Early graders should be supported with instructional materials and professional development meetings where need arises.

(vii) Teachers in grades one and two need training or orientation by school authorities on how to handle multilingual classes, so that they are well prepared for their learners.

(viii) Teachers, school authorities and the government should consider using the proposed reading interventions in this study to supplement their mainstream curriculum so that learners with reading challenges in specific areas can be addressed during reading

interventions (See Section 7.4). Alternative solutions to diverse contributing causes of reading problems have been provided in the same section.

(ix) The perennial causes of reading problems in Zambia such as teaching and learning materials, inadequate teachers, ill-trained teachers, limited infrastructure and over enrolment need immediate attention by all stakeholders including the government, Non-Governmental Organisations (NGOs), corporate and parastatals and individuals with capacity. This is because the absence of critical factors such as adequate teaching and learning materials for early grade learners in schools has serious consequences to the education system.

7.3.2   Recommendation for Further Research

(i)   More evidence-based research is needed to inform instruction in early grade classes in Zambia so that teachers have alternative approaches to the teaching of reading.

(ii) A study is needed in future to assess teacher competencies on the big five literacy skills, which they teach to first grade learners.

(iii) Research is needed to ascertain whether there is a correlation between teacher qualification and experience against their class performance in Grade One.

(iv) A study is needed to establish whether non-speakers of the language of instruction work twice as hard as their counterparts that speak the language of instruction in multilingual settings.

7.4   Proposed Reading Interventions

The study proposed the following reading interventions that may benefit learners in early grade classes in Zambia. The family-child reading development and intervention praxis, letter knowledge and phonics reading interventions which include the alphabet corner, alphabet videos, alphabet path/road, the direct instruction reading proficiency and guess what game. Phonological and phonemic awareness reading interventions include matching sounds, isolating sounds, substituting sounds, removing sounds, adding sounds, blending and segmenting sounds. More specialised and prescripted lessons may be required to effectively implement some of the proposed interventions. Teachers in early grade classes also need to support and implement good instructional practices by reading more on specific topics and how to teach them.

The current study reported multiple reading problems that learners in early grade classes encountered in schools. Similar complications were reported in existing literature as presented in Section 1.1.5 in Chapter One. Some challenges presented were perpetual and intergenerational, while others were not. This section provides an alternative solution to the existing reading problems in Zambia. The proposal on reading interventions presented in this section is partly a response to results of this study as presented in the findings chapter, which showed multiple reading problems among learners. When proposing or recommending effective reading interventions to supplement reading instruction, the following factors need to be considered as outlined by Lipson & Wixson (2012); Honig, Diamond & Gutlohn (2018); and Wanzek, Otaiba and McMaster, (2020).

    (a) Most effective reading interventions are aligned with the mainstream core instructional programme and focus on the specific needs of individual learners. This may demand the use of similar materials and content but different teaching approaches.

    (b) Assessments (such as screening, progress monitoring and diagnostic) results are used to enrol or place learners in reading intervention programmes. Individual learners may respond differently to the interventions and, therefore, teachers should use the information they collect from their interaction with learners to improve instruction.

    (c) Good interventions need a system of support in place. A well-organised, articulated and coordinated system of support services at the state, provincial, district, school and classroom levels is essential for effective intervention.

    (d) Interventions may require more instructional opportunity where there is an increase in instructional time. Usually, 10 to 60 minutes per meeting for five times in a week are recommended for individuals and small groups. The amount of time may depend on the nature of learners and the help required. All interventions must have exceedingly small groups.

    (e) Good interventions need adequate teaching materials and a variety of instructional techniques.

Based on the study, the subsequent reading interventions are proposed and recommended with policy implications. The proposed recommendations and interventions are categorised into four generic streams: the family and socioeconomic status, resources and materials, the teacher and instructional factors, the school and government factors and the reading interventions.

7.4.1 The Family and Socioeconomic Status

The use and involvement of parents, guardians and siblings in teaching children to read was cited multiple times by respondents in this study. Existing literature also acknowledged the importance of family involvement in children's education. Jenkins (2020) stated that when parents and siblings are engaged in the education of their children, reliable results are expected and such reading programmes are usually successful. Danbolt, Banda, Klein and Tambulukani (2017) observed that "parental involvement in children's education has been proved to have positive effects on learning achievement and there is much evidence that good home–school relations are conducive for learner well-being" (p. 207). While some families may not have resources, means, or time to help their children with diverse reading activities in the home, active family involvement in education plays a critical role in improving literacy levels in the country. All families teach their children the oral language, playing, interactions and other activities. Some families do more by teaching letter knowledge (alphabet letter names and sounds) and reading. Although some poor families with low socioeconomic status may not have means and resources to help their children, some wealthy families may equally not have time for their children due to busy schedules. Pre-test results in this study showed some learners already reading on entry into Grade One and some of these had no pre-school background. This shows how far some families can go in helping their children to read and write before school. The study's recommendation, therefore, is that families that have means and capacity to help their children to learn reading skills should do so actively and consistently. This will subsequently help improve reading levels in Zambia. Those families that are unable to help their children read due to socioeconomic conditions or they are unable to read, or they have no means of helping their children, they can continue encouraging and supporting their children's efforts at school. However, those with poor conditions but can help their children learn to read should continue to do so. This background led to the proposition of the family-child reading development and intervention praxis as presented in Section 7.4.4.3.

