

**EMERGENT LITERACY SKILLS AMONG CHILDREN HERDING
CATTLE AS A FOUNDATION TO TEACHING INITIAL
LITERACY IN SCHOOLS OF CHIPATA DISTRICT**

BY

GODFRIDAH TEMBO

**A dissertation submitted to the University of Zambia
in partial fulfillment of the requirement for the award of the
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DECLARATION

I, GODFRIDAH TEMBO, hereby solely declare that the work contained in this dissertation has been composed and written by me and that this work is as a result of my own individual effort. I further sincerely declare that this research has not been previously submitted for any academic award, and that all the work from other researchers has been acknowledged.

Signature..... **Date**

APPROVAL

This dissertation of **Godfridah Tembo** has been approved as the partial fulfillment of the requirements for the award of the degree of Master of Education in Literacy and Learning by the University of Zambia.

Examiner 1 Date
Signature

Examiner 2
Signature..... Date

Examiner 3
Signature..... Date

Chairperson Board of Examiners..... Date

Supervisor..... Date
Signature

ABSTRACT

The purpose of the research was to establish if emergent literacy skills which children herding cattle come with to formal schooling could be used as a foundation to teaching initial literacy and numeracy. The present study sought to identify what emergent literacy skills (ELS) children herding cattle have that could be used as a foundation to teaching initial literacy and numeracy in schools. Clay's theory of Emergent Literacy in line with that of teaching initial literacy and numeracy to children guided this study. The theory that children are tabular rasa as they come from their homes has been disputed by many psychologists and emergent literacy theorists such as Clay.

The study employed qualitative methodology and a case study design was used. Purposive sampling was used to identify 40 children herding cattle and two grade one teachers. Data collection protocol involved the unstructured interview guide, focus group discussion guide as well as observations. Data was analyzed by using themes which emerged from the research questions. The findings of the study revealed that the children herding cattle acquired emergent literacy skills before starting formal schooling such as drawing, counting, identification of colour, size, and even shape, naming with phonological and phonemic awareness. The study also revealed that storytelling enhances narrative and listening comprehension skills. The children also acquired the awareness that songs compose values, attitudes as well as respect to elders. The study further established that the ELS could actually be used as a stepping stone to learning initial literacy once such children were in formal school.

This study also revealed that the teaching of "reading readiness" to the first graders should be done with care and consideration taking into account ELS children like those who herd cattle before entering formal schooling. This shows that children learn to read and write gradually, rather than at a particular point in time and the herding cattle activity is a huge school full of emergent literacy skills. The study recommends that teachers of the Grade 1 take into account the emergent literacy skills among the cattle herders such as counting, naming and identification skills to be used as a foundation to teaching of initial literacy once children are in school. The Ministry of General Education (MoGE) needs to recognise and avail such findings of researches like this one to the awareness of curriculum planners so that they may include emergent literacy skills acquired by children herding cattle as a foundation to the teaching of initial literacy.

Key words: *Emergent literacy, herding cattle, initial literacy*

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DEDICATION

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ABBREVIATIONS AND ACRONYMS

AIKS	African Indigenous Knowledge System
CELP	A continuum of Effective Literacy Practices
EFA	Education for All
ELS	Emergent Literacy Skills
FAO	Food and Agricultural Organisation
FL	Functional Literacy
FDG	Focus Group Discussion
ILO	International Labour Organisation
MoGE	Ministry of General Education
NELPR	The National Early -Literacy Panel Report
NFL	National Framework Literacy
OECD	Organisation for Economic Co-Operation and Development
PLP	Primary Literacy Programme
PIACC	Programme for International Assessment of Adult Competencies
UNESCO	United Nations Educational Scientific and Cultural Organisation

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DEFINITION OF TERMS

Cattle - used to domesticated animals often used for meat and **dairy products**

Cattle herders: people looking after cattle

Continuum: Learning that creates continuity gradually and seamlessly.

Conventional literacy: reading, writing, and spelling of text in a conventional manner

Emergent literacy: refers to early literacy behaviour of children before starting formal schooling and in this study it includes reading, writing, speaking, listening, viewing, thinking, playing and any other literacy behaviour.

Emergent literacy development: acquisition and natural practice of the literacy events from home and the surrounding environment

Emergent literacy skills: the observable behaviour children exhibit which relate to conventional reading and writing practices of the adults.

Environment: includes factors such as culture which is that part of the environment made by human beings and the physical environment including the objects and people. It is also includes the patterns of behaviour and thinking that people living in social groups learn, create, and share.

Graze: a slow, day-long way of feeding on grass or in a pasture done by cows and similar animals

Herd: the activity of keeping a number of animals (usually of one kind) together as a group

Initial literacy: the time or stage an individual learns or is expected to learn the basics or the process of acquiring basic skills in a particular field such as reading and writing in conventional literacy of a particular language.

Literacy: ability to read and write, interpret pictures, signs and symbols knowledge of dances, songs, games within the environment.

Phonological awareness: conscious ability to detect and manipulate sound (e.g., move, combine, and delete), access to sound structure of language, awareness of sounds in spoken words in contrast to written words.

Reading readiness: this is point at which a child acquires the requisite knowledge and behaviour to support the learning of conventional reading.

CHAPTER ONE: INTRODUCTION

1.1 Overview

Chapter one is an introduction to the study on establishing whether emergent literacy skills children herding cattle have could be a foundation to the teaching of initial literacy in schools or not. Throughout the world emergent literacy activities are acquired by children through storytelling, riddles, songs, games as well as other activities and craft. These activities play a fundamental role of enhancing critical thinking and development of motor skills at a very tender age. This study wanted to find out whether or not children who herd cattle acquire any emergent literacy that could be used once such children are in school. The chapter presents background information to the research, statement of the problem, purpose of the study, significance of the study, research objectives and research questions. The chapter further presents theoretical frame work, delimitation and limitation of the study, operational definition of terms and structure of the dissertation. The summary is also presented in this chapter.

1.2 Background to the Study

Initial literacy learning is key to the development of the reading and writing skills in children. It is also true to say that the continuum of speaking, listening, reading and writing skills start with emergent literacy skills children acquire long before they start conventional school. As children engage in assortment of learning from birth, they are developing skills, knowledge and attitudes. Learning to read and write are a variety of skills starting with emergent literacy which leads children to development of literacy skills. Initial literacy skills such as phonemic awareness, phonological awareness, fluency and comprehension are essential for learners to breakthrough to literacy. Eventually, children will read to learn and enhance the development of a viable reading culture in primary schools. With support from the teachers, children can progress well from emergent to conventional reading and writing. Through experiences and meaningful literacy activities, teachers and parents or guardians can model and scaffold literacy skills for emerging learners (Glass, 1997).

Glass (1997) affirms that programs which invite children to access prior knowledge as the basis for individual development and growth, while providing differentiated activities and opportunities to learn which are consistent with a variety of developmental abilities, will encourage the emergence of early literacy skills. However, the teaching of initial literacy aimed at supporting the teaching of reading and writing skills in the early primary grades do not seem to recognise the significance of the emergent literacy skills acquired by children before they come to school. The teaching of initial literacy should start with identifying the emergent literacy skills children come with once enrolled in school.

Emergent literacy (EL) is a term used to refer to the literacy traits that children display before they learn how to read and write. Teale and Sulzby (1989) acclaim that emergent literacy was coined by Clay (1966). Clay was the first one who used the term emergent literacy. It is based on an assumption that a child acquires some knowledge about language, reading and writing even before attending any formal education. Clay asserts that literacy development begins early in life and is ongoing. "Emergent" denotes the process of becoming and "literacy" symbolizes the interrelatedness of writing and reading in young children's development.

Whitehurst and Lonigan (1998) refer emergent literacy to skills, knowledge, and attitudes that are developmental precursors to reading and writing. Rohde (2015) also describes emergent literacy as knowledge and abilities related to the alphabet, phonological awareness, symbolic representation and communication. Other scholars such as Gibson, (1989) have added that the term emergent literacy goes beyond children's interaction with books and encompasses all literacy practices that are within the environment where the child is born and nurtured as displayed by the child. Emergent literacy begins with the learning of language by the child. Sadr *et al* (2015) affirm that emergent literacy is a continuum of multitude behaviors, skills, methods, and perception about written language that leads and expands into conventional literacy skills which serves as a basis for future formalized instructions in reading, writing spelling.

The starting point in the process of achieving initial literacy is to recognise the important role of emergent literacy skills children come with from home. Emergent literacy skills

are acquired informally through oral transmission from elders and other family members. Children's foundation to learn initial reading and writing is embedded in establishing the skills gained from emergent literacy practices at home through different activities. Initial literacy, which is learning how to read and write, is essential to children's success in school and to the primary course, irrespective of their background, socio-economic status or opportunities (Rohde, 2015).

Herding cattle is one of the emergent literacy activities which is carried out in most parts of Zambia. Children, especially in the rural setup begin to herd cattle before they are enrolled in formal schooling. Children are mentored by the elders or the older peers so that they can make use of the knowledge and skills once enrolled in formal schooling. When children who herd cattle are enrolled in formal school they should not either be ignored and go unnoticed, unappreciated or assumed and taken for granted. In order to meet children's learning needs, teachers have to know what to observe in terms of emergent literacy skills during a child's challenge at a literacy task and how best to support such a child's attempt.

Hirst (2018) affirms that cattle as domesticated animals are among the earliest. This is because of the multitude of useful products which cattle provide to humans such as milk, blood, fat and meat. In addition, there are other products such as clothing and tools manufactured from hair, hides, horns, hooves and bones; dung for fuel; as well as being load-bearers and for pulling plows. Culturally, cattle are banked resources, which can provide bride-wealth and facilitate trade. Food and Agricultural Organisation (FAO 2013) asserts that herding is an activity of keeping a number of animals (usually of one kind) together as a group while in search of pasture or water. Herding activities can involve guiding cattle, keeping them together, retrieving those that wander off, separating fighting animals and watching over their safety. Emergent literacies that come along with children herding cattle activities are what this study wanted to establish.

Lefoka (2007) reports that socialization in herding cattle tends to start at an age range of three to five years old, this being the time when young boys, although not compelled to begin herding, may volunteer to accompany their elder brothers or relatives to look after

animals. Tambulukani (2015:36), commends that “in some societies in Zambia which rear cattle, it is customary to teach their boy children to be herding cattle and after a boy has successfully herd cattle for two years, the boy is rewarded by giving a cow of his own”. Payment in such cases is one cow after some three or so years. There are also cases where children could be looking after their uncles’ cattle, like in many matrilineal family arrangements. This is the case among the Chewa people where uncles to children own their sisters’ children and can make them spend years herding their cattle while their biological children could be going to school. The children are then allowed to go to school later and in some cases they can start their grade one at nine or ten years (Banda, 2008).

There are recent studies on emergent literacy that have been conducted in Zambia based on the emergent literacy skills children acquire long before they are enrolled in formal school. The study by Musonda (2011) targeted literacy behaviours preschoolers exhibited in selected homes of Lusaka. Zimba (2011) studied classroom practices that support continuation of emergent literacy in preschools of Kasempa and Solwezi districts of Zambia. Similarly, Kaunda (2013) also did a research on emergent literacy skills and practices among two to six year old children in Mwense district of Zambia. The studies paid particular attention on literacy-related games, songs and plays as the foundation to reading and writing (Musonda 2011, Zimba 2011 and Kaunda 2013). This study aimed at establishing if the activity of herding cattle has some emergent literacies that children who first start with cattle herding before they enroll for Grade one could lean on as they use them as a foundation to their learning of initial literacy once in formal schooling. While the learning of initial literacy could house a number of emergent literacy skills and that it would be important to establish if such skills could be used as a stepping stone to learning initial literacy skills once such children are in school.

1.3 Statement of the problem

In some Districts of Eastern Province of Zambia such as Katete, Chadiza and Chipata, children herd cattle for years before they can start formal schooling in Grade one. Often, children who herd cattle for four years or more are given a cow as a form of payment before such children can start formal education (Banda 2008 and Tambulukani 2015). However, a number of such children do not start formal schooling at all for they conclude

that they are already too late for school. There could be a number of activities children who herd cattle for a number of years may be exposed to and this study wanted to establish if such skills could be used as a foundation in teaching of initial literacy once such children are encouraged to start formal schooling. Such a possibility has never been researched in the past and therefore, scholars lack such knowledge for sure. Thus a situation where cattle herders' prior knowledge is unutilized in formal education constitutes a problem.

1.4 Purpose of the Study

The purpose of this study was to find out if emergent literacy skills which children herding cattle come with to formal schooling could be used as a foundation to learning of initial literacy and numeracy once they begin school.

1.5 Objectives of the Study

1.5.1 General objective

To establish the kind of emergent literacies children herding cattle have which could be used as a foundation to teaching initial literacy and numeracy once they are in school.

1.5.2 Specific objectives

The study was guided by following the specific objectives:

- (a) To identify types of ELS children herding cattle in Chipata District have that could be used as a foundation to learning initial literacy and numeracy skills.
- (b) To determine if learning initial literacy and numeracy skills could be enhanced by ELS, once such children start formal learning in Grade one.
- (c) To ascertain if children who herd cattle utilise ELS to enable them start from a higher grade rather than Grade 1.
- (d) To ascertain if learning and teaching materials teachers use in Grade 1 take into account ELS which children who herd cattle may possess.

1.6 General research question

What emergent literacies children herding cattle have which could be used as a foundation to teaching initial literacy and numeracy once they are in school?

