Learning to Read Words in Cinyanja Language and the Contribution of the Home and School Environments in Lusaka District of Zambia

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Abstract: **The focus of this study was to establish how reading developed in children in Cinyanja language by charting their development from home environment, through grade 1 to 2. An embedded explanatory sequential mixed methods design of both quantitative and qualitative methods was employed to collect, analyse and interpret the data. Six grade 1 children with ages ranging from 7 to 9 at entry point, 6 parents and 3 teachers participated in the study. Quantitative data across the three phases were collected through literacy tests: alphabetic knowledge and word reading. Simple tables were generated manually to analyse the data from literacy tests. Qualitative data was collected from parents/guardians and the teachers via a questionnaire with both closed and open-ended questions, and analysed thematically. Results revealed the following: (i) alphabetic knowledge in children start developing very early before formal schooling and continue until children become skillful readers; (ii) there is a strong relationship between rich-literacy home/school environment and literacy development in children; (iii) learning to read in L1 with a transparent orthography is faster and easier than learning to read in a L2 with an opaque orthography; (iv) the number of stages children go through to become proficient in reading in a transparent language was not the same as in English, an opaque language; (v) Learning to read in the L1 is similar to learning to read in L2 in terms of the language and cognitive processes that are involved. The study makes three major recommendations to policy makers and teachers based on the results: (i) literacy curriculum developers should consider the language in which reading is intended to be developed to avoid the tendency by teachers to simply generalize what is known or assumed about reading in English to apply to Bantu language instruction; (ii) teachers should understand that although children are non-readers at school entry point, they bring with them several literacy skills acquired from home and the surrounding environment which can be exploited in lessons; (iii) more studies on reading development in Zambian languages, beyond the Cinyanja language, are needed to confirm whether the four stages of literacy development in English cited in the theoretical framework can apply to other transparent languages.**

Key words: **reading development, alphabetic knowledge, emergent literacy, home and school environment.**

I. INTRODUCTION

Prominent developmental theorists (Adams, 1990; Ehri, 2004, 2005; Frith, 1985) are passionate about understanding what happens or should happen when a child is learning to read words. These scholars have provided explanation of how the reading process works, and they have suggested several stage/phase models of reading development children go through to learn to read and the changes that occur at every phase as reading develops from birth up to the time they are enrolled into formal school. For example, Ehri's developmental theory uses the four-phase developmental model which states that learning to read words requires children to pass through four phases: pre-alphabetic, partial alphabetic, full alphabetic and consolidated alphabetic. Ehri puts much emphasis on the changes that emerge as children are progressing in learning to read rather than the sequence as the main goal of passing through the phases to understand how sight word vocabulary develops. According to her, reading in children starts developing very early before formal schooling and continues until they become proficient readers. Ehri's theory seems to suggest that very young children regardless of colour, race and language background pass through the four phases to learn to read. For example, during the pre-alphabetic phase, young children know very little/if nothing about the alphabetic system and they do not make associations between letters and sounds, rather, they read words by remembering visual or contextual cues. They have limited sight word reading and decoding skills.

During the partial alphabetic phase, children slowly shift from total dependence on cues/context reading stage to cipher reading stage as they use combination of partial letters and context cues to guess words. There is heavy dependence on sight word reading with very weak decoding skills. During the full alphabetic phase, children acquire some knowledge of the alphabet and letter-sound association and they are able to decode words they have not seen before and recognize words from memory. Decoding skill becomes accurate, while slow and a bit challenging. The last phase is the consolidated alphabetic. Children under the consolidated phase become fluent in reading words and the recognition process becomes automatic. Developmental theorists (Adams, 1990; Ehri, 2005; Cardenas-Hagan, 2020; McBride-Chang, 1999) have therefore argued that the knowledge of the alphabet; knowing the names of letters and the sounds they represent is one of the emergent literacy skills that are important in learning to read words.

II. EMERGENT LITERACY

Emergent literacy period therefore is crucial in the process of reading development because the knowledge children acquire during this period, is determined by how much exposure they have to print within the home environment (Hamilton et al,

2016; Kamhi and Catts, 2012). Numerous studies (Akoğlu and Kizilöz, 2018; Flores, 2019; Hamilton et al, 2016) have been conducted to investigate the relationship between home environment and literacy development in children and results have shown a strong link. In line with this, Kaunda (2019) revealed that even children without preschool background also exhibit literacy experiences in primary school because of the interaction they had with their family members at home. In homes, parental involvement is key in promoting reading development in children. Numerous studies have been conducted to investigate how parents or caregivers promote early literacy development in children (Chansa-Kabali and Westerholm, 2014; Desforges and Abouchaar, 2003; Flores, 2019; Gonzalez, 2013; Kaunda, 2019; Menheere and Hoogi, n.d; Mumba and Mkandawire, 2020; Murungi et al, 2014) and results have shown a strong link between parents' literacy practices and literacy development. A rich home and school literacy environment is key as it promotes early literacy development in children. By rich home literacy environment we mean any literacy related events and practices, artifacts, including oral language in which reading is developed.

This paper is therefore based on the premise that there is an understanding among advocates of emergent literacy theories, and developmental theories that children's path on the road to proficient reading begins early before formal schooling, and continues until they become proficient readers (Adams, 1990; Ehri et al, 2001; Ehri, 2005; Frith, 1985; Hamilton et al, 2016; Lonigan et al, 2000; Snow, 2017; Whitehurst and Lonigan, 1998). Additionally, the study is based on the claims by some scholars (De Vos et al, 2014; Mwansa, 2017; Nag and Snowling, 2013) that learning to read makes more sense when learners understand the language in which reading is developed. Dean (1997) also states that the language of home affects the pupils' performance in reading. In Zambia, the new Literacy Framework states that the seven local languages: Nyanja, Bemba, Lozi, Tonga, Lunda, Luvale and Kaonde should be used as media of instruction from pre-school to grade 4 in all the public primary schools while English takes over from grade 5 to tertiary level and introduced as a subject in grade 2. The assumption is that learning initial literacy in local language from grade 1 to 4 will improve reading levels in the country (Chibamba, 2020; Chileshe et al 2018). While the government of the Republic of Zambia is concerned about the low literacy levels in the country and how these outcomes can be improved, the process children go through to learn to read in a Zambian language from home, through grade 1 to 2 is not known. It is a problem that the body of research in reading development is skewed towards the orthography of English and other European languages because these languages have characteristics that are not shared by the Bantu languages. Some of their orthographic peculiarities are so different from Bantu languages that generalizations for reading development in Bantu languages should be made with caution, if at all. Based on this, this study focused on establishing how word reading developed in children in Cinyanja language by charting this development from the point of school entry through to the end of grades 1 and 2. This study is therefore process-oriented and not product- oriented.