7.4.2 Resources and Materials

The chronic lack of resources, teaching and learning materials in early grade classes as reported in literature and in this study is a perennial factor that keep recurring whenever studies of this nature are carried out. To resolve this problem, schools should allocate available resources to the procurement of books. Where resources are not available, schools in districts or

constituencies should work together and demand that part of the constituency development fund is allocated to the procurement of recommended teaching and learning materials. Individual schools can also visit non-governmental organisations and individuals with capacity in their areas to seek help for materials. If the government does not supply materials, schools should engage in fundraising activities to buy teaching and learning materials. Such activities may involve asking parents to buy a copy of a certain book in a term for their child and carrying out recommended piece works.

7.4.3 The Teacher and Instructional Factors

Most teachers currently involved in literacy instruction in schools may need refresher courses on the teaching of reading. This study and others before showed that some teachers exhibited inadequate content and pedagogical knowledge during lesson observation. Their understanding of what they were expected to teach was partial. Teachers needed to be equipped with appropriate reading instruction and phonics instruction approaches to equip learners with arsenal for reading.
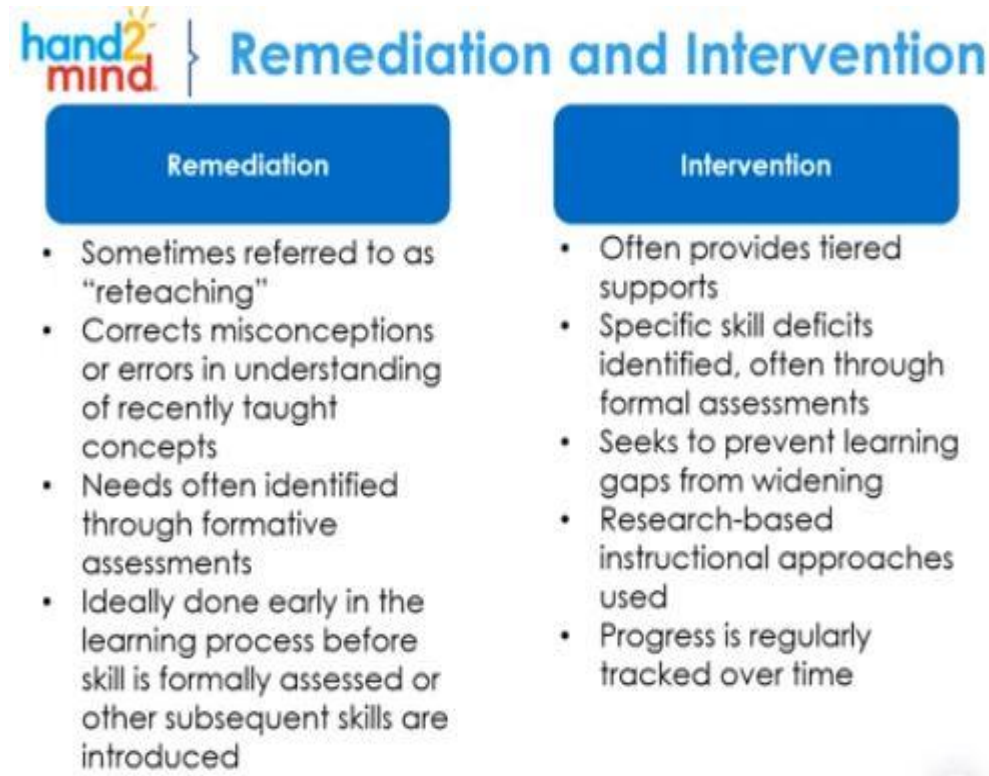
7.4.4 Reading Interventions

Schools should start offering reading intervention, specifically, to struggling readers. Zambia does not have adequate responsive reading intervention programmes in schools to help learners develop reading skills. A reading intervention is an extremely focused premeditated programme offered for a period, where struggling learners are helped to master topics or aspects that make them struggle. Wanzek, Otaiba and McMaster (2020, p.1) noted that "many learners struggle to learn to read and require research-based reading interventions to help them reach grade level expectations in reading. Most of these learners will respond to effective, data-based reading intervention that is designed to meet their reading needs."