1.6.1 Specific research questions

The following are the research questions:

- (a) What type of ELS children herding cattle in Chipata District have that could be used as a foundation to learning of initial literacy and numeracy skills?
- (b) How is learning of initial literacy and numeracy skills enhanced by ELS once such children start formal learning in Grade one?
- (c) How do children who herd cattle utilise ELS to enable them start from a higher grade rather than Grade 1?
- (d) What learning and teaching materials teachers in Grade 1 take into account ELS children come with?

1.7 Significance of the Study

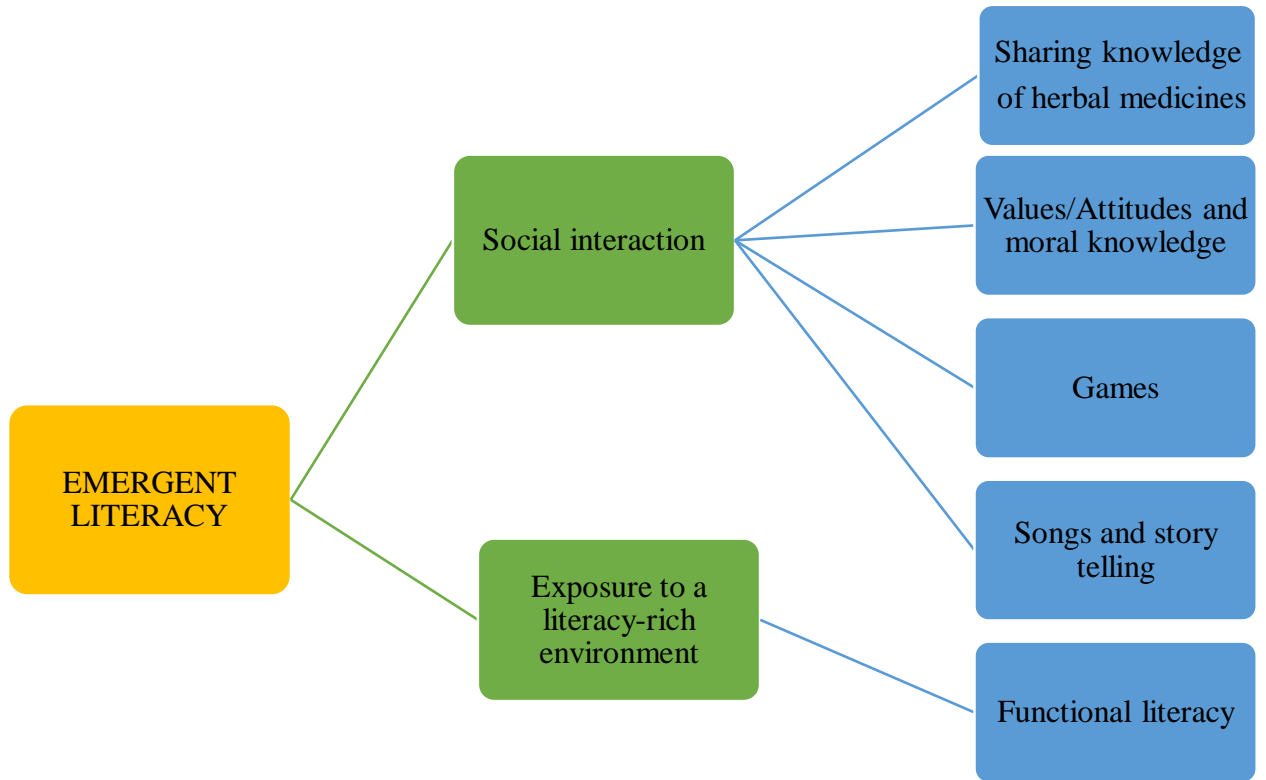
The findings of this study would reveal the emergent literacy skills children herding cattle have that could be used as a foundation to teaching initial literacy as they first come to classroom. It is also hoped that the curriculum planners may be provided with data for consideration as they design the curriculum for teaching initial literacy to the early grades. The emergent literacy skills children herding cattle have may be adopted and fused into the syllabus to provide for developmentally appropriate practices designed to meet the needs of the learners in teaching initial literacy. Teachers of first graders may exploit the fundamentals of the emergent literacy skills children herding cattle have and use them as building blocks to facilitate initial literacy advancement in primary schools. The study may further assist both the planners and the teachers by considering the emergent literacy skills children herding cattle come along with as vital for learning initial literacy.

1.8 Theoretical Framework

This study was based on the theory of emergent literacy which was introduced by Marie Clay (1966). Marie Clay, the originator of the Emergent Literacy Theory, explains that

children learn to read and write through first hearing stories, touching books, seeing letters, numbers and words long before enrollment in formal schooling. Emergent literacy, as opposed to conventional literacy, postulates that literacy develops gradually on a continuum. In this paper, the researcher views emergent literacy theory as an appropriate lens to understand how children acquire knowledge and skills from herding cattle. The researcher believes that young children depend on the cognitive or mental structures and the social environment to construct initial literacy knowledge. Emergent Literacy Theory states that there are levels of literacy behaviors which children acquire before they formally get into classroom which facilitates the acquisition of reading and writing skills at a conventional level. According to this theory, children's literacy development begins long before formal schooling and is enhanced by social interaction and exposure to a literacy-rich environment and literacy skills such as games, songs and storytelling through herding cattle. Clay's research showed that children do not go through a set sequence of skills prior to learning how to read and that reading readiness was an inaccurate term.

Emergent Literacy Theory consists of how various conditions in different language-learning environments and literacy activities affect children's everyday life. Emergent literacy acquisition is no exception in children herding cattle. Children herding cattle could be exposed to various emergent literacy skills in a given environment. The environmental settings that children herding cattle find themselves allow them to observe and participate in the purposes, styles of interaction, and activities of possible emergent literacies that could be so crucial to the development of their cognitive skills.



Source: Field data

Figure 1: Emergent literacy skills as a foundation in teaching initial literacy.

The figure above illustrates how emergent literacy provides a foundation to learning of initial literacy. Through social interaction, children are exposed to sharing knowledge of herbal medicines, values, attitudes, moral knowledge, games, songs and story telling are acquired. The exposure to a literacy rich environment leads children to attaining functional literacy. The theory of emergent literacy is supported within the home environment enhancing oral skills that are used for instructions in phonological and phonemic awareness at school. The fact that acquisition and learning of skills begin early in a child's life strengthens the concept that emergent literacy is the beginning of the continuum of literacy development. Henceforth, the applicability of this theory to the current study is based on children's knowledge and skills acquired through herding cattle that could be used as a foundation to learning initial literacy once such children are in school.

1.9 Delimitations of the Study

Delimitations are used to describe the limits of the study. The catchment area was in Eastern Province in Chipata district. The respondents were drawn from Chambawa and Mnutwa villages of the Chipata district. Chipata was chosen because of its prominence in cattle keeping by the local people. The boys and girls aged seven are engaged in herding cattle for their parents or relatives before they are formally enrolled in school.

1.10 Limitations of the Study.

The first limitation to this study was that the research findings could not be generalized to other parts of the country. This is because the study was conducted in one district among many districts where cattle herding activity is carried out in Zambia. Secondly, the sample size was small and drawn from the two villages and two schools hence the findings may not be generalized.

1.11 Organisation of the dissertation

This dissertation consists of six chapters. The first chapter introduces the study by providing background information to the investigation, stating the specific problem under investigation and giving the rationale for the study. The chapter further outlines the purpose and objectives of the study, specific research questions addressed and research delimitation and limitations experienced. The chapter presents the theoretical framework within which the study was undertaken and also presents the operational definitions by defining and illustrating some of the major concepts relating to the study.

The second chapter reviews some of the available related literature review that was considered to be of relevance to this study in order to place the investigation within the context of similar surveys, thereby enriching it and providing a justification for the study.

The third chapter describes the methodology used by this study in order to provide answers to the questions raised in Chapter One. This chapter presents a brief summary of the methodological framework employed in data collection and analysis, the details of the research design employed in the study, population and sample size, sampling techniques, data collection instruments, procedures, data analysis and reflections on ethical issues.

The fourth chapter presents the research findings organized in terms of themes which were guided by unstructured interviews, focus group discussions as well as observation. The themes were derived from the research questions as set out in Chapter One of this report.

The fifth chapter presents the discussion of the findings in response to the research questions that guided the study. The chapter presents the answers to the research questions as drawn from the data that were collected. Emerging themes from the research objectives provided headings under which the findings were discussed in order to find what answers have been provided from the data. Finally, Chapter Six presents the conclusion and provides the recommendations for the study regarding establishing emergent literacy skills children herding cattle have that could be used as a foundation to learning initial literacy in primary school.

1.12 Summary of the Chapter

The chapter has given the background to the study. It has also presented statement of the problem, purpose of the study, research objectives and questions, significance of the study, delimitations and limitations of the study. The chapter has further presented theoretical frame work that underlie the study and operational definition of terms as used in this dissertation. The next chapter reviews related literature that informs the study.

CHAPTER TWO: RELATED LITERATURE REVIEW

2.1 Overview

This chapter reviews some of the relevant literature available that has been done before and it does so by starting with a discussion on some concepts which directly and indirectly relate to this study as well as identifying the knowledge gaps this research seeks to fill. Literature that deals with an overview of literacy has been reviewed first (2.2), Cultural Literacy (2.3), and Functional literacy (2.4). The literature has further discussed the Emergent literacy concept (2.5), Emergent Literacy Skills and cattle herding (2.6) Storytelling and songs (2.7), Emergent Numeracy (2.8) as well as oral language (2.9) and summary of the chapter will also follow (2.10)

2.2 Literacy

This section presents an overview of literacy as defined by different people and organisations.

Essentially, literacy is described as the ability to read and write. At first glance, ‘literacy’ would seem to be a term that everyone understands. The definition of literacy provided by the Organisation for Economic Co-operation and Development (OECD) in the Programme for International Assessment of Adult Competencies (PIACC) considers literacy as developing across a lifespan continuum to enable an individual to achieve their potential and to participate fully within their communities and in the wider society:

Literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society. (OECD, 2009)

Soares (1992) asserts that literacy is repeatedly subject to past, cultural, economic, political and other forces. A literate person has the ability to participate in all activities in which literacy is necessary. Soares further explains that an individual can function in his group or community to allow him to continue to use reading, writing and calculating for the benefit of his community. The author views literacy from a socio-psycholinguistic

viewpoint. He stresses that literacy constitutes more than the ability to read and write, also make use of oral and written language. In addition, other sign systems such as arithmetic and art could be used. Furthermore, literacy is articulated in several ways such that one can be literate in one field and illiterate in another field. While it is true that literacy is described as the ability to read and write, Vuolab (2000) argues that the term literacy includes survival knowledge, stories, proverbs, sayings of the wise, riddles, beliefs, poems, fairy tales, myths, taboos, legends were books and not only books but theatre. This means that literacy includes many aspects other than just reading and writing. A literate person is able to utilise the literacy skills in different forms apart from reading and writing.

Literacy is recognized to be a dynamic concept which makes literate individuals to have the competencies such as knowledge, skills and aptitudes. The skills allow individuals to both understand and relate to their surroundings in ways more fine than simply comprehending words or numbers strung together. However, the state of being literate, no matter what genre of literacy is considered is not binary, meaning that not often can it be said that one is entirely illiterate or entirely literate. Rather, it is important to consider all literacies on a continuum. It simply means that individuals are variously literate, demonstrating differing levels and uses of literacy according to their environments and needs (UNESCO, 2011).

Barton (2007:19) likewise, points out that “literacy is a fairly recent word and its meaning is being extended”. Barton further emphasizes that literacy goes beyond knowing how to read and write and its definition would depend on the people’s use and experience in a specific context. Apart from knowing how to read and write, Barton adds that someone who is a teacher is literate in educational matters while another one who is an accountant is literate in the accounting field. In the accounting field, a teacher is illiterate unless the person also has attained some literacy in the form of accounts training. This entails that whether one is literate or not depends on a particular situation or set up. It is not so much what literacy is but what it does to an individual.

Mkandaŵire (2010:3) describes literacy as the “ability to manifest a skill in a particular field in order to adapt to the environment”. He further elaborates that literacy includes a wide range of skills including the conventional reading and writing. In a normal society, all human beings are literate and illiterate at the same time. The author points out how an individual could be literate in what and for what? Mkandaŵire gives an example of a professor who is literate in linguistics but may be illiterate in computer science, web designing, computer programming or political and economic issues. This clearly suggests that everyone is literate and illiterate in some fields and therefore, looking for a precise definition of literacy in present day’s world may be an impossible task if so, there is need to specify which literacy is being considered. Therefore, this entails that a person who is literate in a particular field can be illiterate in another field.

In defining literacy as reading both the *word* and the *world*, Freire (2001) recognised that literacy is more than a cognitive skill and that it includes power relationships. For Freire (2001:173), the important point is:

to understand literacy as the relationship of learners to the world. It is to dominate these techniques in terms of consciousness; to understand what one reads and to write what one understands; it is to communicate graphically. Acquiring literacy does not involve memorizing sentences, words, or syllables, lifeless objects unconnected to an existential universe, but rather an attitude of creation and re-creation, a self-transformation producing a stance of intervention in one’s context.

Furthermore, Freire (2001) acclaims that literacy is a process of consciousness in which a printed word is connected to the world for purposes of empowerment. Freire contends that literacy can only make sense as consequences of men’s beginning to reflect about their capacity for reflection. It is about the world and people’s position in the world as well as the encounter of consciousness. This means that literacy is not just about knowing how to read and write but one needs to be literate to understand the word and the world.