III. METHOD

The nature of the research question posed in this study necessitated the use of different phases for data collection. Hence, data was collected in three phases: phase 1, 2 and 3. Phase 1 focused on establishing how the home environment influenced the development of vocabulary and literacy skills in children. Phase 2 focused on establishing how reading words developed in children in grade 1 by charting this development from the point of school entry through to the end of grade 1. Phase 3 focused on establishing how reading words developed in children in grade 2 by charting this development from grade 1 to the end of grade 2. This being a process oriented study, a qualitative approach was employed with the quantitative approach offering a supportive role (Creswell, 2009). Quantitative data were collected through literacy tests: alphabetic knowledge and word reading while qualitative data were collected via a questionnaire with open and closed – ended questions from both parents and teachers on how the home and school environments promoted word reading development in children. It is important to note that even if this study used literacy tests to collect data from children across all the three phases, the study predominantly used a qualitative research approach to allow the exploration and understanding of how children emerged as fluent readers from the point of school entry through to the end of grade 2.

Participants

The population from which the sample was drawn comprised all primary schools in Lusaka District of Zambia, all grade 1 pupils, all parents with children in grade 1 and all teachers of grade 1 and 2 in Lusaka district. Simple random sampling was used to select six (6) pupils (3 girls and 3 boys) age ranging 7 - 9 years from a class of 65 pupils. One (1) primary school was purposively selected because of easy access by the researchers. Six (6) parents and three (3) teachers (two for grade1 and one for grade 2) were purposively selected to participate in the study bringing the total number of participants to 15. Parents were selected by virtue of being the parents of the children who had been randomly selected to participate in the study. Teachers were selected by virtue of being teachers of the selected pupils who participated in the study. This meant that when the children were selected to participate in the study, their parents or principal guardians and their teachers automatically qualified for the study. All the children were Zambians, and they spoke at least one or two Zambian languages and had limited English language. In this study, preschool background was not a criterion for choosing the sample because in Zambia, preschool is not mandatory for all children to be enrolled in grade 1. However, children's demographic profile revealed that one of the 6 children who participated in the study, had preschool background while 5 children did not have. Nevertheless, researchers were conscious about the preschool variable and took care of the situation by referring to it

throughout in the discussion with reference to other pupils without preschool background.

Procedure

Ethics approval for this study was obtained from Zambia, Humanities and Social Sciences Research Ethics Committee of the University of Zambia (HSSREC) before embarking on data collection as required by regulation.

Data in phase 1 was collected at school entry when pupils had just reported for grade 1 in January, 2020. To eliminate the influences of grade 1 work, literacy tests were conducted shortly before learning commenced. Prior to data collection, the school manager gave consent on behalf of the children because there was limited time to wait for parents to return the forms as the researchers needed to collect data before learning commenced. Shortly after getting permission from the school manager, the researchers briefed the grade 1 teacher about the aims of the study, and why the study was being conducted in her class. Later, six (6) (3 girls and 3 boys) grade 1 children were selected to participate in the study using simple random sampling. Children were tested individually on the knowledge of the alphabet and they required to say the letter name (LN) and Letter sound (LS). Administering of the test was done within a period of 1-5 days. Each of the 26 letters of the alphabet were written both in lower and upper case on the cards. Researchers decided to include both upper and lower-case letters because they did not know the type of letter shapes children had been exposed to at home. Children were required to name at least ten letters of the alphabet in general and say the sound for each letter. The researcher asked individual children to pick letters of the alphabet one by one and say their names like, 'pick any letter and tell me its name? A correct answer was awarded 1 mark and an incorrect answer given 0. If the child did not respond within one minute, the researcher proceeded to the next letter. If the child missed three letters in a row, the researcher asked a child to look at all the letters and say which one he/she knew. If again the child missed three letters in a row, the test was discontinued. The same process was repeated for the LS task. For the word reading test, the researcher used word pictures of familiar objects to test reading of simple words in Cinyanja language. The researcher prepared two sets of words; set 2 words were corresponding with the pictures, while set 2 words had one of the letters altered by replacing it with another letter having a very different shape. For example, a word under the picture of baby would read 'maana' instead of 'mwana'. The main reason here was to find out if children would attempt to read simple words phonetically, and identify the altered letters in the words with the help of visual cues. Just like in the alphabetic task, the coding for this task was 0 for a wrong answer and 1 for the correct answer. If the child missed three words in a row, the test was discontinued.

Shortly after the tests, qualitative data collection via a questionnaire commenced to determine the role of the home environment in promoting reading development in children. Parents were asked to sign the consent and information forms. In the consent form, parents were informed of the rights of participants as volunteers and they were assured that their responses would be stored and treated with confidentiality and anonymity (Kumar, 2011). Parents were expected to sign and return the consent forms back to school within 1 – 2 days through their children. Four days after the distribution of consent forms, all the 6 parents that were selected to participate in the study managed to send back the consent forms through their children. Later, the researcher distributed six questionnaires to the parents through their children, and they were expected to return them in 14 days. Fortunately, all the 6 parents returned the questionnaires to school within 14 days, and this was a great achievement as we recorded 100% questionnaire recovery.

In phase 2, data collection was done in February, 2021 after almost one year of literacy instruction in local language in grade 1. To eliminate the influences of grade 2 work, pupils were tested shortly before learning commenced. The researcher used the same methods of data collection that were used in phase 1; quantitative data was collected first, followed by qualitative data. Alphabetic knowledge was repeated to establish the learners' progression in word reading from phase 1 to phase 2. Just like in phase 1, pupils were tested in both letter name (LN) and Letter sound (LS). All the 26 letters of the alphabet both in lower and upper case were written on cards and displayed on the table for pupils to name and sound as many letters as they could. In this phase, pupils were tested on both consonant and vowel sounds separately. The researcher asked individual children to pick any letter of the alphabet and say its name and the sound it produced like 'pick any letter, tell me its name and the sound it makes.' A correct answer was awarded 1 mark and an incorrect answer 0. If the child did not respond within one minute, the researcher proceeded to the next letter. If the child missed three letters in a row, the researcher asked a child to look at all the letters and say which one he/she knew. If again the child missed three letters in a row, the test was discontinued.

For the reading test, the researcher used word pictures of familiar objects to test reading of simple words in Cinyanja language. The same testing procedure which was used in phase 1 was repeated in phase 2 although the words were different. Two sets of words were prepared; set 1 words were corresponding with the pictures, while set 2 words had one of the letters altered by replacing it with another letter having a very different shape. For example, a word under the picture of 'goat' would read 'mbozi' instead of 'mbuzi'. The main reason here was to find out if children could attempt to read simple words phonetically, and identify the altered letters in the words with the help of visual cues. The coding for this task was 0 for the words read incorrectly and 1 for the correct answer. If the child missed three words in a row, the test was discontinued.

Shortly after the tests, qualitative data collection through a questionnaire commenced. The questionnaire included several open-ended questions to get opinions, views and feelings of the teachers about the role of the school environment in promoting reading development in children. Teachers were free to elaborate on their responses throughout the questionnaire.