7.4.4.1 Remedial Work as a Form of Intervention

Although in-service teachers in Zambia reported the use of remedial work as a widespread practice and as a form of intervention, there is a difference between remedial work and intervention. Jenkins (2020) stated that remediation and intervention are used interchangeably by some teachers but there is a difference. Remediation is re-teaching a recently taught topic to correct some errors and misinterpretations that are identified through formative assessment,

while interventions are more formalised and provide clear support targeting specific aspects for instruction. Furthermore, interventions do not target recently taught topics, but general weaknesses as seen from assessments. Reading interventions are focused on one to five learners with similar problems. Figure 20 shows some differences.

hand2mind ⎰ **Remediation and Intervention**

Remediation	Intervention
• Sometimes referred to as "reteaching" • Corrects misconceptions or errors in understanding of recently taught concepts • Needs often identified through formative assessments • Ideally done early in the learning process before skill is formally assessed or other subsequent skills are introduced	• Often provides tiered supports • Specific skill deficits identified, often through formal assessments • Seeks to prevent learning gaps from widening • Research-based instructional approaches used • Progress is regularly tracked over time

Figure 18: Remediation versus Intervention

Source: (Jenkins, 2020).

Although remediation was reported to help learners catch-up with their peers in classes, they have shown historically to be ineffective as they do not provide much help to needy learners (Handel & Williams, 2011; Howell, Kurlaender & Grodsky, 2010). However, reading interventions have proven to be more helpful as they are focused on specific skills that learners require to be taught at the same level as their peers in their grade levels. Zambian schools need to strengthen reading interventions that are more focused on specific skills.

7.4.4.2 The Catch-up Programme

The catch-up programme of Zambia is a good starting point of a reading intervention. Although it boarders between remedial work and reading intervention, the initiative needs support and

improvements for effective result. As reported in Section 3.1.6 of Chapter Three, the catch-up programme which was centred on 'Teaching at the Right Level,' is a remedial teaching methodology that helps these learners" (VVOB, 2017, p.19). While the concept of 'teaching at the right level' was, introduced by Abdul Latif Jameel Poverty Action Lab, Prudent Reasonable Attractive Trustworthy Helpful Ambitious Magnificent (Pratham) and United Nations International Children's Emergency Fund, the catch-up concept or initiative was already in existence and it was managed as a reading intervention 'Catch-up Project' in England and Wales (Clipson-Boyles, 2000). The Zambian catch-up programme (highly funded by USAID) had features of remediation and intervention. The programme involved so many struggling learners across grade levels to learn in one class. The idea of combining multiple learners across grade levels may have its own negative consequences as this may create a mixture of feelings where, for example, higher-grade level learners may feel ashamed seating with their juniors for a remedial lesson. This Zambian version of the catch-up is different from the England version that focused on Grade 3 struggling learners only who were taught individually or/and in smaller groups of two to four learners in an intervention class (Clipson-Boyles, 2000). The England version is reported to have produced very good results as all struggling learners begun to read in a short period. While the Zambian catch-up programme is a good starting point to have remedial or semi-intervention programme, individual learners' need and gaps must be considered seriously. Individual learners' needs may be difficult to address in multi-grade level approach to teaching.
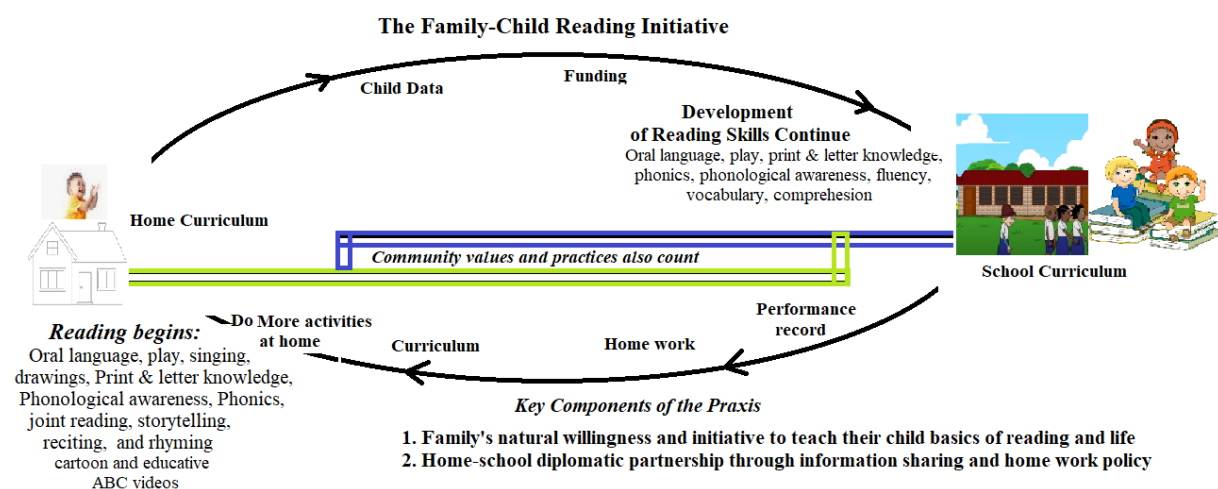
7.4.4.3 The Family-Child Reading Initiative