Royster (2007:3) had a different approach on understanding literacy and defined literacy as the ability:

to gain access to information, manage and process that information variously for example, to assemble, sort, analyze, synthesize, categorize, evaluate and make sense of it. Furthermore, to use information management tools for instance, digital media and other resources variously in communicating with others in speech, writing, and other media; understanding, articulating, and solving all sorts of problems from all sorts of perspectives.

In her view, Royster added that as a multi-layered definition of literacy brings to bolder relief how much more literacy is than just reading little letters on a page. Royster acknowledged Paulo Freire and Macedo (1987) who suggested that “literacy is a process of making meaning with language and using the multiple integrative processes associated with it to “read the word and the world” (Royster 2007:5). This entails that an individual who is literate can utilise such literacy skills to understand and solve different problems from all sorts of viewpoints.

A Continuum of Effective Literacy Practices (CELP 2014) affirms that the key to literacy is a progression of skills that begins with the ability to understand spoken words and decode written words and culminates in the deep understanding of text and written communication. The report further indicates that reading development involves a range of complex language foundations including awareness of speech sounds, spelling patterns, word meaning, grammar and patterns of word formation, all of which provide a necessary platform for reading fluency and comprehension. Moreover, CELP identifies “essential concepts and skills that children are expected to have acquired by the end of key milestone ages and how adults in their lives can assess where they are at on the continuum and what the next stage is in their literacy development.” This means that adults are instrumental in enhancing literacy skills in children in everyday life.

The views presented in this section meet at the point that literacy is much more than just being able to read and write. The definition of literacy has been expanded to cover more than just reading and writing. It is agreeable that literacy is contextual or situational. The reviewed literature has revealed that literacy development is a process or continuum. However, the definitions given do not cover literacy skills children herding cattle may acquire due to the absence of information. Hence the current research sought to establish literacy skills children herding cattle have which could be used as a foundation to teaching

initial literacy. The following section is going to discuss cultural literacy which is also part of literacy.

2.3 Cultural literacy

Cultural literacy is the ability to understand and appreciate the similarities and differences in the customs, values and beliefs in one's own culture and cultures of others. Knowledge in one's culture develops one's potential and enables an individual to participate fully in the wider society. Hirsch (2015) acclaims that cultural literacy is the ability to understand, interpret and participate confidently in a given culture. A culturally literate person knows the object-language's alphabet, grammar and a sufficient set of vocabulary. A culturally literate person knows a given culture's sign and symbols, including its language, particular dialectic, stories, entertainment, idioms, idiosyncrasies and so on. The culturally literate person is able to talk to and understand others of that culture with confidence, while the culturally illiterate person fails to understand culturally-conditioned allusions, references to past events, idiomatic expressions, jokes, names, places and so forth.

The cultural practice of including children from an early age in domestic work is widespread in African societies. Weisner (1998:72), argues that "the mind and mental processes of the child develop interdependently with ecocultural daily routines along culture-specific pathways." Children are prepared to learn from and respond to their environment and children's participation in these everyday activities is the single most important influence on their development. Weisner further elaborates that through participation in the daily routines in activities and settings with the changing developmental needs, the children become competent members of their community. The continuing development of cultural competence, increasingly complex and elaborate schemas for organizing cultural knowledge develop in the mind of the children.

Furthermore, Weisner explains that involving children in culturally meaningful practices they do not only become competent members of their community but such children also have their personalities shaped by these everyday routines. In this way children internalize the cultural models of their community. These models in turn influence children's emotions and behavior. Development, in other words, is an ecocultural project in which

parents try to achieve cultural goals and well-being for themselves and their children, despite limited resources and social constraints. The ecocultural theory of development provides a useful analytical framework for studying how children in herding societies are socialized and how they internalize a pastoral personality. This means that a child needs to appreciate cultural knowledge in order to contribute effectively towards the development of the community.

This section reveals literature that shows cultural literacy as the ability to understand and appreciate the similarities and differences in the customs, values and beliefs in one's own culture and cultures of others. It further described children's participation in the everyday activities as the single most important influence on their development. It is through participation in the daily routines, activities and settings that change along with the changing developmental needs, that children become competent members of their community. However, the literature did not talk about the emergent literacy skills among cattle herders which this study endeavours to establish. The following section reviews literature that deals with the functional literacy as it is also part of literacy.

2.4 Functional literacy

The *National Curriculum for Literacy* (NCL 2007) commends the use of literacy skills by an individual to independently handle routine situations in his or her daily life which becomes an ultimate objective of literacy. NCL affirms that a person is functionally literate and has acquired the knowledge and skills in reading and writing, which enables someone to engage effectively in all those activities in which literacy is normally assumed in his culture or group. This term was originally introduced by UNESCO (1986), which states that:

A person is literate who can with understanding both read and write a short simple sentence on his everyday life (...) A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning in his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community's development. (UNESCO, 1986:4)

Functional Literacy (FL) is described as meaningful acquisition, development and use of reading and writing (also for numeracy purposes) in everyday life, as a tool for self-expression, information, communication, lifelong learning, work and civic participation. It is also a means to improve one's life and to contribute to family, community and national transformation and development. The term Functional Literacy has been understood as the ability to read, write and to perform basic mathematical calculations. This shows that a child who is functionally literate would be able to perform effectively in everyday life activities.

This section has reviewed the literature that showed the importance of functional literacy in the life of a child. As explained by the scholars, children are functionally literate and engaged in all those activities in which literacy is required for effective functioning of his or her group and community and also for enabling him or her to continue to use reading, writing and calculation for his or her own and the community's development. The following section reviews literature that deals with emergent literacy concept.

2.5 Emergent literacy concept

The idea of emergent literacy is attributed to Marie Clay, a New Zealander who first used it in 1966 when she described how young children interact with books and imitate reading and writing, even though they could not read or write in the conventional sense. Clay (2001) argues that children arrive at formal literacy instruction with developed systems to process non-print information (processing systems related to: the syntax of oral language; meanings of words; visual forms of objects, pictures, scenes; making sense of daily activities, and understanding stories). Young children develop these processing systems as a consequence of their early life-experiences.

Clay's findings demonstrated that through the simultaneous development of reading, writing and speaking skills, children entered literacy. Clay further recognizes how young children are in an ongoing, developmental process of becoming literate and with the support of parents, caregivers and teachers, children progress from emergent to conventional reading and writing. Emergent literacy also is described as a continuum of multitude behaviors, skills, methods and perception about written and language that lead

and expand into conventional literacy skills and serve as a basis for future formalized instruction in reading, writing and spelling. Marie Clay's research was like an eye opener to would be researchers in different fields concerning emergent literacy skills as a foundation to the teaching of initial literacy in formal school. This holds for the development of studies on emergent literacy. Clay's work made it clear that young children take steps in the written world. These steps which are part of the process of acquiring literacy begin long before a child begins formal schooling and have been referred to as emergent literacy. Although Children cannot yet read, many pre-readers already have discovered much about the processes of reading and writing.

This entails that children are well equipped with emergent literacy skills which could be used as a stepping stone to learning conventional literacy. Clay's study revealed the type of emergent literacy skills children acquired within home environment while this study endeavours to go beyond to establish what type of emergent literacy skills among the cattle herders that could be used as a foundation to teaching initial literacy once such children were in formal schooling.

Whitehurst and Lonigan (1998) also give a detailed account on emergent literacy as skills which begin developing in early infancy and early childhood through participation with adults in meaningful activities involving talking and print. Emergent literacy skills are the basic building blocks for learning to read and write. In the authors' account, the duo state the model of Emergent literacy as two interdependent domains "Outside-In" and "Inside-out" processes and skills. The models are represented as a continuum with the knowledge of context at one end and understanding of rules of letters and their sounds at the other. Whitehurst and Lonigan, the term outside-in processes are used to describe conceptual knowledge, such as the function of print, particularly in the context of narrative. Children's processing of the overall text, according to the authors, is where the understanding of the context in which they are trying to read or write occurs. The comprehension of all but the simplest of writing depends on knowledge that cannot be found in the word or sentence itself. The outside-in end of the literacy continuum recognizes that reading is ineffective without comprehension strategies, including the use of background knowledge, to decipher the message of the writer to the reader. The child

has to depend on the outside-in processes which have to do with the knowledge of the word, semantic knowledge and knowledge of the written context in which this particular sentence occurred. To comprehend a written sentence, a child has to translate and categorise graphemes into sounds and also be able to understand the concepts and context in which the sentence occurs.

On the other hand, Whitehurst and Lonigan further explain the inside-out processes which include knowledge of graphemes or letter naming knowledge, phonological awareness, and repair of grammatical errors, letter-sound knowledge and emergent writing. These include understanding how to match the smallest components of literacy, sounds and print units together, moving towards larger units of words. A child's ability needs to be supported in order to decode the letters in a sentence into correct phonological representations which depends on knowing letters, sounds, links between letters and sounds, punctuation, sentence grammar and cognitive processes such as being able to remember and organize these elements into a production sequence. Inside-out processes are grounded on the elements of the sentence itself. Nonetheless, a child could have the requisite inside-out skills to read the sentence aloud and still not read it successfully. Understanding of the text depends on knowledge that cannot be found in the word or sentence itself. This is the narrative, conceptual and semantic context in which a sentence is found and how the sentence makes sense within that context.

The outside-in and inside-out processes are both vital to reading and work simultaneously in readers who are reading well. This means that the two processes are mutually supporting the essential components guiding a child of being literate. Whitehurst and Lonigan's outside-in and inside-out processes help a child to develop both the knowledge of letter-sound knowledge and comprehension strategies while this study endeavours to find out if cattle herders would be able to use the same emergent skills for learning initial literacy once in formal schooling.

However, Rohde (2015) contends that learning to read in children has long been held as a necessary ingredient for success in school and in life. Starting children on the path to reading begins early. Children learn about the function and process of reading and writing

long before they pick up a book and decode the text. Rohde states that early skills, known as Emergent Literacy (EL), include the knowledge and abilities related to the alphabet, phonological awareness, symbolic representation and communication. Rohde used Mason and Sinha's (1993) ideas and pointed out that Emergent Literacy skills (ELS) are founded on the theory that literacy emerges from children before they are formally taught to read. In addition, ELS go beyond decoding and encompass the processes of reading, writing, speaking and listening.

The child's point of view and active involvement with literacy constructs are highlighted during Emergent literacy acquisition. Similarly, the social setting in which children are learning about literacy is addressed. Rohde points out the importance of the knowledge and skills children acquire as they are growing up so that these skills are used as basic foundation for reading and writing in school. This entails that even before children are introduced to conventional literacy, they have already acquired the knowledge and skills which could be used as a stepping stone.

While it is believed that emergent literacy is the term used to describe a child's developing concept and behaviour as print becomes meaningful, Teale and Sulzby (1989) argue that it is a process influenced by cognitive and social interactional factors which begin at home before formal schooling and develop into conventional literacy at school. From an emergent literacy perspective, reading and writing develop concurrently and interrelated in young children, fostered by experiences that permit and promote meaningful interaction with oral and written language. The duo attests to the fact that the process of becoming literate starts before school intervention. Teale and Sulzby further point out that these early literacy behaviors, skills and attitudes are not 'pre- anything'. It is not reasonable to point to a time in a child's life when literacy begins. Thus emergent literacy is the term used to refer to the literacy traits that children display before they start learning initial literacy.

However, emergent literacy skills which are developed prior to five years of age, strongly predict achievement in later initial literacy learning and many other fields throughout life. This shows that the background of the emergent literacy skills children come along with

from home sets a foundation to learning initial literacy in school. It is for this reason that the present study seeks to establish whether these literacy traits and behaviours among cattle herders could be used as a foundation to teaching initial literacy once such children are enrolled in formal schooling.

Teale (1986) similarly commends that the field of emergent literacy has made educators, teachers and parents aware that much more was happening in the development of literacy than the term *reading readiness* described. Teale added that something that emerges should have been there at the beginning and only shows itself under the right conditions. This is an indication of the child's own natural learning ability which facilitates any kind of learning. The social- cultural context is also a determining factor in the awakening of this innate ability. Teale stresses that the kind of home and surrounding environment that a child grows up in will either help or hinder emergent literacy. Children's need to communicate, their curiosity and their skills for making sense of the world prompts this development. This means that children go to school with prior knowledge on reading and writing which teachers should take advantage to teach writing and reading skills in formal schooling, hence the need for the present study to determine what emergent literacy skills could be used to teach initial literacy.

Furthermore, Spedding *et al* (2007:7) argue that:

recently, it has become common to refer to these early language and literacy behaviors as 'emergent literacies', recognizing that literacy includes talking, listening, visual literacies such as viewing and drawing, and critical thinking, not just reading and writing. In addition, the literacies of technology (such as computer, internet, faxes), popular culture (such as movies, theatre, art), functional literacy (such as road maps, timetables), ecological literacy (especially for Indigenous groups) and literacies other than English are relevant to the lives of young children today.

Spedding *et al* further elaborate that emergent literacy differs from conventional literacy as it examines the range of settings and experiences that support literacy the role of the child's contribution and the relation between specific literacy outcomes and the diverse experiences that precede those outcomes. Spedding *et al* acknowledge the continuities between early literacy behaviors and initial literacy. This entails that children with

emergent literacy skills, provided they are guided by teachers progress well when introduced to writing and reading in formal schooling.

Heath (1983) also acclaims that children see a lot more than we think they do and they understand a lot more. The children become socialised into many things just by listening, looking, watching, imitating and so on. Children see how adults act with and react to print. They know print can bring joy or sorrow. Today it has been discovered that literacy emerges not in a sequential manner, but as a response to the previous exposure to language experienced by the child in his environment, social context and linguistic context. Hence, the concept of emergent literacy has gradually replaced the terms "reading readiness" and "early reading and writing." Reading Readiness first appeared in about 1925 and with it the concept that there is an educational job of preparation to be done before a child enters into the formal school reading program.