Additionally, there was space that was created at the end of the questionnaire for the teachers to make any suggestions they wished to, and to add any information they felt was relevant to the study. Prior to data collection, teachers were asked to sign the consent and information forms. In the consent form, teachers were informed of the rights of participants as volunteers and they were assured that their responses would be stored and treated with confidentiality and anonymity. Later, teachers were given questionnaires which they returned to the researcher in two days.

Phase 3 data were collected in February, 2022 when pupils just reported in grade 3. To eliminate the influences of grade 3 work, pupils were tested in word reading shortly before learning commenced. The main reason for testing the pupils only in word reading was to establish how they were progressing in terms of reading from phase 2 to phase 3. The other reason was to determine whether the pupils had broken through to literacy or not after going through literacy phonics instruction for almost two years. After gaining permission from the school manager to continue with the research, the researcher met with the teacher who was teaching the pupils in grade 2, and explained that she had gone for the last data collection. After a brief explanation to the teacher about the purpose of the study and the type of tests to be conducted, pupils that participated in phase 2 data collection were availed to the researcher. Fortunately, the number (6) was still intact as none of the pupils moved out of the school. In this phase, the researcher did not use word pictures for word reading test, rather, a six words simple story was extracted from a grade 1 Cinyanja story book. The reason to use a story was to see if pupils apart from reading individual words, could also read words in sentences phonetically. Pupils were told to read a story while the researcher was following and taking note of the flow of the story and slashing out the words read in-correctly. The coding for this task was 0 for a word read incorrectly and 1 for the word read correctly. Each child was given 2-5 minutes to complete the task, and if the child became stuck in the process of reading, the researcher would point at the word to remind the child about the word. If the child did not make any attempt to continue reading even after many prompts, the test was discontinued. The reading test lasted for 5 days. After the test, the grade 2 teacher was given 30 minutes to read and sign the consent form voluntarily before she could fill in the questionnaire. The teacher was informed of her rights as a participant and she was assured that her responses would be stored and treated with confidentiality. After signing the consent form, the teacher was given the questionnaire to fill in and return in two days. Two days later, the researcher was called to collect the questionnaire and that was the end of data collection for this study. The researcher thanked the pupils, teachers, and the school manager for allowing her to carry out the study in their school for a long period of time.

Data Analysis

In all the three phases, data collected through literacy tests were analyzed first prior to qualitative data. This was in line with Creswell's (2014) statement that "in an embedded explanatory sequential mixed methods design, the researcher analyses the quantitative data first and then builds on the results to explain them in more detail with qualitative research." In this study, the researcher did not use statistical analysis software to analyse data from the tests because the sample was very small being less than thirty (Cohen et al, 2018). The justification for using a small sample was that the design was akin to longitudinal, and thus, it was a process-oriented study and not product oriented which required thorough explanation of how children were learning to read words. In some cases, figures were run and presented manually through the use of simple tables and figures to shed more light on children's test results and to assist in charting their progression in reading. In this case, the data which was collected from tests were analysed and further explained in detail using the qualitative approach. A qualitative approach plays an important role in interpreting, clarifying, describing, and validating quantitative results. Qualitative data resulting from parents and teachers' responses to open-ended questions on how the home and school environments promoted reading development in children were collected and grouped into themes that emerged before the analysis.

IV. RESULTS PRESENTATION AND NALYSIS

In this section, the findings from the data collected from children through literacy tests: alphabetic knowledge and word reading are presented relative the research questions: *How did children learn to read words at home before formal schooling?, What role did the home environment play in promoting reading development in children?*

Socio-demographic characteristics of Participants: Tables 1, 2 and 3 show participants' demographic characteristics. For confidentiality, pupils are coded, PP and parents or guardians are coded P. Teachers are coded TR.

Table 1: Demographic profile of pupils

Code	Age	Gender	Pre-school background	Language (s) spoken at home according to preference
PP 1	8	Female	No	Bemba, Nyanja, English
PP 2	7	Female	Yes	English, Lozi, Nyanja
PP 3	8	Male	No	Nyanja, Bemba
PP 4	8	Male	No	Tonga, Nyanja, Bemba, English
PP 5	7	Female	No	English, Nyanja, Bemba
PP 6	9	Male	No	Bemba, Nyanja, English

Table 2: Demographic profile of parents

Code	Pupil representing	Gender	Profession	Language (s) spoken at home
P 1	PP 1	Female	Maid	Bemba, Nyanja, English
P 2	PP 2	Female	Marketeer	English, Lozi, Nyanja
P 3	PP 3	Male	Bricklayer	Nyanja, Bemba
P 4	PP 4	Female	Marketeer	Tonga, Nyanja, Bemba, English
P 5	PP 5	Female	Tailor	English, Nyanja, Bemba
P 6	PP 6	Male	Marketeer	Bemba, Nyanja, English

Table 3: Demographic profile of teachers

Code	Gender	Grade Taught	Qualification
TR 1	Female	1	Degree (Primary)
TR 2	Female	1	Diploma (Primary)
TR 3	Female	2	Degree (Primary)

Phase 1: Alphabetic Knowledge and Word Reading

In phase 1, pupils were asked to say the names of the letters and say their sounds, and to read words. Tables 4 and 5 show pupils' performance in both LN and LS and word reading based on the question: *How much did children learn to read words at home before formal schooling?*

Table 4: Distribution of Pupils' Performance in LN and LS

Alphabetic Knowledge			
	Code	Test items	Total marks scored
Letter name	PP 1	10	0
	PP 2	10	6
	PP 3	10	0
	PP 4	10	1
	PP 5	10	1
	PP 6	10	0
Letter sound	PP 1	10	0
	PP 2	10	4
	PP 3	10	0
	PP 4	10	1
	PP 5	10	1
	PP 6	10	0
Total		6 children on each item	On each item

Table 5: Distribution of Pupils' Performance in Word Reading

Code	mwana	amai	atate	moto	ana	Error/descriptive term
PP 1						Picture reading
PP 2				x √		Picture/orthographic reading
PP 3						Picture reading
PP 4						Picture reading
PP 5						Picture reading
PP 6						Picture reading

The findings in table 4 revealed that out of 10 marks on LN, PP 1 scored 0, PP 2 scored 6, PP 3 scored 0, PP 4 and PP 5 scored 1 each while PP 6 scored 0. The findings further revealed that PP 2 who scored the highest mark had preschool background and was one of the youngest participants in the group, while PP 4 and PP 5 who scored 1 mark each did not have preschool background. Interestingly, results on LS revealed correspondence in performance with LN as pupils who managed to mention some letters also said their names. For instance, PP 4 and PP 5 managed to sound the letters they mentioned earlier /t/ and /b/ respectively, while PP 2 managed to say four letters out of the six letters she mentioned earlier /t/, /s/, /o/, /p/. Interestingly, demographic profile showed that PP 4 who managed to say letter and sound't' had the initial letter of her name T. The findings further revealed that PP 2 scored the highest mark although the marks reduced by two. The findings further revealed that all the six children including those who failed to name and sound the letters, were able to sing the alphabet song with a mismatch in what they were reciting/singing and the symbols. Further, researchers noticed that PP 2 committed a reversal error where 'b' was 'd', and she also misnamed letter 'm' for 'n', 'p' was 'q', 'a' was 'e' as in met, 'e' was 'i' as in bit, while letter 'u' was /ə/ or /uh/ as in about and duck respectively.