The family-child reading initiative constitutes two parts that are partly a build-up of Section 7.4.1. First, it addresses families' natural efforts and initiative to teach their children basic human skills such as oral language, singing, games, playing, scribbling, simulation and other basic etiquette, which are precursor to the development of reading skills. In this part, some families go further to read and tell stories to their children, begin to teach them print knowledge, letter knowledge, alphabetic principle or phonics, phonological awareness, vocabulary and comprehension. These aspects start to be taught to children in children's homes and they are foundations for reading. Second, parents' work relationship with their children's teachers in schools is through information sharing and homework policy that are all centred on the academic

performance and the overall wellbeing of a child. The families' natural efforts and initiatives to teach their children and their partnership with schools to develop reading and academic life of their children is the hallmark of the family-child reading initiative and many times, this is an intergenerational role that families play.

In this initiative, it is envisaged that parents, siblings and guardians have a critical role to play in teaching their children to read. This is because the family and the community are the first institutions where children begin to learn about language, print awareness, letters of the alphabet, phonemic awareness, phonics and phonological awareness (Ehri, 2000). Engaging family members to take part in literacy experiences at home can develop children's reading ability, comprehension and language skills (Reade, 2017). Parents and siblings can engage multiple activities at home that may help in the development of literacy skills in children and these include joint reading, drawing, singing, storytelling, reciting, game playing and rhyming as part of the family curriculum for literacy development. Families can tailor activities to their child's age and ability level and can incorporate technology into their learning opportunities (Reade, 2017). See Figure 21 for the summary.

Figure 19: The Family Child Reading Initiative

Parents or families can collaborate with class teachers of their children in schools to help them learn to read. The nature of the collaboration may involve exchange of information where parents may provide background knowledge of their child and teachers may provide performance records and manageable activities that parents can do with children at home for

remediation or intervention. These materials and activities need to be very clear, explicit and easily accessible from the home environment. Notwithstanding the challenges of family curriculum in reading as discussed in Section 7.4.1, the family-child reading initiative may supplement the low reading levels among early grade learners for families with capabilities in Zambia. Although it might be difficulty to work effectively with this model for some families, it is one viable reading model for families.

7.4.4.4 Letter Knowledge and Phonics Reading Interventions

This study recommended some existing letter knowledge, alphabetic principle and phonics reading intervention resources to help struggling learners understand the letters and their sounds in Zambian languages. Pre-test and post-test results of this study as presented in Chapter Five showed a substantial number of Grade One learners that failed to identify vowels, consonants and their corresponding sounds. In this regard, the current study proposes that Grade One teachers in Zambian primary schools as well as parents should use the available reading resources to help their children learn letter knowledge and phonics. The following are proposed to be used in schools and homes. Some of the proposed interventions are also found in Joseph & Amspaugh (2018); Honig, Diamond and Gutlohn (2018); and Wanzek, Otaiba & McMaster (2020).

(i) Alphabet Corner

Teachers and parents in their classes and homes, respectively, should set up an alphabet corner where many forms of letters of alphabet such as small hard paper cards each with a letter, cards with a letter and an image, a letter with words, letters on the wall and books with letters can be placed. Learners in class should learn to use such materials to supplement what is written or stuck on classroom walls. This activity was modified from Honig, Diamond & Gutlohn (2018) in what they called "Alphabet centre". If this is more appropriate, users can call this activity by either name.

(ii) Alphabet Videos (With Cartoon)

Parents with phones or other electronic gadgets that can connect to YouTube or other video channels should search for videos teaching alphabet letters and sounds. It is much better to start with videos that teach alphabet sounds. Teachers operating in schools with computers or electronic gadgets can also use a similar strategy. It is important that parents and teachers look

for more authentic websites that have quality and authentic videos. Watch the videos first, make your judgement, and then let the children watch them.

(iii) Alphabet Path/Road

Teachers and parents can create a path/road behind their school, house, or playground or wherever there is space. Then create materials with letters of alphabet on them. These may be a block or brick or stone with one letter written on them in small and capital letters (lower and upper case); it may be a paper with such letters or the floor or ground or anything. Make sure the path is long enough to accommodate all letters of the alphabet standing meters away from another. When this is complete, ask learners or children to walk through the path and stop at each station either in groups or all of them depending on the class size. You can also ask individual learners to walk through the alphabet path and shout out the letters. The teacher or parent can walk with learners to guide them where they are stuck. Teachers can also ask learners to stand at specific stations with letters by asking them to state what station they have reached or where they should go. The activity is modified from Blevins (2006); and Honig, Diamond and Gutlohn, (2018) in their alphabet strategy called "Letter Path".