Reading readiness appeared to be an inaccurate term because, with time it has been realized that long before the children are introduced to conventional literacy they already display some literacy abilities. Ontario Government (2003) defined "Reading Readiness" as the point at which children are ready to learn to read and write as well as the time during the transition from being a non-reader into a reader. "Reading readiness" suggests that there is a point in time when a child is ready to begin to learn to read and write. Reading readiness is different from emergent literacy which suggests that the development of literacy takes place within the child. Thus, the term reading readiness could no longer adequately describe what happens in the literacy development of a child (Teale, 1986). Therefore, it means that teaching initial writing and reading should be handled carefully taking into consideration that children are not coming in school absolutely blank to be filled in with knowledge. This is what the present study endeavours to find out whether the children herding cattle are exposed to these emergent literacy skills which could be used as a foundation to teaching initial literacy.

Kaunda (2013) carried out a study on emergent literacy skills and practices among two to six year old children. The problem being investigated was what emergent literacy practices, if any, were exhibited by children aged two to six in rural areas before they

begin formal schooling, with special reference to Chisheta and Chipongoma villages in Mwense district of Zambia. This study established that children generally exhibited a number of literacy skills before starting formal schooling such as drawing, holding a pencil, scribbling, narrative and listening comprehension skills, singing, reciting memory verses and pretended reading.

Kaunda emphasized that children were able to engage in literacy-related games and play and other practices which enabled them develop certain skills required for literacy development. The study further revealed that most households organized literacy practices and activities which helped their children to develop full emergent literacy skills. The children's elder siblings were instrumental in supporting the literacy development of their young siblings. Moreover, the study also revealed that at community level, there were a number of activities and practices which the community did not intend for literacy but which actually contributed to the children's literacy development. It was seen that there was some home and environmental print to support emergent literacy.

Although Kaunda's study is similar to the present one in that it identified emergent literacy skills in children before enrollment in formal schooling, it did not constitute children's emergent literacy practices among the cattle herders. In as much as the study by Kaunda shades more light on emergent literacy skills, the study does not specifically analyze emergent literacy practices in children herding cattle that could be used as a foundation to teaching initial literacy once enrolled in school which the present study seeks to establish in chapter four and five. The present study is different from Kaunda's study in that it goes beyond the home environment to find out emergent literacy skills cattle herders acquire as they are herding cattle and whether the same skills could be used to learn initial literacy once enrolled in formal schooling.

Similar results to those in kaunda's study are reflected in Kasonde's study (2013) who established that actually children entered school already possessing skills, knowledge and attitudes which were the foundation to conventional literacy. The child's social and cultural context influences the development of the initial literacy. The study revealed games played by preschoolers as well as establish what type of skills, knowledge and

attitudes found in children's play and games which could be characterized as foundations to literacy and numeracy or those that aid their development. Moreover, the findings indicated that preschoolers in the targeted compounds were engaged in both exploratory and rule-governed play depending on how the game was played or what behaviour the players engaged in while playing. The age and gender of the children as well as the culture and social economic status of their parents determined the kind of games that the children played. Kasonde's research is rooted into the social cultural contexts and situates it into the notions of constructivism which views social interaction as a primary mechanism for children to develop their individual understanding and knowledge about reading and writing.

However, although Kasonde's study established that children entered school already possessing skills, knowledge and attitudes which were the foundation to conventional literacy, the study did not specifically talk about emergent literacy skills children herding cattle have as the foundation to teaching initial literacy in school. This is contrary to the present study which is in the quest of identifying what emergent literacy skills cattle herders attain to enhance writing and reading in formal school.

The study by Musonda (2011) revealed literacy behaviors which children who were not yet enrolled in formal school exhibited in selected households of Lusaka. The main focus of the study was on correct handling of books to pretend reading. Children were able to engage in other literacy-related games and play. Musonda in her study also found that children had well developed oral skills and were able to count and write numbers. The findings in Musonda's research also showed the presence of literacy behaviors in the children's play. However, the researcher argued that children were able to enhance their emergent literacy even by just observing the games being played because they heard names of objects which were in words that stood for numbers. Like the present study, Musonda's research reveals the positive effect of repetition of songs on vocabulary and oral language enrichment which such children displayed before they could be introduced to conventional writing and reading.

Unlike Musonda's study which was conducted in the selected house holds of Lusaka, the present study was conducted in a rural setup of Chipata district whose main activity among the children was cattle herding. Moreover, this study aimed at establishing whether cattle herders attain any emergent literacy skills that could be used as a foundation to teaching initial literacy once such children were in formal schooling. In as much as Musonda's study revealing literacy behaviors in games and the importance of language games and other activities that children know and play before they start formal schooling, she did not provide an elaborate analysis of activities in children herding cattle as aspects of emergent literacy. Instead, she only dwelt on the contribution of songs and games to early childhood development. Furthermore, the study does not specifically analyze the emergent literacy activities in children herding cattle that could be used as a foundation to initial literacy before children get into Grade one.

The literature reviewed above begun with an overview of the term emergent literacy to the scholarly circles by the New Zealand researcher Marie Clay. Emergent literacy has been explained as comprising skills, knowledge and attitudes that could be used as the foundation to conventional literacy. Emergent literacy has also been presented as a process whose components develop and increase over time. This process begins long before children enter formal schooling. Therefore, children do not start formal school with lack of behaviors that are foundations of the teaching of initial literacy. However, the reviewed literature did not include the emergent literacy skills children herding cattle have that can be used as a foundation to the teaching of initial literacy in primary schools. The current study seeks to establish the presence of these emergent literacy skills children herding cattle have if at all there is a possibility that such skills could be used as a foundation to the learning of initial literacy in school.

2.6 Emergent literacy and herding cattle

FAO (2013) argues that it is not always easy to distinguish between child labor and acceptable child work, where the latter is not considered harmful and can be beneficial to children in certain situations. Especially in the context of rural family-based endeavours, it is important to realize that age-appropriate tasks that carry minimal healthy and safety risks and do not interfere with a child's schooling and leisure time can be a healthy part

of growing up in a rural environment. It can provide children with agricultural knowledge and skills for their future. Similarly, Serpell (2016) further clarifies that even the International Labour Organization (ILO), despite its intensive advocacy against “child labour,” acknowledges that in the context of family farming, small scale fisheries and livestock husbandry. Some participation of children in non-hazardous activities can be positive as it contributes to the inter-generational transfer of technical and social skills and children’s food security. Improved self-confidence, self-esteem and work skills are attributes often detected in young people engaged in some aspects of farm work.

Furthermore, in a report by FAO (2013) affirms that both girls and boys are involved in livestock activities. They typically start herding and caring for livestock at a very young age (four to seven years). Apart from herding cattle, children are involved in feeding and cleaning animals, collecting fodder and water and working with draught animals for cultivating the fields. FAO’s report quotes Afenyadu (2008) and Zdunnek *et al.* (2008) describe how in North and South Tongu (Ghana), boys herd cattle for relatives (and nonrelatives), also outside their own communities. They work for three to five years under contracts agreed verbally by the parents, boys and employers, at the end of which they receive a calf or cow. It is through involving and giving proper guidance by the elders on herding cattle, children are put in the right path to acquire the emergent literacy skills. This means that the knowledge and skills acquired through herding cattle could be used to learn initial literacy once these children are enrolled in formal school. Therefore, the current study seeks to find out whether these emergent literacy skills could be used as a foundation to teaching initial literacy in school.

A study conducted by Howes (1980) among the Fulani of Northern Senegal revealed that children start pastoral duties at a very young age (five to seven), progressing naturally from their plays to actually guarding calves in the compound. The results showed that the Fulani children would start by playing a game of hyena, sheep and shepherd, or play with clay or wooden toys representing animals and plants. These activities displayed by the Fulani children are part of emergent literacy and could be used as a foundation to teaching initial literacy once enrolled in formal school. In almost all groups, the father teaches the sons by going out with them first, then giving hands-on responsibility, and the knowledge

is already firmly established by ages nine or ten. This is similar to the present study where parents are involved in scaffolding children's acquisition of skills and knowledge in herding cattle. However, the aim of this study is to find out whether such skills could be utilised for teaching initial literacy in formal school.

Pitikoe and Morojele (2017) state that knowledge and skills in herding cattle were acquired through the children's daily interactions and required repeated practice until they had fully mastered the skill. Additionally, the children herding cattle mainly learned basic numeracy skills through the assistance of their peers and older peers. The skill of basic numeracy was a requirement for livestock motoring. The herders compensated for their illiteracy by devising other traditional means of knowing and identifying the livestock for the same purpose of monitoring. Pitikoe and Morojele described the unique counting acumen (sharpness of mind) and informal learning of basic literacy and numeracy children herding cattle have. The lifestyle in herding cattle coupled with the low literacy rates greatly influenced what the children learned and how they learned it. The herding cattle context also builds children's capacity in problem solving skills, resilience, and wisdom that could be applied in practical ways and had immediate relevance to their lifestyle. In spite of the children's inability to read and write, most of them were tasked with the responsibility to skillfully look after large herds of cattle.

The study further reveals that the environment had capacitated the children herding cattle with unique skills that enabled them to carry out their responsibilities with ease. One such skill revealed in the findings was the children's unique non-numeric acumen in identifying and counting their livestock. Children effectively managed the records of their livestock, they indicated that because they could not count the animals, they were able to identify the livestock with the earmarks, which were usually unique to each livestock owner. Further findings showed that children herding cattle had learned to become so intimate to the cattle that they could tell without necessarily counting, that a cow was missing. Indeed, the herders had developed advanced identification capacities enabling them to spot the different shapes of the cattle so closely that, at first glance, without going into the numeric, they could establish whether one of the cattle was missing or not. Pitikoe and Morojele discovered that learning was also done through visual matching where the children

herding cattle matched the number of cattle with the number of stones that were dropped. Moreover, the herders learned different forms of both numeracy and literacy. For some, the numeracy skills were acquired through the actual counting from one up to a certain number.

In as much as Pitikoe and Morojele's study shows that children acquired literacy and numeric skills, the study does not mention if these children later on are enrolled in formal schooling. This is contrary to the present one which intends to do a study on children herding cattle who have just been enrolled in Grade one. This is in line with the aim of the study to find out if cattle herders are able to use the emergent literacy skills they come along with to learn conventional reading and writing. Furthermore, the above study did not mention whether the literacy and numeracy skills the children herding cattle acquired could be used as a foundation to teaching initial literacy in school which this study endeavors to investigate. This is what the present study seeks to find out if the acquired skills could be used as a foundation teaching initial literacy once these children were in school.

Moritz (2008) conducted a similar study on children herding cattle. The study focused on the developmental phases of children herding cattle which included activities such as role playing, calf handling, herding instruction, dominating animals, and herding alone. Through everyday participation in herding cattle routines at each stage in their development, Moritz argued that children develop a pastoral personality. During the day, FulBe children observed their parents and other adults in the camp engaged in activities such as milking, childcare, fetching water, cooking, and other domestic tasks. Boys start playing with clay cattle and corrals when they are about age three and can be observed hitting their clay cattle with small sticks, just as they will do later in life with real cattle. Moritz elucidates that girls are sometimes assigned herding tasks for example, when a household or family has no boys of suitable age but herding is mostly regarded as a male activity. Boys, therefore, play in the bush while they are herding cattle, which involves being away from the camp for the greater part of the day and away from supervision of mothers and other female caretakers. The routines are part of the cultural complex that is adapted to the ecology of herding animals.

Moritz further expresses how in early childhood FulBe children play “herding” with the calves that remain in the camp after the mature animals have left for daily grazing in the bush. At first children chase the calves all over camp without a clear sense of direction or purpose, but play gradually becomes work when the day-to-day management of the calves becomes their responsibility. This entails that children by following instructions on herding cattle, they were acquiring emergent literacy skills. Although, for children especially the boys, this was part of the daily routine activities. However, Moritz did not specifically analyse whether the emergent literacy skills acquired by children could later on be used as a foundation to learning of initial literacy once enrolled in school, hence this study will investigate what types of emergent literacy skills that could be used as a foundation once in school.

Likewise, Ba (1982) asserts that herding cattle is the art of guarding and conducting livestock. Among the Fulani of Mauritania and Senegal, the herder guards cattle by moving livestock against the wind so that they can smell predators. The art of conducting includes night grazing, never allowing cattle to drink at noon especially in the dry season, and learning all the signs, cries and songs needed to ‘talk’ with cattle. Not everyone has the same aptitude and skill in herding. Cows respond to voices of the herders. Cows are afraid of low, harsh voices. Calling out or whistling to cows from behind the herd along the track keeps them moving without causing fear. It is advised that children herding cattle use a higher friendly tone or whistle from behind the herd along the track to keep them moving (<http://www.lamecow.co.nz/pdf/12-cow-behaviours-and-cow-flow.pdf>). The study above shows that children involved in herding cattle had acquired special skills which enabled them carry out their duties effectively. In as much as this study was carried, Ba does not mention whether skills and knowledge acquired could later on be used as a foundation when such children went into formal schooling. That is what the present study intends to find out if the emergent literacy could be used in school.