Results in table 5 show that of the 5 words children were supposed to read, only PP 2 managed to read one word 'moto' after struggling as she was trying to spell the letters in the word. For example, when the researcher asked PP 2 to read the Nyanja word 'moto' 'fire', the child started like….em....she paused.....she repeated em…..oo....she paused, and continued with the rest of the letters. The researcher asked the child to read letters 'em', 'o','t' and 'o' together, and the child finally said.... 'mo'….'to'. The findings revealed that PP 2 was spelling individual letters in the word before she could say the sound and the syllable word. The findings further revealed that all the children who failed to read words were reading the pictures without paying attention to the words.

Parents' Views on the role of the Home Environment in Promoting Reading Development in Children

On this question, researchers sought views from parents on how they supported their children to learn to read. All the six parents indicated that they supported their children in many ways such as buying story books and scrabble games, setting up the library in the home, reading and telling stories, teaching numbers, teaching letters of the alphabet and the alphabet song, allowing them to watch cartoons and play with peers in the neighbourhood. For example, one parent, P1 who seemed to be disappointed in his children because of their carelessness with books said:

> *"I always buy story books for my children to read. But to my surprise, it doesn't take even a week before they lose them. At the moment, only one or two books are remaining in the house."*

On the same, P 2 whose child was in preschool prior to grade 1 stated that she bought books for her child although she always brought story books from preschool. She also submitted that she asked her son to teach the girl to read although she believed that it was the responsibility of the school and the teachers to teach her child to learn to read because she was paying them.

Responding to the question on the use of local language to tell stories to their children, three parents P 4, P 5 and P 1 said that they told stories to their children in Zambian languages while P 2 and P 3 and P 6 said they used both English and Zambian language. In line with the same, another parent, P 1 said;

> *I prefer using my own mother tongue language when telling stories to my children to using English language because it's very interesting and makes my children understand stories better. Every Sunday in the evening before going to bed, I tell my children stories from the Bible in either Nyanja or Bemba languages.*

The local languages that were prominently used were mainly Cinyanja, Citonga and Icibemba. Some parents said they used the three languages because they were the most commonly used in the homes and outside the home. Some parents extended the survey by indicating the type of stories that they told to their children. Three parents mentioned the story of Kalulu and the Tortoise while one mentioned the story from the Bible; Abel and Cain.

Phase 2: Alphabetic Knowledge

In phase 2, pupils were asked to say the names of the letters and say their sounds. Researchers separated the vowel and consonant letters. Table 4 and 5 show pupils' performance in both consonant and vowel LN and LS knowledge based on the question: *How much did children learn to read words in grade 1?*

Table 4: Shows pupils' performance in consonant LN and LS

Alphabetic Knowledge - Consonants			
	Code	**Test items**	**Total marks scored**
Letter name	PP 1	21	19
	PP 2	21	21
	PP 3	21	19
	PP 4	21	21
	PP 5	21	17
	PP 6	21	15
Letter sound	PP 1	21	8
	PP 2	21	14
	PP 3	21	10
	PP 4	21	12
	PP 5	21	10
	PP 6	21	10
Total		**6 children on each item**	**Score on each item**

Table 5: Shows pupils' performance in vowel LN and LS.

Alphabetic Knowledge - Vowels			
	Code	**Test items**	**Total marks scored**
Letter name	PP 1	5	5
	PP 2	5	5
	PP 3	5	5
	PP 4	5	5
	PP 5	5	5
	PP 6	5	5
Letter sound	PP 1	5	5
	PP 2	5	5
	PP 3	5	5
	PP 4	5	5
	PP 5	5	5
	PP 6	5	5
Total		**6 children on each item**	**Score on each items**

For the consonant LN in table 4, the findings revealed that out of 21 marks on each item, PP 1 and PP 3 scored 19 each, PP 2 and PP 4 scored 21 each, PP 5 and PP 6 scored 17 and 15 marks each respectively from zero marks in phase 1. The findings further revealed tremendous improvement in performance especially for PP 3, 5 and 6 who scored zero each in phase 1. The most highly improved was PP 1 who scored 2 in phase 1 but scored 19 in phase 2. Pupils were further tested in LS. Results revealed that out of 21 marks on each item, PP 1 scored 8, PP 2 scored 14, and PP 3 scored 10 from zero in phase 1, PP 4 scored 12, while PP 5 and PP 6 scored 10 marks each. The findings further revealed that PP 2 still scored the highest mark while PP 3, PP 5 and PP 6 improved tremendously. Table 5 tested pupils in vowel LN and LS. Pupils were expected to say all the vowel letters in Cinyanja language. The findings

revealed 100% pass rate in both LN and LS as shown in table 5.

Word Reading

For the word reading test in phase 2, children were tested on reading simple words in Cinyanja language. Table 6 shows pupils' performance in reading.

Table 6: Distribution of pupils' performance in word reading

Code	mwana	amai	werenga	bvala	tuma	Error/descriptive term
PP 1	√	√			√	Picture reading/spelling
PP 2	√	√			√	Picture reading/spelling
PP 3	√	√	√		√	Picture reading/spelling
PP 4	√	√			√	Picture reading/spelling
PP 5	√	√	√		√	Picture reading/spelling
PP 6		√			√	Picture reading/spelling

Results in table 6 show that of the 5 words children were supposed to read, PP 1, PP 2 and PP 4 managed to read three each, while PP 3 and PP 5 read four words each. One pupil, PP 6 only read two out of five. The findings further revealed that all the children who failed to read words were trying to read the pictures while those who managed to read some words used both visual/context cues and letter/alphabetic cues.

Teachers' Views on the role of the School Environment in Promoting Reading Development in Children?

On this question, the researchers' main focus was to explore how the school environment supported children in terms of reading development. Several factors were cited. Expressing awareness of existence of Primary Literacy Programme teacher, TR 1 submitted;

> *"The idea of teaching reading using local languages is very good and beneficial because right now my pupils are able to read and write in local language."*

Expressing similar views TR 2 stated thus:

> *"From my own experience as a grade 1 teacher, I think teaching reading using a local language is easy and can make children learn to read faster than using English."*

However, TR 2 was quick to express concern about the challenges of using of local language to teach literacy in classes with linguistically diverse learners. She said:

> *Teaching literacy using a local language is a good thing because pupils learn to read faster than when they learn to read in English language. However, this may also hinder progress because some pupils and teachers do not understand Nyanja language because they come from homes where they do not speak Nyanja, but other languages.*

On the issue of having a library in the classroom, both teachers acknowledged that there were libraries in their classrooms with limited reading materials. However, both teachers lamented the inadequate teaching and reading materials in school.