(iv) Direct Instruction Reading Mastery

This is phonics-reading intervention that uses pre-scripted and teacher directed lessons in classes. Joseph and Amspaugh (2018, p.3) noted that this was developed "several decades and continues to be remarkably effective for helping learners acquire the alphabetic principle. Children are taught to associate letters with sounds using words with predictable spellings." In this programme, each lesson is prescribed and teacher directed. Children are asked to make choral responses and are given multiple opportunities to practice skills with teacher corrective feedback and reinforcement until they reach proficiency levels (Englemann & Bruner, 1988).

(v) Guess What Game

The guess what game is based on tangible materials that children can touch and feel without using the sense of sight. The game is called guess what because children are supposed to touch a letter piece and guess its name. You must give a child or children a set of upper case wooden or plastic letters in a container, then tell the first player to pick a plastic letter from the container or bag where letters are stored and then with eyes closed identify the letter by feeling its shape. If the letter is named correctly, the first player keeps the letter. If the letter is

not named correctly, it goes back into the storage bag or container. The second player now takes a turn, continue the game until all letters have been named. The learner with the most letters at the end of the game is the winner (Honig, Diamond & Gutlohn, 2018).

7.4.4.5 Phonemic Awareness Interventions

Phonemic awareness as part of the segments that learners use to read and recognize words is important for early grade teachers as it consolidates their letter knowledge and phonics in the context of words through specific practices. Grade One teachers and other early grade teachers can engage learners in specific reading intervention strategies such as matching sounds, isolating sounds, substituting sounds, removing sounds, adding sounds, blending and segmenting sounds (Joseph & Amspaugh, 2018; Honig, Diamond & Gutlohn, 2018; Wanzek, Otaiba & McMaster, 2020). Although these interventions are being discussed at phoneme level, some of them can also be used at syllable and word level as segments of phonological awareness.

Matching sounds intervention involves identifying similar sounds in a pair or list of words. Teachers may train learners to focus on initial sounds in Nyanja words such as *m*anja and *m*anda. Ending sounds as in pit*a* and lek*a*. Teachers may decide to show images or pictures that starts, or end in the same sounds and these could be good activities for phonemic awareness.

Isolating sounds involves "singling out the beginning, middle and ending sounds in words. This activity may consist of the instructor saying: "What do you hear at the end of the word /yapya/?" It is expected that children will reply with making the /-dya/ or /ya/ or /a/ sounds."

Substituting sounds in words demand that one sound is replaced by another in a word to form a different word. For example, replacing the /d/ sound in dada with /w/ sound to form an unfamiliar word *wada*.

Removing sounds "involves deleting a sound in a word and saying the remaining sounds. For example, deleting the sound /sh/ in the word /sheta) and saying the remaining word /eta/."

Adding sounds require the addition of a sound to a word to make a different word. For instance, to an existing word '*mayo,*' adding a sound /a/ at the beginning to form a novel word /amayo/ by addition of a sound.

Blending sounds require learners to put sounds together to form words. For instance, combining the sound /b/ with a sound /e/, for example, to form /be/ word or syllable. Blending three sounds or more to form more different words are all possibilities.

Segmenting sounds involves "breaking the word apart at the phoneme level and saying each individual sound in a word. For example, the word /chapa/ may be presented and the children are asked to break the word apart and say the following sounds: /ch/-/a/-/p/-/a/."

7.5   Summary

As a concluding chapter, readers are reminded that the topic and the problem that was being researched in this study was the comparison of speakers and non-speakers of the language of instruction in terms of reading achievements in multilingual classes. General reading achievements of learners in monolingual and multilingual settings were also investigated and the results from the monolingual and multilingual learners were contrasted. Chapter One introduced the current study by highlighting on pertinent issues governing the research. Theories that guided the study were presented and discussed in Chapter Two, while the review of literature related to the study was in Chapter Three. The fourth chapter presented the research design and the methodological issues that surrounded this study. Chapters five and six presented and discussed the findings respectively. This chapter concludes the study with respect to each of the research objectives as presented in Chapter One, suggests recommendations and highlights on the contribution of this study.

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APPENDICES

Appendix 1: Pre-test and Post-test for Grade One Learners. Modified from Zambia Assessment of Early Literacy Abilities (ZAELA) with a focus on eading.

This test was used for Recognising Letter Sounds, Blended sounds, two syllable words, three syllable words and complex words with clusters.