The literature above reveals how male children are involved in herding cattle while acquiring the social literacy. In this section literature has attested to the fact that herding cattle is an art that requires intelligence. Furthermore, the literature has reviewed that emergent literacy enhances knowledge and skills among the children herding cattle which

is acquired through their daily interactions, and required repeated practice until they had fully mastered the skill. The children herding cattle mainly learned basic numeracy skills through the assistance of their peers and older peers. Thus, this study seeks to further find out whether the basic literacy and numeracy acquired by children herding cattle could be used as a foundation to teaching initial literacy in schools.

2.7 Emergent literacy and initial literacy

Olurinola and Tayo (2015) contend that colour is powerful tool, which has many uses in education. It can be used to get attention, enhance clarity, establish a code, label things in nature and differentiate items. Teachers use various colours to influence learning outcomes. For example, the red ink is supposed to be used by teachers to correct assignments, notebooks, and class works. It is definitely done to draw the attention to the mistake children may make. Colour draws on both symbolic and cognitive powers to affect learning, facilitating memorization and identification of concept. Colour also influences the way children see and process information. Colours can play a positive role in affecting learners' cognitive retention.

While the duo report on the importance of colour which is a powerful tool in the teaching and learning process, the report does not mention how this skill is acquired. It is also not clear whether colour is one of the emergent literacy skills children herding cattle have, hence the need to find out if children herding cattle acquire the skill of identifying colour as part of emergent literacy skills which could be used as a foundation to teaching initial literacy in school.

Borkfelt's study (2011) reveals the practice of naming which is among the most basic actions of language. Indeed, it is naming something that enables us to communicate about it in specific terms, whether the object named is human or non-human. A name is a representation and can therefore potentially carry all the values, ideas, perceptions and conceptions carried by representations and have the array of potential consequences, which can ensue from representation. Naming is thus not only the first and most basic of linguistic processes; it is also an excellent example of the power or control that is in many ways inherent to language use. Borkfelt used Hearne's (2007) ideas that, "if we merely

use a name to speak about an animal but not directly to it, we are not allowing the animal to have an identity the way we have and are therefore upholding an artificial distance between ourselves and the animal.” Hearne ascertain that:

Some animals are able to know their own name, thus having a consciousness of their own identity, giving an animal a name does often draw it closer to us. It can make us think about it as an individual, a person. In a way, the animal may become humanized. Especially since we often give non-human animals, who we regard as special in some way, names we would also use for humans. Indeed, it can be argued that as we have, historically, come to regard other animals with greater complexity, it has become more common to use human names for them (2007:169).

This shows how the naming skill is important and could be useful in a classroom situation. In as much as the above study talks about giving names to animals in general, the present study would seek to find out if such a skill is there in herding cattle which later could be used to teach initial literacy in school.

Nkolola’s study (2013) is yet another study on names and naming cattle. The study brings out the role of cattle names in reconstructing Tonga culture, shedding light on the Tonga people’s social world view, socio- economic milieu and the value they attach to cattle. The study discusses the sources, meanings of names and naming systems for cattle among the Tonga of Zambia. Nkolola’s study reveals that the relative social value attached to each category of names is assumed to be proportional to the number of distinct names it comprises: meaning, simply, that the more times certain types of names appear, the greater the value they express.

The research further discovered that cattle are not simply viewed as collective possessions and that each animal is given a separate and specific identity by its owner, which may be reflected in its time. It also shows that just like personal names, names of cattle among Tongas are not given unmindfully. The names given to cattle relate to the immediate natural environment and social setup and they reflect the beliefs and customs of the Tonga people. Nkolola’s study highlights the significance of names and naming system of cattle.

This study, in looking at names and naming cattle did not analyse the names as part of emergent literacy skills children herding cattle have as a foundation to teaching initial literacy. Conversely, it provides a spring board to the current study.

2.8 Emergent literacy in Storytelling and Songs

The use of oral traditional stories empower the children to recount life's experiences, recast stories that have been told to them and then share with others in a wonderment manner. St. Amours (2003) explains that naturally stories are a vehicle on what children build on oral language skills to develop literacy. Hence, allowing children listen to stories enables them to gain the insight about their knowledge, creativity, and language ability and strengthen their thinking processes. The scholar also stressed that the story to which the child is exposed to at home also prepares the child for structure and development of narratives. The study also clarifies that encouraging children to participate in storytelling may expand the child's language to literacy and make him/her become good at the time they get into formal school. This implies that storytelling furnishes children with knowledge and skills that are believed to enhance literacy in school.

In a study by Kakoma (2017) reveals the meaning of indigenous songs. The aim of the study was to find out the meaning of Zambian indigenous songs for early childhood music learners and teachers. The study showed that indigenous songs linked one generation to another and that they conveyed the cultural norms and values of the society. Singing indigenous songs helps the learners with language development, improves their body movements and muscle growth. Kakoma further mentioned that indigenous songs create a feeling of connectedness and friendship, makes people happy and uplifts their spirit. In addition, Kakoma established that songs are used for different purposes such as appreciating God's creations, mockery, expressing happiness, recalling names of months of the year, learning about health and warnings for safety, therapy and communicating with the ancestors. Indigenous songs help to promote children's physical development through jumping, limping, running and dancing and develops them socially through their singing together.

To further underscore the meaning of indigenous songs for pre-school learners, it is evident that indigenous songs promote children's mother-tongue learning, making it easy for them to understand what they are doing. This entails how beneficial indigenous songs can be especially to the children who are learning to improve on their vocabulary as well as listening and speaking skills. Kakoma's study is similar to the present study which intends to find out what kind of songs do children herding cattle learn and how the songs could be utilised to learn initial literacy once these children are in formal schooling.

Nannyonga-Tamusuza (2013) also affirms that musical meaning in children's indigenous songs can also be found in story songs, lullabies, games songs and folk tales. Nannyonga-Tamusuza further explains that the lyrics of indigenous songs promote ethnic cultural values and heritage, and convey affection for the society and its people. Indigenous songs can only be meaningful to preschool children if they can mould the learners for their intended purpose in the village, community or nation. Mutema (2013) established that through the songs and games children got to know their environment and acquired life skills among other things.

This study investigated the existence and performance of traditional children's songs and games among children. Mutema mentions that the Shona traditional children's games and songs played a crucial role in the transmission of Indigenous knowledge in its various forms to the young. Songs have always been a way for children to remember stories and learn about the world around them. Using songs as a stimulus can effect one's emotions and make information easier to remember. This shows that songs also create an environment that is conducive to learning. They can reduce stress, increase interest, and set the stage for listening and learning during the process of learning and teaching. Indigenous songs can foster teaching and learning process. The present study seeks to find out if cattle herders learn indigenous songs and could the songs be used as a foundation to teaching initial literacy in school.

2.9 Emergent numeracy

The study by Banda (2008) holds that accounting system was adequate for its purpose among the Chewa people, as everyone knew how to keep very accurate records by

marking stripes on the wall. In Chewa, the counting is in base five while the English one is base ten. This counting aspect is an important component not to be ignored. Banda further revealed that it would be better if primary teachers used that knowledge as basis for teaching in schools especially for the teaching of initial literacy. Children come to school with knowledge of counting in base five which needs to be incorporated in teaching mathematical issues. Banda in his research raised a concern that teachers and textbooks seem not to take advantage of the experience in the counting systems that children possess from their communities which could be used as a foundation to teaching initial literacy and numeracy. Teachers tend not to acknowledge the basic skills of counting children acquire through emergent literacy. This has contributed to the poor performance in mathematics subject and so much to drop out rates reason being that teachers ignore the counting skills children come along with from home .

Banda's research revealed that pupils bring to classroom knowledge in counting, family planning, farming and gardening and in many other areas but teachers do not help pupils to bring these skills out and use them. Teachers just follow the textbooks and teach what they think will be in the examination. The research has also shown that teachers find it difficult to tap the indigenous knowledge from the learners' everyday life to school work as they themselves are not familiar with the Chewa. The study acknowledged the use of songs, play, riddles, proverbial wisdom, tasks, expeditions, observations, stories, use of all the senses, games, songs, chants, riddles, observations that would promote the teaching of various core subjects. Teachers can take advantage to use these skills to teach initial literacy.

Banda points out that in the case of the Chewa people when boys are herding cattle, they share knowledge of herbal medicine for their sick animals. Banda cited Vuolab (2000) who explains that "You do not need to have books in order to have literature and to have literacy. My family, my home, and nature around my home were my libraries. My literary events took place in our cowshed as we were milking cows". This Means that children are bound to acquire different emergent literacy skills through herding cattle such as counting. The present study seeks to find out if counting is part of emergent literacy skills children

herding cattle have and if so, could it be used as a foundation to learn initial literacy once enrolled school?

Serpell (2016) in the same way points out that learners receive literacy and numeracy instructions in abstraction from most of the real world tasks to which those skills could usefully be applied in their everyday lives. Similarly, Ng'asike (2014) in Serpell (2016) has advanced a similar critique of the absence of any connection between formal programs of early childhood education offered to children of the cattle-herding. Ng'asike gives an example of the Turkana people of Kenya and the indigenous knowledge system as well as animal husbandry skills that inform the non-formal educational practices of the society. This means that the teachers should be more aware of the knowledge and skills children come along with to be used as a basis for teaching mathematics and other subjects. Teachers can take advantage of these skills which the children already have and use them as building blocks to any new concepts during teaching and learning process in school.

Similarly, Mwansa (2007) holds that calculations deal with numbers which is numeracy. Numeracy has been described as the capacity to use mathematics in the activities of daily life requiring quantitative skills and the capacity to reason mathematically when information is presented in quantitative form. The process of acquiring this knowledge also begins long before children enter formal schooling through herding cattle. This is referred to as emergent numeracy. Among the questions that the current study seeks to answer is whether emergent numeracy exists in the emergent literacy skills children herding cattle have that could be used as a foundation once such children are in formal schooling.

2.10 Emergent literacy and oral language

Foorman *et al* (2002) state that the components of emergent literacy include oral language, phonological sensitivity, letter knowledge, print awareness, print motivation and emergent reading and writing. Therefore, it is important that teachers of early graders recognise and utilise the oral language acquired through emergent literacy skills children herding cattle have that could be used as a foundation to the teaching of initial literacy. It is right to mention that the importance of oral language development in the acquisition of

early literacy cannot be over emphasised. Matafwali (2010) has revealed that children whose oral language is well developed at an early age have excelled in literacy, language (learning) and academic achievement in general.

The principle behind such an observation is that the child learns the sounds of the spoken words and later as he learns to read, makes associations of the sounds which he has heard and spoken repeatedly with the written words. The child becomes familiar with words which when he comes across will not be strange and this will enhance literacy acquisition and development. This entails that there are so many activities which could be used in order to improve on the oral language skills in children such as songs, storytelling, poems, tongue twisters and rhymes. Hence the present study intends to find out if cattle herders are exposed to such activities which could be used to teach oral language in class.

Banda (2017) in his presentation *Travelling from 'Emergent' Literacy to Reading to Learn on a Meandering language Policy Road* at the National Reflection workshop on Improving Early Grade Reading acclaims that treating the learners as if they come from their homes as blank slates for teachers to write on should not be encouraged when they first come into school. Banda in his presentation continues to elaborate that children herding cattle acquire different emergent literacy skills such as colours, shapes, counting, size, height, weight as well as games and plays with phonological and phonemic awareness skills. It is therefore advised that teachers of early grade children should be in a position to first find out what the children already know and use it as a foundation to learning new concepts in school. Banda quoted Michael Stubbs who states that “the general consensus in educational thinking is that education should be child-centered in the sense that learning is most effective if it is based on the child’s own experiences. Teaching has to start from where the child is, because there is, logically, nowhere else to start.” This implies that a teacher should allow children to express themselves through oral activities for learning to take place. Chances of children forgetting what they do are very slim unlike when a teacher demonstrate the oral activities on behalf of the learners.

Banda further uses Vygotsky’s (1979:83) ideas who argues that it is not practical to teach reading and writing of words and meanings of concepts directly without first teaching

them orally in a much natural way such as through language games, songs, storytelling, etc. Vygotsky further holds that the oral language must be done over time. He further warns that, “a teacher who tries to ignore this usually accomplishes nothing but empty verbalism, a parrot like repetition of the words by the children, simulating knowledge of the corresponding concepts but actually covering up a vacuum.” In the same way, Spolsky (1986:8) situates emphasis on the oral language which dictates an education that relates it to languages of intercommunication at various levels and thus imparts education relevant to the children’s needs.

Ignoring teaching oral language first deprives many learners of their subsistence in that second language. Chan *et al* (2000) hold that “There is a large body of evidence linking oral language proficiency to the development of literacy skills and argues that limitations in oral language abilities are the basis of early reading difficulties experienced by pupils.” With the evidence given above from the scholars on the importance of teaching oral language, this study seeks to determine whether children herding cattle acquire oral language skills through emergent literacy which would help them use the same skill as a foundation to learning initial literacy once enrolled in formal school.

Imange (2013) looked at the utilization of emergent literacy for teaching initial literacy in Grade 1 in Zambian Government schools, with special reference to selected schools in Mansa District. This study was a descriptive survey. The targeted population consisted of all Grade 1 classes and their teachers in Mansa District. The problem being investigated by Imange was whether teachers utilised emergent literacy in teaching conventional reading and writing skills, a procedure that would enhance continued development of conventional literacy in children at Grade 1. The study revealed that Grade 1 teachers who were observed and interviewed did not know what emergent literacy was. Neither do they know how useful emergent literacy was for teaching children the conventional reading and writing skills on a continuum model. This implies that teachers lack knowledge of emergent literacy skills, which is children’s most useful foundational knowledge in the classroom set up for teaching them the reading and writing skills. The researcher’s argument is that lack of emergent literacy skills renders the teachers incapable of creating

the necessary classroom conditions that would bring about continuity in the learning of conventional literacy.