Phase 3: Word Reading

In phase 3, pupils were asked to read a six word simple story that was extracted from one of the pupils' story books based on the question: *How did children learn to read words in grade 2?*

Table 7 shows pupils' performance in reading a simple story

Code	atate	anapita	kukapha	mbewa	ku	munda	Error/Descriptive term
PP 1	√	√		√	√	√	Word processing, phoneme fixation/regression skipping and replacement error
PP 2	√	√	√	√	√	√	morpheme fixation, no unitization
PP 3	√	√	√	√	√	√	morpheme fixation, no unitization
PP 4	√	√	√	√	√	√	morpheme fixation, no unitization
PP 5	√	√	√	√	√	√	morpheme fixation, unitization
PP 6	√	√	√		√	√	Word processing, phoneme fixation/regression

Results in table 7 revealed that all the pupils managed to read the story with variations in the way they read. For example, of the six words in the story, PP 2, PP 3, PP 4 and PP 5 managed to read all the words in the story with their eyes fixated on morphemes, while PP 1 and PP 6 read five words each with their eyes fixated on every letter in the word.

Teacher's Views on the role of the School Environment in Promoting Reading Development in Children?

Just like in phase 2, the researchers' main focus in phase 3 was to explore how the school environment supported children in terms of reading development. When asked if parents were engaged in the school affairs of their children, the teachers confirmed that some parents made an effort to visit the school to check on their children's progress while some did not.

TR 3 stated thus:

> *The school has a programme of inviting parents to come to school to check their children's progress on the last Fridays of every month, but very few parents make an effort to come. Most of the parents are only seen when they are summoned by the school manager for something else and they don't make an effort to come to class. Some children tell me that their parents fail to come to school*

because they are very busy with work at the market and they stay very far from school.

The teacher further stated that parents who rarely came to school complain of financial challenges and they would rather be busy concentrating on income generating activities than attending to their children's school activities. The teacher stated that parents who manage to come are those from homes where education is valued. In her response, she said:

As a teacher, I am willing to interact with parents, but the majority of them are not willing to come. I have noticed that parents who visit the school are those from homes where education is valued and most of them have the education background.

The teacher was also asked if the use of local languages to teach initial literacy from grade 1 to 4 has yielded good results. She said:

From my own experience as a teacher, I think teaching literacy using local language from grade 1-4 is a good initiative because local languages are easier to learn than English language because of their 1-1 letter-sound correspondence.

On the contrary, TR 3 expressed concern about some of the challenges both teachers and learners' experienced with the language of instruction which they were not familiar with. She lamented:

The only challenge I have observed is that children come from different language backgrounds, and forcing them to learn the language they are not exposed to at home is very unfair. Some children take long to learn to read not because they are dull, but because they are taught in an unfamiliar language.

V. DISCUSSION

Phase 1: Alphabetic Knowledge

The findings presented in phase 1 revealed that generally, all the 6 children had challenges in both LN and LS. The findings seem to suggest that children lacked the knowledge of the alphabet as they could hardly name the letters and make the letter-sound connections. Interestingly, it was observed that all the 6 children including those who failed to name and sound any letter of the alphabet were able to sing the alphabet song with a mismatch in what they were reciting/singing and the symbols. The findings seem to suggest that children were introduced to the alphabet song early at home before they started grade 1. The findings were in agreement with parents' claims that they taught their children the alphabet song at home, which was a good starting point. Such findings resonate with the literature (Kamhi and Catts, 2012) that children from rich-print homes are likely to sing/recite the alphabet and recognise letters. Interestingly, the findings also revealed that PP 5, PP2 and PP 4 who managed to name some letters of the alphabet were also able to sound them, suggesting that awareness of the letter name seemed to aid in identifying letter sounds. The findings further suggest that knowing letter names is strongly related to children's ability to remember the forms of written words and their ability to treat words as sequences of letters. Such findings are consistent with the literature that (Hohn and Ehri, 1983; Foy and Mann, 2006; Treiman et al, 2006) it is easier for children to learn letter-sound correspondence if the letter's sound happens to be in the letter's name because children's knowledge of the letter shapes helps them distinguish and remember the visual constituents of words. The findings further revealed that LS knowledge development lagged behind than LN knowledge development. For example, vowels proved to be challenging for PP 2 as she pronounces them differently that is, 'a' was 'e' as in met 'e' was 'i' as in bit, while letter 'u' was /ə/ or /uh/ as in about and duck respectively. Such findings seem to suggest that letters that represent sounds which are more commonly represented by other sounds in English language are more confusing than letters which have their own unique sounds. The findings are in line with MacBride-Chang (1999) who stated that LN and LS knowledge are differently associated with development. Some consonant sounds were also a challenge when it comes to saying them out in isolation. We observed that PP 5 and PP 2 pronounced letter 'b' as /bee/ or /buh/, 'k' as /kee/ with a vowel at the end. The findings seem to suggest that saying both voiced and unvoiced consonant sounds in isolation without a vowel sound at the end proved difficult for children at their age, and so, the responses were acceptable. The findings also revealed that PP 6 scored zero in LS, yet he was the oldest among the participants. Such findings suggest that at this stage, age did not help the child to learn to read.

The findings further revealed that one child, PP 2 committed numerous naming and phonological errors as she attempted to identify and name letters of the alphabet. One possible explanation to this is that PP 2 had a bit more of alphabetic knowledge than her friends because of the preschool background, and thus, she was more prone to committing more errors. For instance, she committed reversal errors where 'b' was'd', and she also misnamed letter 'm' for 'n' and 'p' for 'q'. Although this study did not investigate error analysis in writing, the researchers' assumption was that the child confused the letters because of their general similarity in visual form or shape. The findings seem to suggest that PP 2 completely failed to make a distinction between the letter's 'b' and'd' due to their general similar appearances, suggesting that the general characteristics of letters can affect pupil's learning of letter names. The findings resonate well with (Honig et al, 2018; Treiman et al, 2006) claim that similarity of letter shape is the major determinant of confusion errors in children as it was identified in the USA and Brazilian preschoolers. Even though PP 2 committed numerous errors than her friends, she was the only one who scored higher marks in letter knowledge. One possible explanation to this is that the child's literacy prior knowledge influenced her performance in the alphabetic task. In this case, we can conclude that children's performance in LN and LS was more linked to their prior knowledge of the specific aspects of letter knowledge and literacy experiences. For example, there was enough evidence that PP 2 performed better than her friends because prior to her formal schooling, she was

in pre-school and may have been exposed to the alphabet. Because of this, there seems to be a difference in performance between pupils with preschool background and those without. The child with the preschool background exhibited some levels of understanding of the letters of the alphabet, suggesting that preschool background positively influenced the way she performed in the alphabet task. Although the findings revealed that preschool background positively influenced the way she performed in the alphabet task, there could be other factors that might have contributed. This was evident by two children PP 4 and PP 5 who did not attend preschool, yet they managed to score one mark each. Such findings suggest that PP 4 and PP 5 might have come from homes where they were exposed to rich-literacy environment, and they were at an advantage than those who lacked exposure to rich print – related materials such as alphabet books and story books among others. The findings are in agreement with the literature review (Kaunda, 2019) that even children without preschool background exhibit literacy experiences in homes because parents provide a stimulating environment as they constantly scaffold their children and engage them in literacy practices. The home environment therefore plays a key role in children's reading development.