1.	**Vowels**				
	i	**U**	o	e	A
	E	A	I	u	0
2.	Consonants				
	z	T	B	s	m
	n	F	k	T	j
	v	R	g	d	c
3.	Blended Sounds to One Syllable words				
	da	Su	fo	mi	ze
	Tu	ZA	Di	NE	ko
4.	Two Syllable Words				
	Dadi	Vina	cipe	Goza	Hike
	guta	Shati	Kwite	Bedwa	vyaka
5.	Three Syllable Words				
	Putako	Bezuki	Vupita	Dugane	Memiyo
	Yesako	Rimeta	nenula	supilo	wilepo
6.	Consonant Clustered Words				
	Nkhani	*muvwi*	mbeu	*gwada*	*thumba*
	Bwanji	sheta	Thumba	kwise	*phewa*

7.	Complex Words				
	nkhwangwa	*yotenthedwa*	*phwandoga*	*swethwani*	*zakwathu*
	Vwatuphi	byavyelo	zwantheu	hemvundya	tsimyaphe

Appendix 2: Interview Guide for Grade One Teachers of Literacy

1. Which language or Languages do children use when playing outside this school? **(RO1)**
2. What languages do children use to communicate in a classroom among themselves? **(RO1)**
3. Which languages do you use to interact with learners inside and outside the classrooms? **(RO1)**
4. What languages do you use to interact with fellow teachers within and outside the school? **(RO1)**
5. Which language(s) do you use to teach initial literacy in class? **(RO1)**
6. Are there children in classes who do not speak the official language of Literacy Instruction? **(RO1)**
7. If yes to question 6, how do you help such children that speak other languages than the official for them to learn how to read and write in class? **(RO2)**
8. Is there a deliberate initiative or policy by the school to deal with learners that speak other languages than the official for literacy instruction? If yes state, the policy. **(RO1)**
9. How do you handle literacy classes where there are learners from different language and cultural backgrounds? **(RO2)**
10. What are your experiences in teaching monolingual and multilingual classes? **(RO2)**
11. What are your views about teaching multilingual classes? **(RO2)**
12. What methods do you use to teach literacy to Grade One learner? **(RO2)**
13. When teaching in class, do you stick to the prescribed methods in the literacy framework? **(RO2)**
14. Do you think there are other ways or methods that can be used to teach reading or literacy in Grade One in Zambian Schools? **(RO2)**
15. If yes to question 15 above, state which ways or methods? **(RO2)**
16. What do you think are the advantages and disadvantages of teaching in a class where the official language of instruction is the same with the language that learners speak and vice versa **(RO3)?**
17. Would you say that learners like to be taught in the official language? **(RO4)**
18. Which language(s) would you recommend being used for literacy instruction at this school and state why? **(RO4)**

19. Do you have the prescribed books for literacy at this school?

20. If yes to Q18. What is your comment on the appropriateness of these books for Grade One? **(RO5)**

21. What recommendations would you make about ways or methods of teaching literacy for Grade One classes? **(RO5)**

22. What are your recommendations for teaching learners in monolingual or multilingual classes in Grade One? **(RO5)**

23. Are there better ways of teaching literacy in Grade One other than what is already prescribed for classes in policy documents? **(RO5)**

24. What challenges do you face in teaching reading or literacy skills in Grade One? **(RO5)**

25. How can these challenges be resolved? **(RO5)**

26. Apart from the core or mainstream instruction, is there any help in reading given to learners after class? Justify your response **(RO5)**

27. What other activities do you do for learners with reading problems after class? **(RO5)**

28. Do you have anything that you think is important to mention about any of the themes discussed? **(RO5)**

Appendix 3: Literacy Lesson Observation Guide in Grade One

1. Check if the classes contain learners from different language backgrounds (Class Register, Greetings and by chatting with learners). **(RO1)**