Imange's study further discovered that most of the teachers regarded their children as not knowledgeable about anything to do with reading and writing. The teachers ignored most of the prior knowledge to formal reading and writing which learners acquired before entry into Grade 1. Teachers judged the learners as mere beginners who did not know anything about such literacy skills as holding books right side up, identifying 'print' on a page and that they were without any early writing development such as scribbles. Children's emergent literacy which greatly affects their abilities to learn, remember, reason, solve problems, and acquire new knowledge from their classroom or learning environment is not appreciated by their teachers and therefore, not utilized for the benefit of conventional literacy learning. The designing and using appropriate extra teaching materials with emergent literacy background may stimulate and broaden the chances of utilizing the essential prior knowledge to reading and writing that learners earlier acquired from their homes and pre-school environment. Relative abundance of reading books, writing materials, and other varied educational aids of various kinds will set the quality of an education system that will produce an efficient reader and writer into the Zambian society.

Although Imange's study is similar to the present one, there are some differences in that Imange used a descriptive survey and collected data from the teachers. He did a lesson observation on initial literacy teaching to see if the teachers first acknowledged the emergent literacy skills learners had during the lesson. Contrary to the present study which is a qualitative case study. The current study intends to collect data from cattle herders who had just been enrolled in Grade one as well as the Grade one teachers. This would be done with a purpose of collecting data required for this study which would be outlined in chapters four and five.

Griffith and Olson (1992) state that when children learn to speak a language, they naturally become well acquainted with its elementary speech sounds, or phonemes. Children pronounce these sounds with every word and they hear them spoken in every utterance. Despite their remarkable expertise in speech, children ordinarily spend little

time thinking consciously about the phonemes they use. Their focus is quite properly on getting meaning and on producing understandable messages. Therefore, phonemic awareness would be irrelevant were it not for the fact that phonemes are the units encoded by the letters of the alphabetic languages used in most of the modern world, the raw material of reading and writing.

The teaching of initial literacy should be based on what the children already know as this will help them understand the basic skills and especially if teaching and learning is carried out in a familiar language. The emergent literacy skills children herding cattle have sets the background language knowledge to learning in school. The *National Literacy Framework* (NLF 2013:5) states that:

Learning in one's first language is 'essential for the initial teaching of reading.' Children arrive on the first day of school with thousands of oral vocabulary words and tacit knowledge of the sound system of their mother tongue, but are unable to use and build upon these linguistic skills because they are instructed in a foreign language. Dismissing this prior knowledge, and trying to teach children to read in a language they are not accustomed to hearing or speaking, makes the teaching of reading difficult, especially in under-resourced schools in developing countries.

The current language policy on literacy in Zambia under the Primary literacy Programme (PLP) is a means through which emergent literacy skills in children would be used as foundation in teaching initial literacy in primary school. It is for this reason that this study is undertaken to establish if the emergent literacy skills children herding cattle have can be used as a foundation to teaching initial literacy in primary school. The view of children as passive learners, who only learn through direct instruction, has gradually lost prominence as many now view children as active constructors of knowledge. Hence this study seeks to establish whether the emergent literacy skills children herding cattle have could be a foundation to teaching initial literacy once enrolled in school.

Zimba (2011) conducted a research on emergent literacy in Zambia which was based on the preschool sector. Zimba investigated the extent to which classroom practices in Zambian preschools support the continuation of emergent literacy in children. The researcher's study aimed at establishing the emergent literacy support in early childhood

education in the selected preschools of Kasempa and Solwezi Districts. Zimba's study was mainly qualitative in which he sought to interpret his observations and those of his respondents to establish the extent to which practices in the target schools support the continuation of emergent literacy. As a continuum process of acquiring the literacy knowledge, teachers at primary school need to exploit and utilize the literacy knowledge children have come with from homes and preschools into Grade 1, where they receive formal education, to ensure developmentally meaningful learning of the conventional literacy skills. Zimba's study targeted the preschoolers to find out the extent to which classroom practices in Zambian preschools support the continuation of emergent literacy in children. Unlike the present study was constituted with a view of examining whether emergent literacy skills children herding cattle come along with could be used as a foundation to teaching initial literacy or not.

Furthermore, Cunningham *et al* (2009) state that the road to literacy begins long before a child enters school, long before pencils, paper, and textbooks come into play. It begins at birth when the sounds of language are first perceived, and this journey continues throughout the preschool years, enriched by stories heard, rhymes rehearsed, and songs sung. Cunningham *et al* argue that:

Teachers need to recognize the vital role of word recognition skills in early reading acquisition and development, how phonological awareness and the alphabetic principle are at the very foundation of learning to decode accurately and, later, how phonologic, orthographic, syntactic, and semantic knowledge lead to automatic and fluent reading which, in turn, leads to making meaning from text. Teachers need the associated content knowledge to support children as they develop reading skills (2009:491)

Cunningham *et al* promote that "school teachers of early grades must possess a wide range of content knowledge in order to effectively scaffold students' reading development. Increasingly, preschool teachers are also expected to explicitly and systematically provide instruction that scaffolds." This means that teachers need to have a wider knowledge and also to use correct teaching methods in order for the teaching and learning process to be effective.

2.11 Summary of the Chapter

This chapter has provided related literature on studies based on emergent literacy skills among cattle herders as a foundation to teaching initial literacy. The literature was reviewed thematically according to research questions. A review of the literature related to the research area in general and the research topic in particular has been presented. The review has looked at literature on the overview of literacy, cultural literacy, functional literacy, emergent literacy storytelling and songs and oral language. This chapter has also reviewed some studies on emergent literacy as precursor skills to the development of conventional literacy among children. The studies presented may have similar findings with the present study.

The study has further reviewed studies done in Zambia to show how relevant the studies were to the current one and particularly with a view to bringing out the identified knowledge gap in the available literature. However, none of them investigated the emergent literacy skills children herding cattle have that could be used as a foundation to teaching initial literacy once such children were in school. The present study intends to establish emergent literacy skills among cattle herders to be used as a foundation to teaching initial literacy in Chipata district. The next chapter discusses the methodology employed in the current study.

CHAPTER THREE: METHODOLOGY

3.1 Overview

This chapter presents the methodology adopted for the study in terms of the research design for the study, research sites, population from which the sample was drawn, sample size and sampling techniques, data collection instruments and data collection procedures, as well as data analysis. Furthermore, the chapter presents and justifies the methodology that was considered appropriate in view of the purpose of this study. Finally, the chapter highlights some of the ethical issues that were taken into account during the research.

3.2 Research design

A research design can be considered as a structure of research. It is a plan or an outline of how the research is conducted. Punch (2009) describes the research design as one which involves a discussion of when, where, how and why the research was going to be started and accomplished. It comprises all the activities planned to be carried out during the study. This study employed a case study design. To be particular, a case study of two selected villages in Chipata district was undertaken. According to Cohen *et al* (2007:253) “a case study is a specific instance that is frequently designed to illustrate a more general principle....it is the study of an instance in action.” A case study was appropriate because the research sought to take an in-depth analysis of the two villages which were selected from the district’s rural areas where most of children’s main activity was to herd cattle. It was equally used as it proved helpful in understanding the emergent literacy skills cattle herders had which were less understood before the research was undertaken in that particular area.

This study was qualitative in nature since it required the researcher to describe the state of affairs as found and observed in their natural setting in the research sites. The research required reporting on the findings, classification, analysis and interpretation of data (after collection) in order to propose possible principles and solutions to the research problems. Denzin and Lincoln (2000) ascertain that qualitative research is naturalistic. Qualitative research attempts to study the everyday life of different groups of people and communities in their natural setting. It is particularly useful to study educational settings and processes.

The current study focused on children's emergent literacy skills when herding cattle in the natural setting.

The research paid particular attention to emergent literacy skills acquired by children when herding cattle that could be used as a foundation to teaching initial reading and writing in schools. It was naturalistic since it did not involve manipulation of any process but involved a period of intensive non-participation observation of children herding cattle in their natural setting.

3.3 Research Sites

This study was conducted in Chipata district. Children herding cattle were from the villages and primary schools of typical rural areas of Chipata District to provide information on emergent literacy skills children herding cattle have acquired before enrollment in school. The selected children were used to find out whether they were able to use the emergent literacy skills as the foundation to learning initial literacy in schools. The children were from Mnukwa and Chambawa villages situated about thirty-eight kilometers away from the town of Chipata where herding cattle was the main activity. The children had just been enrolled in grade one at Mnukwa Primary School in Mnukwa village and Chambawa Primary School in Chambawa village.

3.4 Target Population

Kombo and Tromp (2006) explained that a population refers to the target group from which the sample is taken. In addition, the duo stated that a population also refers to the larger group from which the sample is taken. For this research, the targeted population consisted of all the children herding cattle enrolled in grade one and all the grade one teachers in Chipata District. This group was targeted as the main source of information the researcher intended to collect. It was useful to note the population from which the results were required, the targeted population and the covered population. The population consisted of the children aged seven years because these children of that age had just been enrolled in formal school.

3.5 Sampling technique

A sampling procedure is a plan of how a researcher would obtain or select a sample from a given population before any data is collected. In this research a non-probability sampling procedure called purposive sampling was used. The research employed non-probability sampling since a case study focused on an object with certain specific characteristics. Non-probability sampling techniques are procedures where selection of individuals for a sample does not give all the individuals chances of being selected. In non-probability sampling there is no random selection of individuals or elements. Participants in non-probability samplings are usually selected on the basis of the accessibility or by the purposive personal judgement of the researcher (Msabila and Nalaila 2013). Purposive sampling was employed to include people of interest and those referred to here, included children herding cattle who had just been enrolled to start grade one aged seven years. This was in line with Cohen et al (2007:114) who define purposive sampling as “a feature of qualitative research where researchers handpick the cases to be included in the sample on the basis of their judgement of the typicality or possession of the particular characteristics being sought.”

All the children used chewa, so it was convenient for both the researcher and the participants. The researcher firstly identified households where there were children who were 7 years and were enrolled to start grade one in the two villages. In each village, 40 households were identified with the help of a research assistant and other villagers who lived in the two villages. Then, names of owners of those households were written on pieces of paper. The names were then put in a tin where they were shuffled and a child was asked to pick 20 names for each village. The 40 homes which were picked by the child made up the sample for the study. The children who were selected for the research had just been enrolled to start grade to the nearest two primary schools hence it was convenient to pick the two schools to select the grade one teachers. The researcher purposely targeted children herding cattle who had just been enrolled in grade one and the grade one teachers as they were believed to have the data useful for the research.

3.5.1 Children

Children were the direct beneficiaries of this current study. It was for the reason that the researcher sampled a bigger number from the children. For this study, the researcher targeted children on the basis that these had just been enrolled in school and if at all they were able to use the knowledge and skills they came along with as a foundation to learn writing and reading in school.

3.5.2 Teachers

Teachers of the first graders were selected from the two selected primary schools using purposive sampling. The researcher found it convenient to select the grade one teachers for the study because the two primary schools were located within the two villages where children herding cattle were identified and selected for the study. Purposive sampling was ideal for the selection of the grade one teachers because they were knowledgeable about the curriculum designed for the lower grades.

3.6 Sample size

The children were drawn from the two villages of Mnutwa and Chambawa. The two villages were located about thirty-eight kilometers away from the town of Chipata. The mode of transport are mainly bicycles and only a few individuals afforded to use cars which were also expensive. The sample comprised of 42 respondents consisting of 40 children and 2 teachers from the selected villages and primary schools respectively. According to Best and Khan (2006:13), a sample is a small proportion of the population that is selected for observation. It represents the population because certain inferences about the population can be made by observing the sample. The children were aged seven years and were interviewed while herding cattle in small groups as Focus Group Discussion (FGD) or as individuals.

Participants	Sample
Teachers	2
Boys	30
Girls	10
Total	42

Source: Field data

Table 1 Sample of children and teachers

The table above shows the sample size of the participants of the the study. The study had two Grade one teachers, 30 boys and 10 girls who had just been enrolled in Grade one. The total number of participates in the was 42.

3.7 Data collection instruments

Data collection methods can be divided into primary and secondary data categories. Primary data collection methods include methods like the use of questionnaires, interviews, focus group discussions and observations. Secondary data collection methods are document analysis, narrative analysis, history inquiries, films, videos and photographs (Msabila and Nalaila, 2013). The researcher used the primary data collection and the instruments that the researcher employed in this research were the unstructured interviews, observation as well as the focus group discussion. The unstructured interviews, observations and the focus group discussions were appropriate to this research because it was a qualitative research which required the in- depth knowledge to establish whether or not emergent literacy skills children herding cattle have were a foundation to teaching initial reading and writing in school in Chipata District.

The unstructured interviews were conducted on children herding cattle as well as the grade one teachers. While the focus group discussions were also conducted only with the

selected children boys and girls herding cattle and were enrolled in school. The same boys and girls who were selected for the unstructured interviews were the same group the researcher used for the focus group discussion so that children should be free to give out those answers they failed to mention when interviewed alone. As for observation, the researcher had to follow the children in the field where the cattle were taken for grazing. The researcher wanted to check on the behaviour of the cattle herders doing other activities apart from herding cattle.

3.7.1 Observation

Direct observations are useful because some behaviors involve habitual routines of which people are hardly aware. The study used this instrument of data collection because it had some strengths of bringing out information that would not be captured by the interview guide such as behavior. The observation checklist was used to gather information from the children while in the field herding cattle. The information was collected through the songs, storytelling and the games played by the children as they were herding cattle.