Word Reading

The findings revealed poor performance as all the children could not read a single word phonetically, but they were able to guess the words using pictures. This was evident when the children read all the words without noticing that some letters were altered in the words, and that some words were placed under the wrong pictures. One possible explanation for poor performance by children is that the task was probably too difficult for their age. Interestingly, two children (PP 2 and PP 5) said some words in English using the pictures. The findings are contrary to the views expressed by parents that they promoted reading development in their children by teaching them letters of the alphabet and their sounds at home, yet, they seem not to, or offered very little support as evidenced by children's poor performance in alphabetic knowledge. While it may be true that parents taught their children the alphabet, it may also be untrue for some parents. My argument is that if parents taught their children the alphabet and grapheme-phoneme associations as they claimed, the performance could have been better. I therefore tend to disagree with some parents' claims that they taught their children the alphabet. Nevertheless, the case of PP 2 who tried to read the word 'moto' in a spelling way corroborated the responses from P2 who said that apart from taking her child to preschool, she was also teaching her letters of the alphabet at home. The pupils' demographic profile revealed that PP 2 and PP 5 who read some picture words in English came from the families where English was constantly used as the language of communication. Such findings suggest that English language as a variable interfered with the children's mother tongue spoken language. There is enough evidence (Silavwe et al., 2019; Nag and Snowling, 2013) that exposing children to a foreign language in early stages does not only interfere with the child's mother tongue spoken language, but also contributed to the delay in learning to read in the child's mother tongue language. Because of this scenario, the researchers tend to support Silavwe et al. and Nag and Snowling claims that the language in which reading is developed is key if learning to read is to be successful. As Tambulukani and Bus (2011) put it, it is better to learn to read first in a familiar Zambian language as this will foster learning to read in English.

This is probably because a better understanding of the relationship between spelling and phonology in the Zambian language as a result of learning in a familiar language facilitates learning to read in English. In addition, the findings seem to suggest that at this stage, although children might have seen print such as billboards, road signs, labels and logos everywhere around them, the impact on learning to read was not seen. The findings confirm (Ehri, 1987) claims that there is no direct link between the ability to read environmental print and the actual reading. The argument is that there is a possibility that environmental print may not enhance print awareness in some children as they pay much attention to other visual cues that are more prominent than letters (Ehri, 2004).

Interestingly, on the other hand, PP 2 who had preschool background showed some levels of alphabetic knowledge when she attempted to read the word 'moto' using the little knowledge she had about the alphabet. For example, when the researcher asked PP 2 to read the word 'moto' 'fire', the child started like….em....she paused a bit before she could repeat the letter…..em…..she continued……..oo.....she paused a bit…and finally she said 'mo', and she did the same with the last part of the word until she read the whole word 'moto'. The findings seem to suggest that PP 2 was trying to read the word in the spelling way before she could say the sound and the whole word. The findings suggest that PP 2 used both visual and orthographic images to read the words probably because she was exposed to the alphabet in preschool prior to grade 1. We can testify that in this study, influences of orthography were detected in PP 2 who exhibited some levels of the alphabet knowledge. However, the degree at which the orthography influenced the reading task was not known. One conclusion we can draw from these findings is that the little knowledge of the alphabet PP 2 attained from the home environment and preschool seemed to aid in the reading task. Such findings resonate well with Tyler and Burnham (2006) statement that alphabetically literate children perform better in reading tasks because they have conscious access to phonemic representations. In this study, influences of orthography were detected in PP 2 who exhibited some levels of the alphabet knowledge. Such findings seem to suggest that for transparent languages, learning to read is faster probably because there is 1:1 grapheme-phoneme correspondence as evidenced by the literacy skills exhibited by PP 2.

In conclusion, the findings suggest that phase 1 is the pre-reading period. Such findings seem to point to the fact that at the time of research, children lacked the understanding of grapheme-phoneme association, but used visual cues and context cues to guess the words. The low performance in

alphabetic knowledge and word reading tasks was evidence enough to rate children as nonreaders.

Phase 2: Alphabetic Knowledge

After almost one year of literacy instruction in grade 1 in local language, the findings revealed that LS task was still a challenge compared to performance LN task for all the pupils. However, even if the task proved to be challenging, there was tremendous improvement in performance by all the six pupils compared to phase 1 when only PP 2 performed better. In phase 2, pupils slowly gained the knowledge of the alphabet which was absent at the beginning of the study. Some of them especially PP 1, PP 2 and PP 4 were able to correctly and confidently name and sound letters of the alphabet effortlessly by looking and pointing at the printed symbols, and not by reciting them orally without paying attention as it was in phase 1. Additionally, PP 2 who committed many phonological errors in vowel LN and LS in phase 1 managed to sound them properly in phase 2.

As the data illustrates, the findings revealed an increase in the number of pupils who performed well in the task; a reflection of improved pupils' knowledge of the letter-sound due to their exposure to phonics literacy instruction, coupled with parental involvement. Such findings seem to suggest that in phase 2, pupils learnt more about letter-sound associations which resulted in almost everyone confidently participating in the task regardless of the errors they committed.

While pupils' performance in alphabetic knowledge improved tremendously, there were some naming and phonological errors that were observed in some pupils. Some errors that were identified in phase 1 recurred in phase 2, while others were new. Some pupils misnamed some letters as other letters, for instance PP 3 misnamed letter 'm' for 'n' and 'v' for 'u', while PP 5 misnamed 'q' as 'g'. The findings further revealed that PP 2 and PP 5 committed reversal errors where letter 'b' was'd'. The act of confusing letters also extended to the upper-case letters where PP 1 misidentified 'O' as 'Q' and 'X' as 'K', while PP 6 misidentified 'I' as 'J', and 'V' as 'U'. Just like in phase 1, phase 2 did not investigate the factors that lead to this confusion, but the researcher's assumption was that the confusion in naming letters was due to their general similarity in visual form or shape. Additionally, there could be other factors such as poor eye sight which might have caused this confusion in some children. The findings seem to suggest that some children completely failed to make a distinction between the letters due to their general similar appearances, suggesting that the general characteristics of letters can affect pupil's learning of letter names and sounds. The findings resonate well with (Honig et al, 2018; Treiman et al, 2006) claim that similarity of letter shape is the major determinant of confusion errors in children as it was identified in the USA and Brazilian preschoolers.