2. Observe the language(s) that teachers are using to teach in class. **(RO1)**

3. Check how much attention is given to learners that speak a different language **(RO2)**

4. Check how much learners from other languages participate in class **(RO5)**

5. Check how learners from other language backgrounds interact with other learners in class **(RO1)**

6. The languages learners are using to respond to teacher's questions and contribute to class. **(RO1)**

7. The languages learners use when talking to their friends in class **(RO1)**

8. The languages learners use when playing outside the school? **(RO1)**

9. Observation of teacher's teaching strategies and methods. **(RO2)**

10. Observation and learning materials and their appropriateness **(RO5)**

11. Monitor interaction types in class **(RO2)**

    (i)   Turn Taking

    (ii)   Explanations

    (iii)   Code-switching or translanguaging

    (iv)   learners and teachers' questions

    (v)   learners' interactions

12. Check the attention given to individual learners by the teacher especially those from other language backgrounds.

Appendix 4: Focus Group Discussion Guide

1. How many languages do children use at this school?
2. What languages do children use to communicate in a classroom among themselves?
3. Which languages do you use to interact with learners inside and outside the classrooms?
4. What languages do you use to interact with fellow teachers within and outside the school?
5. Which language(s) do you use to teach initial literacy in class?
6. Are there children in classes who do not speak the official language of Literacy Instruction?
7. If yes to question 6, how do you help such children that speak other languages than the official for them to learn how to read and write in class?
8. Is there a deliberate initiative or policy by the school to deal with learners that speak other languages than the official for literacy instruction? If yes state, the policy.
9. How do you handle literacy classes where there are learners from different language and cultural backgrounds?
10. What are your experiences in teaching monolingual and multilingual classes?
11. What are your views about teaching multilingual classes?
12. What methods do you use to teach literacy to Grade One learner?
13. When teaching in class, do you stick to the prescribed methods in the literacy framework? **(RO2)**
14. Do you think there are other ways or methods that can be used to teach reading or literacy in Grade One in Zambian Schools?
15. If yes to question 15 above, state which ways or methods?
16. What do you think are the advantages and disadvantages of teaching in a class where the official language of instruction is the same with the language that learners speak and vice versa?
17. Would you say that learners like to be taught in the official language?
18. Which language(s) would you recommend being used for literacy instruction at this school and state why?
19. Do you have the prescribed books for literacy at this school?

20. If yes to Q18. What is your comment on the appropriateness of these books for Grade One?

21. What recommendations would you make about ways or methods of teaching literacy for Grade One classes?

22. What are your recommendations for teaching learners in monolingual or multilingual classes in Grade One?

23. Are there better ways of teaching literacy in Grade One other than what is already prescribed for classes in policy documents?

24. What challenges do you face in teaching reading or literacy skills in Grade One?

25. How can these challenges be resolved?

26. Apart from the core or mainstream instruction, is there any help in reading given to learners after class? Justify your response **(RO5)**

27. What other activities do you do for learners with reading problems after class? **(RO5)**

28. Do you have anything that you think is important to mention about any of the themes discussed?

Appendix 5: Ethical Clearance Letters

THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

Great East Road | P.O. Box 32379 | Lusaka 10101 | Tel: +260-211-290 258/291 777
Fax: +260-1-290 258/253 952 | Email: director@drgs.unza.zm | Website: www.unza.zm
22nd October 2019

REF NO. HSSREC-2019-AUG - 003

Mr Sitwe Benson Mkandawire
School of Education
Department of Language and Social Sciences Education
LUSAKA.

Dear Mr. Mkandawire

RE: "A COMPARATIVE ASSESSMENT OF PUPILS INITIAL READING ACHIEVEMENTS IN MULTILINGUAL AND MONOLINGUAL CLASES OF LUSAKA AND KATETE DISTRICTS OF ZAMBIA"

Reference is made to your protocol dated Aug 2019 HSSREC resolved to approve this study and your participation as Principal Investigator for a period of one year.

Review Type	Ordinary	Approval No. HSSREC-2019-AUG - 003
Approval and Expiry Date	Approval Date: 22nd October 2019	Expiry Date: 21st October, 2020
Protocol Version and Date	Version - Nil.	21st October, 2020
Information Sheet, Consent Forms and Dates	• English, Nyanja, Bemba.	21st October, 2020
Consent form ID and Date	Version - Nil	21st October, 2020
Recruitment Materials	Nil	21st October, 2020
Other Study Documents	Questionnaire.	21st October, 2020
Number of participants approved for study	600	21st October, 2020

Specific conditions will apply to this approval. As Principal Investigator it is your responsibility to ensure that the contents of this letter are adhered to. If these are not adhered to, the approval may be suspended. Should the study be suspended, study sponsors and other regulatory authorities will be informed.

Excellence in Teaching, Research and Community Service

Conditions of Approval

- No participant may be involved in any study procedure prior to the study approval or after the expiration date.
- All unanticipated or Serious Adverse Events (SAEs) must be reported to HSSREC within 5 days.
- All protocol modifications must be approved by HSSREC prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address.
- All protocol deviations must be reported to HSSREC within 5 working days.
- All recruitment materials must be approved by HSSREC prior to being used.
- Principal investigators are responsible for initiating Continuing Review proceedings. HSSREC will only approve a study for a period of 12 months.
- It is the responsibility of the PI to renew his/her ethics approval through a renewal application to HSSREC.
- Where the PI desires to extend the study after expiry of the study period, documents for study extension must be received by HSSREC at least 30 days before the expiry date. This is for the purpose of facilitating the review process. Documents received within 30 days after expiry will be labelled "late submissions" and will incur a penalty fee of K500.00. No study shall be renewed whose documents are submitted for renewal 30 days after expiry of the certificate.
- Every 6 (six) months a progress report form supplied by The University of Zambia Humanities and Social Sciences Research Ethics Committee as an IRB must be filled in and submitted to us. There is a penalty of K500.00 for failure to submit the report.
- When closing a project, the PI is responsible for notifying, in writing or using the Research Ethics and Management Online (REMO), both HSSREC and the National Health Research Authority (NHRA) when ethics certification is no longer required for a project.
- In order to close an approved study, a Closing Report must be submitted in writing or through the REMO system. A Closing Report should be filed when data collection has ended and the study team will no longer be using human participants or animals or secondary data or have any direct or indirect contact with the research participants or animals for the study.
- Filing a closing report (rather than just letting your approval lapse) is important as it assists HSSREC in efficiently tracking and reporting on projects. Note that some funding agencies and sponsors require a notice of closure from the IRB which had approved the study and can only be generated after the Closing Report has been filed.
- A reprint of this letter shall be done at a fee.
- All protocol modifications must be approved by HSSREC by way of an application for an amendment prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address or methodology and methods. Many modifications entail minimal risk adjustments to a protocol and/or consent form and can be made on an Expedited basis (via the IRB Chair). Some examples are: format changes, correcting spelling errors, adding key personnel, minor changes to questionnaires, recruiting and changes, and so forth. Other, more substantive changes, especially those that may alter the risk-benefit
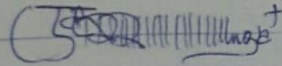
ratio, may require Full Board review. In all cases, except where noted above regarding subject safety, any changes to any protocol document or procedure must first be approved by HSSREC before they can be implemented.