3.7.1 Unstructured interviews

Unstructured interviews were used to allow the researcher interact with the respondents in their natural settings. Kombo and Tromp (2006) explain that unstructured interviews require both the researcher and the participants to be at ease because it is like a discussion or brainstorming on the given topic. The direction of the interview is determined by both the researcher and the informants, not predetermined. The unstructured type of interviews allowed the researcher to pose some open-ended questions and the respondents to express their own opinion freely. The researcher had some ideas in mind of the topics to be covered. Unstructured interviews allowed the researcher to collect in-depth data required for the study.

The process of collecting data using unstructured interviews was achieved by allowing the respondents to open up and give as much data as they could. The unstructured interviews were appropriate for data collection for this study in the sense that the children who were engaged in looking after cattle were not restricted on the answers. Unstructured

interviews do not follow specific questions to be asked. The unstructured interviews with children herding cattle were used in order to obtain supplementary data needed for the research. The responses were collected, arranged, analysed and filtered so that only useful responses to the research questions were used. The questions in unstructured interviews were informal and conversational and that they gave the advantage to the respondents who happened to be children herding cattle to freely respond to the questions being asked.

3.7.3 Focus group discussions

The study employed focus group discussion (FGD) so that different views on the information on emergent literacy skills boys and girls herding cattle have could be used as a foundation to teaching initial reading and writing once enrolled in school. This type of interview is conducted after a series of individual interviews, to further explore the general nature of the comments from different individuals (Shneiderman and Plaisant, 2005). It is the fastest way of collecting data as it involves a good number of participants with divergent views. The focus group discussions were conducted only with the children selected within the boys and girls herding cattle participating in the research.

The researcher formed two groups for FGD to allow more insights concerning the knowledge that was acquired by the children learning in school. The FDG had six to eight children. The researcher conducted the FDG meetings in both the two villages of Chambawa and Mnukwa, one FDG meeting in each village. The purpose of using FDG interviews by the researcher was to allow the participants of the research to develop and express ideas they would not have thought about on their own. Hence the use of FDG helped the researcher to collect data sufficient for the research.

3.8 Data collection procedure

The data collection exercise was undertaken over a period of five weeks. Data collection procedure is defined as the process which the researcher adopts in order to collect the intended data for the study at hand (Creswell, 2009). The study followed the following procedure in order to have the research questions answered by the selected cattle herders in Chipata District. In order to visit the research site for data collection, the researcher obtained a letter of introduction from the Directorate of Post Graduate Studies.

The researcher then sought permission from the Chipata District Education Board Secretary. The letter requested the two schools to assist the researcher with the necessary information and man power. The researcher went ahead to seek permission as well from chief Mnukwa for the two villages through the headmen. Parents to the selected children herding cattle aged seven who were enrolled to start grade one in school were identified and approached for permission to be interviewed. This was followed by a non-participation observation of the children herding cattle on a daily basis.

The study utilized qualitative research methods of data collection and embraced case study design. The research instrument used included unstructured interviews, observation and focus group discussions with selected children and teachers. The purpose of selecting the case or cases was to develop deeper understanding of the phenomena being studied. In qualitative study the researcher seeks to establish deeper understanding of the phenomena being studied therefore, the research required to take more time to interview and to observe so that the data collected could be a true reflection of what was studied. To do so, the researcher needed only a small sample size for this research. Thus, this study had a total sample of 42 participants who were interviewed.

The researcher had to follow the selected children in the field to interview and observe them in their natural settings as they were herding cattle. The researcher also visited homes of respondents and interviewed them from their homes. The answers were followed with follow-up questions where the researcher was not clear. As the selected respondents expressed their views, the researcher was alert to capture subtle, meaningful cues and phrases in respondents' expressions and articulations of issues of emergent literacy practices and skills children herding cattle have that could be a foundation to teaching initial writing and reading in school. As respondents did a lot of talking, the researcher did a lot of listening and note taking. The researcher also made some observation of children as they herded cattle. The unstructured interviews used together with the focus group discussions and simple observation of the selected children involved in herding cattle provided for triangulation in the data collection methods. Triangulation adds credibility, objectivity and validity to the interpretation of data. Saunders *et al* (1997) refers to a situation where various types of data or procedures are used within one study

to verify the validity of data. Triangulation is a powerful way of demonstrating concurrent validity, particularly in qualitative research.

The researcher conducted the face-to-face interviews with the grade one teachers to find out more on what they know about emergent literacy skills children come along with and if so, were they able to apply the knowledge to teach initial reading and writing in class? The focus of the interview was on teachers' knowledge and views on emergent literacy. The investigation was on how important this knowledge was for teaching initial literacy in a literacy classroom. During this process, the researcher was in a position to find out what challenges, if any, teachers experienced during teaching initial literacy to the learners coming with a background of herding cattle. The researcher further probed some of the major and interesting issues that arose from the teacher's responses. The main aim was to find out how much teachers of grade one knew about emergent literacy skills and if at all they utilized this knowledge from among their learners who were herding cattle while teaching them to read and write in class.

3.9 Data analysis

The data were analyzed qualitatively using thematic analysis. Analysing data commenced immediately the research began. Bryman (2004) states that thematic analysis gives an emphasis on what is said rather than how it is said. Qualitative data collected from focus group discussion guides and unstructured interview guide were analysed through thematic analysis by coding, grouping and meaningfully interpreting emerging themes reflecting both the specific research questions and objectives of the study. Therefore, the researcher analysed data using Yin's (2011) analysis of qualitative data outlined in five steps: compiling, disassembling, reassembling, interpreting, and concluding.

3.9.1 Compiling data

The researcher made sure that the data was consistent during data collection. Data was first compiled into a useable form to find meaningful answers to the research questions. The researcher became familiar with the data for it allowed a greater sense of understanding of phrasing of a term within the context of the whole. The researcher organised data after collection in a consistent and systematised format.

3.9.2 Disassembling data

The next step the researcher did was to disassemble the data. The researcher put the data into meaningful groupings. At this point the data was coded whereby raw data were gradually converted into usable data through the identification of themes, concepts, or ideas that had some connection with each other. The researcher also identified similarities and differences of data. Furthermore, the researcher used Vivo coding method as the data used verbatim words from the respondents to describe data. Saldana (2016).

3.9.3 Reassembling

The researcher further reassembled the codes to which each concept was mapped so that the related themes were put together to create themes. Once data had been reassembled through coding, it enabled the researcher to extract excerpts from the data and view them in relation to and in the context with each other.

3.9.4 Interpreting

The researcher focused on interpreting what was going on within and thus began to identify thematic patterns across the data. The researcher had considered that raw data formed codes and codes formed themes and thematic maps. Through Identification and definition those themes led to interpretations.

3.9.5 Conclusions

Conclusions were then made depending on the responses to the research objectives or purpose of the study. Research must yield results that are open for careful scrutiny into the researchers' decision making throughout the analysis process. The researcher achieved the accomplishment of data analysis with a detailed description of coding procedures and criteria, detailed description of how codes and patterns of codes led to themes and resulting interpretation. The codes were given to the respondents for confidentiality purposes. The schools were presented as school A and B. The Focus Group Discussions for pupils were coded as FGD1 and FGD2. For the unstructured interviews the cattle herders were coded as CH1, CH2, CH3, CH4, CH5, CH6, CH7, CH8, CH9, CH10, and CH11 up to CH40. The teachers were indicated as TR1, TR2, TR3 and TR4.

3.10 Trustworthiness

Ensuring trustworthiness in every study begins with the research findings which must be as truthful as possible. This is why it is important for the researcher to evaluate the research in line with the procedure that will be able to generalise its findings. In qualitative research, the concepts such as credibility, dependability, transferability and Conformability were used to describe various aspects of trustworthiness (Lincoln and Guba, 1985). Therefore, the researcher ensured trustworthiness in this study which was achieved through giving a clear and distinctive description of the research context, selection and characteristics of the participants, data collection as well as the procedure for data analysis through credibility, dependability, transferability and conformability.

3.10.1 Credibility

Credibility in qualitative research is defined as the extent to which the data and data analysis are believable and trustworthy. Credibility is involved in establishing that the results of the research are believable. It depends on the richness of the data collected. The basis of any claim to trustworthy knowledge of a study is credibility. Credibility should replace truth value. Therefore, through the prolonged engagement in the field, persistent observation and triangulation exercises, as well as exposure of the research report to criticism by a disinterested peer reviewer the researcher was able to build credibility on the findings of the emergent literacy skills among cattle herders. (Seale, 2000, p.44). Graneheim and Lundman (2004) confirm that the first question concerning credibility arises when making a decision about the focus of the study, selection of context, participants and approach to gathering data. Choosing participants with various experiences increases the possibility of shedding light on the research question from a variety of aspects

3.10.2 Dependability

Dependability ensures that the research findings are consistent and could be repeated. This implies that each process to be used was described in detail so that further researching on the same subject could yield similar results. Merriam (1998) ascertain that “dependability refers to the extent to which research findings can be replicated with similar subjects in a

similar context.” It emphasises the importance of the researcher accounting for or describing the changing contexts and circumstances that are fundamental to consistency of the research outcome.

3.10.3 Transferability

Transferability refers to the degree in which the research can be transferred to other contexts. Research findings are transferable or generalisable only if they fit into new contexts outside the actual study context. Generalizability refers to the extent to which one can extend the account of a particular situation or population to other persons, times or setting than those directly studied. Lincoln and Guba, (1985) argue that qualitative research seeks transferability by providing the details of the phenomena and setting in formal accounts like research reports. Thus in this research, transferability was achieved by providing sufficient information on the emergent literacy skills as a foundation to teaching reading and writing school.

3.10.4 Conformability

Conformability is the degree to which the research findings can be confirmed or corroborated by others. Conformability asks to what degree a researcher will adapt the findings by ensuring a degree of replicability in qualitative terms of any study. The conformability was also achieved by returning to the respondents in order to verify the technical account.

3.11 Ethical considerations

The researcher assured the informants of confidentiality. Considering the significance of ethical issues in every research, responses from respondents in this study were treated with maximum confidentiality as the data was used purely for the academic exercise. Assurance was given to the respondents that no harm, neither emotional nor physical, would be inflicted upon them. Throughout the period of the study, it was crucial that ethical issues were taken into consideration to ensure reliability and accuracy of data. Anonymity and confidentiality were strictly observed during description and reporting of findings. From the beginning of the research, the researcher made sure that the

respondent's privacy was respected. The researcher had to protect respondents against potentially harmful effects of participation, for example, stress through participation and loss of self-esteem. The respondents were informed about the procedure of the study and made their decision to participate.

The researcher provided information on the purpose of the study, benefits to the respondents, expected duration of participation and procedure to be followed. As part of the ethical issues, the researcher had to seek the consent of the participation and also had to inform those participants who were willing to participate that their involvement in the study was purely voluntary. The researcher assured the willing participants that the information they provided would not be exploited during and after the research. To avoid plagiarism, the researcher acknowledged the works of other scholars that were utilized in the research. The researcher reported the data as it had been collected. And during the whole data collection process the researcher was honest to the respondents.

The parents/guardians were further assured that the findings of the research would be used for academic purpose only and that confidentiality would be maintained and their names would be withheld. The respondents in this study included the teachers and the children herding cattle in the primary schools and villages of Chipata district. Clearance will be obtained from the Ethics Committee, School of Education and Department of Language and Social Sciences, University of Zambia.

3.12 Summary of the Chapter

This chapter has explained the scheme of the research, that is, the methodology used to carry out the research. It has highlighted on the research design, the population, sample size and sampling techniques, data collection instruments and data collection procedures, and data analysis. The chapter closes with a reflection on research ethical issues observed. It has also been indicated that data analysis and presentation of findings has been thematically done in line with the research questions. The next chapter presents the data and its interpretation.

CHAPTER FOUR: PRESENTATION RESEARCH FINDINGS

4.1 Overview

This chapter presents the findings of the study on establishing emergent literacy skills among children herding cattle as a foundation to teaching initial literacy in schools of chipata district. The data presented were obtained through unstructured interviews, observation and focus group discussion. This study brought out a number of issues from participants which were related to the research questions. The findings are presented as themes under the research questions as follows:

- (a) What type of ELS children herding cattle in Chipata District have that could be used as a foundation to learning of initial literacy and numeracy skills?
- (b) How is learning of initial literacy and numeracy skills enhanced by ELS, once such children start formal learning in Grade one?
- (c) How do children who herd cattle utilise ELS to enable them start from a higher grade rather than Grade 1?
- (d) What learning and teaching materials teachers in Grade 1 take into account the ELS children come with?

4.2 What type of ELS children herding cattle have that could be used as a foundation to learning of initial literacy and numeracy skills?

With regards to the first research question, the data was collected through the interview guide, the focus group discussions and observation. The researcher interviewed the selected children from two villages of Chipata district. The researcher aimed at identifying the emergent literacy skills children herding cattle had. The activity of herding cattle as part of emergent literacy skills allow children to enter initial literacy especially in the rural setup of Zambia. Children are involved in herding cattle activities before they are enrolled in formal school. The interviewed selected children confirmed that during the activity of herding cattle, a number of emergent literacy skills were acquired and these were presented below as themes.

4.2.1 The skill of identifying direction during herding cattle

Directions are an important aspect in the teaching of initial literacy as well as other subjects such as Social and Development studies. Children herding cattle are able to identify different directions such as North, South, East and West. Children are able to identify different directions of sunrise and sunset. Respondents in both the interview and the focus group discussion agreed that identifying directions while herding cattle was very important to them.