For the vowels, the findings revealed excellent performance in both LN and LS as all the pupils got everything correct. Good performance by pupils in the vowel task was evidence enough to conclude that learning to read is easier and faster in the language (s) with a transparent orthography than a language with an opaque orthography. One possible explanation to good performance is that in Zambian languages the relationship between sounds and letters is very regular, i.e. the way they are written is the way they are pronounced, i.e. 'a', /a/. This means that for Zambian languages, there is 1:1 letter-sound correspondence. Such findings corroborate the conclusions by Mann (1986) and Wimmer, Landerl & Schneider (1994) that cross-linguistic comparisons show that learning to read (to decode print) is faster in transparent alphabetic orthographies than in English.

Word Reading

In phase 2, the findings revealed tremendous improvement in reading compared to phase 1 as all the six children managed to read at least 2-4 words each out of five words. Interestingly, two pupils, PP 3 and PP 5 with no preschool background scored higher marks than PP 2 who had the preschool background. Such findings seem to suggest that at this point, preschool background was not the only determinant in learning to read. There could be other factors that influence learning to read in children which the researcher did not investigate. However, even if the researcher did not observe literacy lessons, evidence from the teacher's demographic profile and the pupils' performance seem to suggest the TR 1 was using the right methods to teach literacy as she had a degree in primary school teaching. There was evidence that children were already exposed to the systematic phonics instruction as they started showing signs of the knowledge of the alphabetical principle. The findings corroborate the literature (Wayne and Youngs, 2003) assertion that one of the factors in pupils' achievement in school is teacher qualification. According to Wayne and Youngs, (2003) there is a direct link between teacher characteristics such as experience and appropriate professional qualifications and student achievement in school.

Additionally, responses from the teacher about how parents promoted literacy development in their children revealed that parents were advised to teach their children letters of the alphabet at home. Such findings suggest that children of parents who check their progress become motivated and perform well at school than those whose parents take a more relaxed approach. The amount of time parents spends teaching their children at home has a bearing on how they perform in school. The findings corroborate (MOE, 2008) claims that there is a very strong relationship between pupil's home background characteristics and learning achievement in school.

The findings further revealed that three pupils, PP 1, PP 2 and PP 4 managed to read three words each while PP 6 only scored two out of five. Even if PP 1, PP 2, PP 4 and PP 6 did not score five out of five, there was an improvement in performance compared to phase 1 where everybody scored zero. The findings seem to suggest that during one year of explicit phonics literacy instruction in Cinyanja language, children learnt more about letter-sound associations and they began attempting to decode simple words phonetically with the help of both visual and alphabetic/letter cues, as opposed to phase 1

when they just guessed words using visual cues. Evidence from the teachers' responses also suggests that the presence of the libraries in classrooms was an added advantage as pupils were reading stories during their free time. The findings further revealed that even if the pupils exhibited a level of grapheme phoneme understanding, they seemed to be more glued to print rather than to meaning. Such findings are in line with Ehri's (2004) assertion that in the first stages, children heavily rely on the contextual guessing to read words, but later, as they increase their understanding of letter-sound associations, they become glued to print, which also disappears once they fully develop the understanding of the alphabetic principle. The findings also corroborate the literature review (O'Carroll, 2011; Ehri, 1987; Beech, 2005; Ehri, 2005; Escamilla, 2009) that during the initial reading stage, emergent readers in their earliest stages of learning to read, initially rely heavily on picture and context cues when reading, but once they know some letter-sounds, they can start to use these cues to remember words. The findings further suggest that at this stage, the majority of pupils showed a general understanding of the orthography as they began to form not only alphabetic connections, but they were also able to map graphemes to phonemes to decode words, with their eyes more fixated on individual letters, often more than once. The findings corroborate the literature review (Ehri, 2005; Snowling, 2012) that grapheme - phoneme connections are formed out of readers' knowledge of the alphabetic system.

Interestingly, the findings further revealed that even if all the pupils managed to read some words, in some cases, reading words was characterized with some challenges. For example, PP 1 constantly repeated the initial syllable of some words twice or more before sounding the next one. Repeating the syllables, which is also called pattern reduplication error, is mostly present in very young children that are learning to read which, once it persists, turns into stammering and the child may need special attention. However, in this study, PP 2 seemed to repeat syllables when reading because of the little knowledge she had about the alphabet and the anxiety she developed for being subjected to the task, because despite speech challenges, she managed to read word. The findings further revealed that all the six pupils struggled to read the word '**werenga**' (read). One possible explanation to failing to read the word '**werenga**' is that polysyllabic words proved difficult to break into smaller units; a simple task for skillful readers. Such findings suggest that pupils who failed to break the longer words into syllables were still at single or two syllable word stage, and they needed enough systematic instruction to help them start recognizing syllables or morphemes in longer words.

The other interesting scenario emerged when PP 2 struggled to correctly pronounce one word in Cinyanja language with proper intonation. For example, to pronounce a word 'tuma' 'send' which is just /t/u/m/a/, the child pronounced it as 't ə:ma'. In this scenario, the child replaced /u/ sound with /ə:/ sound as in the word 't**u**rn' which does not exist in Zambian mother tongue and cannot be said without being taught, an indication that the child was taught the /ə:/ sound in pre-school. It is worth noting that Zambian languages are transparent languages with a 1:1 grapheme-phoneme correspondence and so, letter u will always be /u/. On the other hand, English language has a deep orthography and the grapheme-phoneme mapping is inconsistence and the letter u can manifest in several phonemes i.e. /ə:/ sound as in the word 't**u**rn', short sound /u/ as in the words duck and cup, long sounds /oo/ and /ou/ as in the words food and soup respectively. Such findings suggested that learning initial literacy in a foreign language at preschool did not only interfere with the child's spoken Nyanja language, but also contributed to losing proficiency in the child's mother tongue. It is worth noting that this was the child who had the preschool background and previously experienced challenges in vowel letter name and letter sound in phase 1. The findings corroborate the literature review (Tambulukani and Bus, 2015) that learning initial literacy in an unfamiliar language affect the child's literacy development. Additionally, (Pullen, 2003; Ambrose et al, 2012; Snowling, 2012; Doyle, 2013 and Akoğlu and Kizilöz, 2018) stated that children who lag behind in literacy foundation skills such as print knowledge, letter knowledge, phonological awareness and oral language skills start typically remain poor readers throughout their schooling and beyond. The findings further revealed that phase 2 was the reading and decoding stage as pupils used both visual and orthographic/letter cues to remember and read words. The findings revealed that pupils demonstrated that it is possible to read and decode words at the end of grade 1.

Phase 3: Word Reading

For the word reading test, the findings revealed good performance as all the pupils managed to read the story although the reading was characterized by some oral reading variations and errors which placed them into two categories; good readers or poor readers. According to (Honig et al, 2018) variations in reading and the depth of the errors committed distinguish good readers from poor readers. For example, three pupils, PP4, PP 3 and PP 5 managed to read the whole story with correct pronunciation and their eyes were no longer fixated on every letter, but on morphemes as they read words. The findings seem to suggest that PP 4, PP 3 and PP 5 demonstrated good reading skills because they were able to associate more complex sounds with their letters in order to decode words. For example, when reading the word kukapha, pupils managed to break it down into three sounds /ku/+/ka/+/pha/ with ease based on their brain's memory. The findings seem to support the claim (Adams, 1990) that good readers' ability to read long words depends on their ability to break the words into syllables. The findings also seem to suggest that PP 3, PP 4 and PP 5 were at sentence level as they were familiar with both graphic and meaning when reading. One possible explanation to pupils' good performance which corroborate the teacher's (TR 3) responses is that the continued teaching of literacy using local language from grade 1 up to grade 2 benefited them a lot.