Should you have any questions regarding anything indicated in this letter, please do not hesitate to get in touch with us at the above indicated address.

On behalf of HSSREC, we would like to wish you all the success as you carry out your study.

However, as a legal requirement, you will need to have final study clearance and approval to conduct research from the National Health Research Authority (NHRA). You may call Tell: +260211 250309 | or Email: znhrasec@gmail.com | for inquiries. These offices are at Paediatric Centre of Excellence in the University Teaching Hospital (UTH) premises, Lusaka, Zambia.

Yours faithfully,
HSSREC IRB

Dr. Jason Mwanza
Dip. Clin. Med. Sc., BA., M.Soc., PhD
CHAIRPERSON

Appendix 6: Ministry of Education Permanent Secretary Approval Letter

All communications should be addressed to
The Permanent Secretary, Ministry of General Education
Not to any individual by name

Telephone: 250855/251315/251283
251293/211318/251291
251003/251319

REPUBLIC OF ZAMBIA

In reply please quote

No.........................

MOGE/101/28/11

MINISTRY OF GENERAL EDUCATION

P. O. BOX 50093
LUSAKA

27th December, 2017

Sitwe Benson Mkandawire
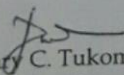University of Zambia
School of Education
P. O Box 32379
LUSAKA

PERMISSION TO CONDUCT A PHD RESEARCH STUDY IN SELECTED PRIMARY SCHOOLS

I acknowledge receipt of your letter dated 12th December, 2017 in which you requested for permission to conduct research in selected primary schools.

I wish to inform you that permission has been granted for you to carry out the research.

Your planned study has the potential to help develop appropriate pedagogical approaches that would improve the teaching of literacy. Once your research is done, we would be grateful if the results are shared with the Ministry.

We wish you all the best as you undertake the study.

Henry C. Tukombe
Permanent Secretary
MINISTRY OF GENERAL EDUCATION

ssk

Appendix 7: District Education Board Secretary Approval Letter

In reply please
Quote Ref...

REPUBLIC OF ZAMBIA
MINISTRY OF GENERAL EDUCATION

DISTRICT EDUCATION BOARD OFFICE
P.O. BOX 550063
KATETE

23rd October, 2018.

The Headteacher
....School
KATETE

RE: INTRODUCTORY LETTER: MR SITWE BENSON MKANDAWIRE

The above stated matter refers.

I write to introduce to you the above named student. He is carrying out a research on A
PHD RESEARCH STUDY. Please help him to carry out a research in your School as it is a
partial requirement for attaining a PHD to help develop appropriate pedagogical
approaches that would improve the teaching of Literacy.

Kindly receive him and give all the necessary help and support to make his research a
success.

Thanking you in advance.

R.N. Moyo(Mrs)
DISTRICT EDUCATION BOARD SECRETARY
KATETE

Appendix 8: Parental or Guardian Approval Letter for Children

Dear Parent/Guardian,

I write to request you to allow your child to take part in a research study by a PhD student from the University of Zambia named Sitwe Benson Mkandawire. The study is about supporting children to read (Reading Achievements in Grade1) and will take place at a school where your child goes to learn. There will be no harm or pain inflicted on your child but will be learning in class with other learners like they do on any other school day. Taking part is voluntary. Denying your child to take part will not affect his/her relationship with the school, teacher, or class. His/her participation will take about 4 to 8 minutes on the study.

Tick one of the optional boxes below to show that you have allowed or denied your child to take part on this study taking place in your child's class.

☐ **Yes. I allow my child.**   ☐ **No. I have not allowed my child.**

Signature of Parent/Guardian:

Name of Parent/Guardian:

Date:

Yours Faithfully.

Sitwe Benson Mkandawire