The findings further revealed that even if PP 3, PP 4 and PP 5 read the words in the text correctly, only PP 5 read the story faster as her eyes were no longer fixated on every word in the text, but was able to read and recognize more complex familiar

words in the text as a whole by breaking them into smaller units. Such findings seem to suggest that PP 5 was on the road to becoming a skillful reader as she demonstrated the skills of a skillful reader. She was able to read words in sentences and her eyes were no longer moving back and forth. The findings are in line with Honig et al's (2018) explanation that when skilled readers come across a polysyllabic familiar or unfamiliar word, they automatically break it down into smaller units before they say it as a whole as their brains' processor is used to see common letter patterns and recurring word parts.

On the other hand, PP 1and PP 6 managed to read five words out of six in the story. In terms of the flow of the story, PP 1and PP 6 were able to read the story slowly with their eyes fixated on every letter in the word. The researcher also noticed that as pupils PP 1and PP 6 were reading, their eyes kept on moving back and forth as they tried to process every word. The findings seem to suggest that PP 1and PP 6 were at syllable level and, they were still more glued to print rather than to meaning. The findings further suggest that such pupils needed more systematic explicit phonics instruction to improve their reading skills. Apart from oral reading variations, there were also some oral reading errors committed by PP 1. The child kept on skipping some syllables in the words when reading as she read the story i.e. she read the sentence 'Atate anapita kukapha mbewa' as 'Atate _apita kuka_ mbewa'. In this sentence, the child skipped 'na' in the word 'anapita' and 'pha' in the word 'kukapha'. Even if this study did not focus on investigating error analysis in spoken language, the issue of skipping letters and syllables was recorded under consideration for further studies. It was also observed that PP 1 replaced one letter in the word with another letter i.e 'anapita' was read as 'anapika'. In this word, letter't' was replaced with letter 'k'.

The conclusion made from the findings are that by the end of phase 3, which is grade 2, some pupils exhibited signs of becoming skillful readers in future as they read the words as quickly as whole units, while some did not show unitization when reading, but processed every word as they read. The findings seemed to suggest that phase 3 is the breakthrough phase, as pupils' decoding and encoding skills and alphabetic principle that is used to bond spellings to their pronunciation in memory developed, although not fully in some readers. Pupils gained a deep understanding of the alphabetic principle, as they exhibited a high level of awareness of letter-sound association.

VI. CONCLUSION

One main conclusion drawn from the findings, which corroborates the literature (Ambrose et al, 2012; Hamilton et al, 2016; Tambulukani, 2015; Whitehurst and Lonigan, 1998) is that alphabetic knowledge starts developing very early in children before formal schooling, and continues until they become skillful readers. Phase 1 is therefore an emergent literacy period and all the children were nonreaders as they failed to make letter-sound connections, but they used visual and context cues to guess the words. Phase 2 is the decoding and reading phase as pupils used both visual and orthographic/letter cues to read and recognize unfamiliar words. During phase 2, pupils start developing the knowledge of the alphabetic principle. Phase 3 is the breakthrough to the literacy phase as many pupils were on the right path to attain the deeper understanding of the alphabet principle, and they were able to use letter-cues to recognize familiar words automatically. In this study, researchers noticed pupils' speedy progression in reading across all the three phases. The researchers' assumption in this scenario was that pupils' speed progression in reading especially in phase 2 was necessitated by the nature of the language in which reading was developed as it is evidenced by the literature (Ehri, 2005; Mann 1986; Wimmer, Landerl & Schneider 1994) that pupils learn to read easier and faster in the language with shallow or transparent orthography. As the data testifies, there is evidence that learning to read in the first language does not take longer than it takes in the second language. This suggests that while it may take four stages for children to learn to read in English language according to the framework used in this study, the number of stages children go through to learn to read in a transparent language are reduced to three. In this case, the partial alphabetic stage proposed by Ehri (2004) does not apply in Cinyanja language (see figure 1)

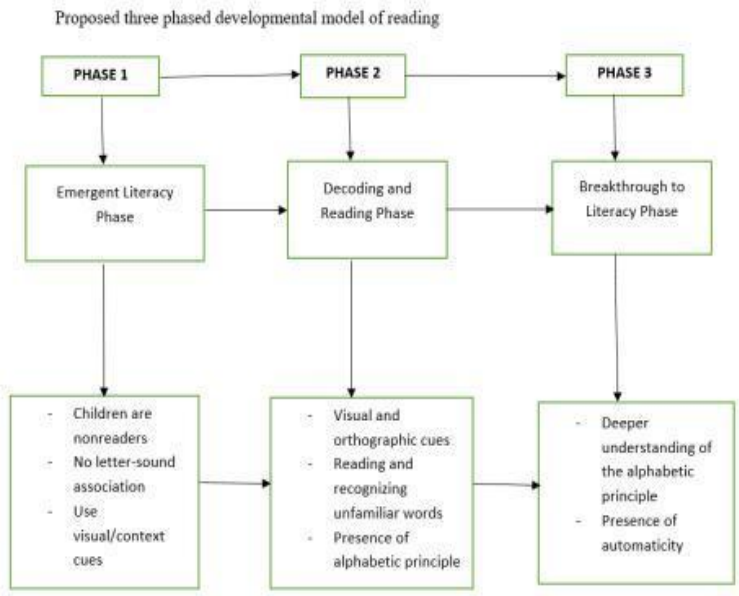

Figure 1: Proposed three phased developmental model of reading

VII. RECOMMENDATIONS

The present study has policy implications for curriculum development and review as many decisions about improving literacy teaching in Zambia are based on studies that are conducted in English and other European languages, in high-income countries with greater resources. Literacy curriculum developers should therefore consider the language in which reading is intended to be developed to avoid the tendency by teachers to simply generalize what is known or assumed about reading in English to apply to Bantu language instruction. Generalization of what is assumed about reading in English to apply to Bantu language instruction may result in the use of ill-

suited methods that may contribute to Zambian pupils' poor performance in reading.

It is clear from the findings that alphabetic knowledge start developing very early in children before formal schooling, and continues until they become skillful readers. The study therefore recommends that teachers should not undervalue the strengths and enthusiasm children bring to the process of reading, but instead, they should exploit the knowledge children come with from home as they are executing their duties.

It is also clear that children pass through several stage/phases to learn to read and become proficient readers. Based on this argument, the study recommends that teachers and researchers interested in reading development studies should conduct more studies in reading development in Zambian languages, beyond than the Cinyanja language to confirm the applicability of these patterns to transparent languages, as this may guide educators in making decisions about reading instruction.

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