FDG1 had this to say on the importance of identification of directions:

Ndiziwa kuti dzuwa ichokera Kum'mawa ndiponso ilowa Kumadzulo. Ndiponso ndidziwa kwamene kupezeka udzu wabwino wofewa ndikwamene ndipreka ng'ombe. I know that the sun rises from the East and sets in the West. The directions assist to identify where good pasture for the cattle is to be found.

CH1 also said that: *ndiziwa kuti dzuwa ichokera Kum'mawa ndiponso ilowa Kumadzulo.* [I know that the sun rises from the East and sets in the West]. From the findings, other selected children herding cattle also mentioned that the directions assisted them to identify where good pasture for the cattle was to be found as well as to locate the direction of their village.

4.2.2 The skill of identifying different sounds during cattle herding

The interviewed children also confirmed that as they were herding cattle, the cattle herders were able to identify the different sounds made by the birds in the bush. The birds' sounds became familiar to the cattle herders. The children herding cattle mentioned that they were able to identify sounds made by a particular bird.

CH3 also responded that:

Ise tonse anyamata olusa ng'ombe timaziwa kuimba kwa mbalame zambiri zamchire. Aliyense akhoza kudziwa maimbidwe ambalame. Nthawi zambiri anyamata amathanthauza maibidwe ambalame mosiyana-siyana.

Translation:

Listening and interpreting the birds' different sounds is done by all the boys involved in herding cattle. We are able to identify the sounds by recognising the different sounds produced by birds while herding cattle. The sounds from birds are interpreted differently such that we are able to understand the birds' sounds into anything such as a song.

The findings revealed that cattle herders identified sounds made by different types of birds which was skill acquired as children were herding cattle. That is one of the respondents had to say:

Kuli kambalame kamene kamalila ngati mvula izaloka, ndiponso kuli mbalame zina zomwe zimalira ngati kuzakhala cilala. Ndipo nthawi zambiri zimachitika tero. Atate ndiye amene analikudiuza kuti kuimba kwa mbalame kumakhala ndi manthanthauzo osiyana-siyana. (CH4)

Translation:

I know of a bird which would always produce a certain sound to warn us that it is going to rain and indeed most of the times the bird is proved to be right. Some birds would produce a sound to give a signal of a spell of drought during the rainy season. My father told me that when a bird is singing, it can be interpreted differently.

The children further mentioned that there were times when they were guided by the sound of the birds. The interviewed cattle herders said that the sound made by birds helped children locate the direction to the village or to the river because some of these birds were mostly found near the villages or near the rivers. The children herding cattle said that birds also warned them if at all there was a snake especially in tall grass. Birds produce sounds which indicate a sign of being frightened or danger.

The research further revealed another type of sound called whistling. Whistling was equally important during herding cattle as confirmed by children during the interview and focus group discussions. The cattle would always follow where the whistling sound was coming from and obeyed accordingly. Whistling is a speech of several rural populations used in many ways such as singing. Cattle herders used whistling among themselves as

they were herding cattle. It was also used to alert others if there was danger. Children herding cattle would whistle to cattle as well to give them direction. Children interviewed responded that they whistled in form of a song or when calling each other and were able to interpret what the sound of whistling was all about. The researcher further discovered that whistling was not the only sound that was made by cattle herders but a flute as well was used by some children.

CH15 said that: *Ndimaliza mutolilo ndipo ng'ombe zanga zilondolo kwamene ndifuna zipite*. I use a flute instead of whistling to direct the animals to go where I want them to go. The boy further stated that he made different sounds using a flute which was a skill he acquired during the activity of herding cattle. Furthermore, the children confirmed that they were also able to identify the sounds made by insects for instance, a sound made by a cicada [*achenzi*] which was found on trees and tall grass. The children said that cicadas made a lot of noise and sometimes they would catch them for relish. The interviewed cattle herders went further to mention that they paid much attention to what was happening around them. By virtue of being attentive to what was happening around them, the children herding cattle were able to read nature and how important it was to both the cattle herders and cattle they were looking after.

4.3 How is learning of initial literacy and numeracy skills enhanced by ELS, once such children start formal learning in Grade one?

To answer the second research question, the researcher collected data through the interview guide, the focus group discussions and observation. The researcher interviewed the selected children from two villages of Chipata district. The researcher aimed at determining how emergent literacy skills of children herding cattle could enhance teaching initial literacy once such children were in formal schooling. The interviewed selected cattle herders responded that they participated in different activities during herding cattle. Different activities are presented below as themes generated from the research question.

4.3.1 Activities performed by children during herding cattle

Besides the actual act of herding cattle, the children participate in various other activities with regard to cattle care. This includes cleaning cattle under their care and even the kraals where they are housed. Work is often seen as an integral part of children's everyday roles, responsibilities and development. As long as it is not excessive and does not pose serious health risks, herding cattle may be considered harmless and sometimes beneficial to children's development and well-being. The respondents said that in most cases they preferred herding cattle to staying at home and mostly in the company of other children either from the same village or the nearby village.

CH6 pointed out that:

Kulusa ng'ombe pamozdi ndi anzathu ndikwabwino chifukwa timathandizana kulusira ng'ombe pamodzi. Ngati tapita kukalusa ng'ombe timachita zina monga kufula uchi kapena kusema mpini, zipamba kapena mithiko, kapena kupanga tswanda ndi mandengo. Komabe aliyense amapasidwa mpata kuchita cimene afuna. Ena aona ng'ombe kuti sizinapite kutari pamene ena akusewera masewera okwera mitengo.

Translation:

Herding cattle in a group gave us advantage to do other activities while others continued herding cattle. It is also safer to go with friends because we help one another. This is because we give turns to look after the cattle while others will be probably doing other activities like harvesting honey, crafts such as making cooking sticks, weaving baskets or even climbing trees just for funny.

The above mentioned skills were also part of emergent literacy skills acquired while herding cattle. The children further mentioned that sometimes they sang songs while herding cattle. Songs were part of the emergent literacy skills children herding cattle acquired and enjoyed to do. Children sang different songs while herding cattle. The children interviewed from FDG 2 sang one of their favourite songs which went like this:

*Galu uyu m'mawa waaadya matemba
ate fish] Galu uyu m'mawa waaadya matemba*

[A dog in the morning
[A dog in the

morning ate fish] *Timucheke pamimba timuone ngati wadya matemba* [Let's cut him on the stomach to prove that he has eaten the fish].

4.3.2 Nsoro

Among other activities performed by the children herding cattle was playing a traditional game called *nsoro*.



Source: field data

Figure 2: Children playing the game of nsoro.

The figure above shows the two children playing a traditional game of *Nsoro*. *Nsoro* is a traditional game involving the movement of some stones or seeds from one hole to another. The game is played by two players at a time who are expected to face each other and make their movements in opposite directions to each other. These movements are done in small holes arranged in about 4 vertical lines (or columns) and 8 horizontal lines (or rows) respectively. Horizontal lines can sometimes go to about 12. Each hole contains two stones or seeds. A player is required to think before making any movement so he or she aims well on the opponent. The two players have to play in opposite directions. When one player runs out of the stones, the other one is declared a winner. The game of nsoro was also part of emergent literacy skills. Children acquired the skill of counting and improved their critical thinking from playing *nsoro*. Cattle herders played nsoro as a form of entertainment.

CH7 confirmed that:

*Ngati titeya nsoro, wamene waluza apita kukaona ng'ombe.
Timachita tero mpaka aliyense azakhala ndimpata oteya nsoro.
Nihawi zambiri ngati tilusa ng'ombe timacita masewera ena
osiyana-siyana komabe maso ali pan'gombe kuti sizinapite kutari.*

Translation:

When one lost the game, it is his turn to go and herd the cattle then another one would come to play. The exercise would go on until each one of us had at least a chance to play. There is no any dull moment when we are herding cattle because we do different activities one after the other but again we would always keep a close eye on the cattle to make sure that all the cattle are within the vicinity.

The researcher found four children herding a large herd of cattle, and when asked the children stated that actually they were coming from four different households. The children admitted that it was easier to help one another to find a cow or a calf if at all it went missing or when the animal was attacked though it was a rare case. The selected respondents further confirmed that sometimes the cattle were taken to a river to drink water especially during the dry season. Unlike in the rainy season water was available everywhere. The children admitted that they would fish using fishhooks in the river while letting their cattle drink water. Fishing was part of emergent literacy skills which the children herding cattle had acquired.

4.3.3 The skill of identification during cattle herding

Another finding from the children interviewed was the skill of identification. The selected children interviewed were able to identify the cattle by sight, shape, colour, size as well as length. Children confirmed that they also identified traditional medicine meant for curing some minor diseases of the cattle through smelling. Children herding cattle said that they identified their cattle by colors (*mutundu*). All the children interviewed admitted that the colour of cattle was significant for identification.

CH8 stated this on the importance of identifying cattle using colours :

Mutundu wang'ombe umatinhandiza kudziwa ng'ombe kuti ndi yathu makamaka ngati ziri m'magulu ena. Mutundu wa ng'ombe ukhala osiyana-siyana: zoyera, kapena bulauni, kapena zakuda. Ng'ombe zina zimakala ndi mitundu iwiri kapena itatu.

Translation

The colours of the cattle help us to identify which cattle belong to us or they belong to other people especially if they are mixed with cattle from our neighbouring villages. The cattle have different colors such as white, brown or black and others have mixed colours.



Source: field data

Figure 3: Cattle with different colours which cattle herders used for identification.

As shown in the figure above, the cattle had different colours such as black, brown, white and others had mixed colours. The colours on the cattle were important to the children herding cattle. From the research findings, the children explained how they were able to identify their own cattle by colour. Colours on cattle had a significant purpose to children herding cattle. Apart from using different colours for identification, the interviewed children said that they were able to identify their cattle by their size. The cattle herders further explained that they were also able to identify their cattle by explaining how big or small, fat or thin a cow was. CH9 stated that: *Ng'ombe zanga ziri ndimaokedwe osiyana-siyana. Zina zing'ono, zina ndizikulu, zina zonenepa ndiponso zina zokwinyirira.* My cattle are different in sizes, some are big or small, and some are thin or fat. The researcher found that identifying cattle by colour or size was a special skill the children herding cattle acquired which could be used as a foundation to teaching of initial literacy in school.

The children mentioned that the other way of identifying their cattle was by the length or height. Children said that the horns of cattle were different from each other. Some cattle had long big horns and some had short small horns. Other cattle had curved horns while some cattle had straight horns. That was a special skill the children herding cattle acquired as they were able to identify the size of the horns for each and every animal. In addition, the researcher found out from cattle herders interviewed that the shape of the each animal was important for the skill of identification in herding cattle. The children interviewed responded how they were able to identify the sound made by cattle.

CH10 child said that:

Ng'ombe nthawi zina zimapita kwina kutari ndipo zimasowa. Timadziwa maliridwe a ng'ombe ngati ifuna-funa zizace. Tima mverera maliridwe ndikudziwa kuti ng'ombe yamene ilira ndiyathu.

Translation:

The cattle would sometimes wander off and go far away from the other cattle. We are able to identify the cry of the cattle and know that it belongs to us. It is easy to identify the cry even from afar because we pay extra attention and listen to the sound produced by a cow.

It was also found out from the children interviewed that they were also able to tell if the cow was in danger because of the way the cow cried out. The cry of a cow which was attacked could easily be detected from afar. Identification of a sound from cattle was considered vital in the cattle herding which the children had acquired.

4.3.4 The skill of counting in cattle herding activity

The research findings revealed that children had different methods of counting their cattle. The findings showed that children used stones, sticks or sometimes they drew lines. The children explained that one stone would be put down for each animal before going out for grazing. The same process was done when the cattle were back from grazing. If a stone had no match to an animal, then children would know that one of the cattle was missing. The respondents mentioned that the method of counting using stones or sticks went on until the children were able to count using Roman numeral other than using stones, sticks

or leaves. The skill of counting made the children to improve the skill of thinking in children herding cattle. Another child said that some lines were drawn on the walls of the mad hut. Each time an animal goes out of the kraal, a line would be crossed to show the presence of an animal.



Source: field data

Figure 4: The picture shows cattle in a kraal .

The figure above is showing the cattle in the kraal waiting to be taken out for grazing and cattle being led to the grazing fields. The respondents said that they would always count their cattle before taking them for grazing and after grazing when leading them to the kraal.



Source: field data

Figure 5: Cattle being taken out for grazing.

The above figure is showing a herder taking cattle for grazing in the morning and brought them back in the late afternoon. The children who were interviewed said that when going out to herd cattle, they would carry with them some food like fried groundnuts and maize to eat as well as water to drink. Children would always count the cattle before taking them out and when getting them back in the kraal. Accountability of the cattle was cardinal. Further findings showed that children herding cattle counted the cattle before taking them for grazing and after grazing. The researcher found out that the children did not know how to count when they first started herding the cattle but slowly the children were able to acquire the skill of counting. The children interviewed admitted that the skill of counting was highly appreciated because it helped the children to keep the correct number of cattle in cattle keeping. Children interviewed said that they were taught how to count by their mothers, fathers or their elder brothers. Children further confessed not to know how to count using the actual numbers but used other means of counting such as using the stones, sticks or leaves.

4.3.5 The skill of naming in cattle herding activity

The researcher discovered from the children interviewed that naming cattle was a very important skill in the activity of herding cattle. Cattle were named after an event, a person, a town or sometimes any word which had connotation meaning. Cattle were given different names so much that cattle obeyed once called by their name because there was communication between cattle herders and cattle. The names given to the cattle had meanings. Cattle were named according to how the owners wanted their cattle to be called. The children also mentioned that not all the cattle were given names, only the selected for a particular reason had names.

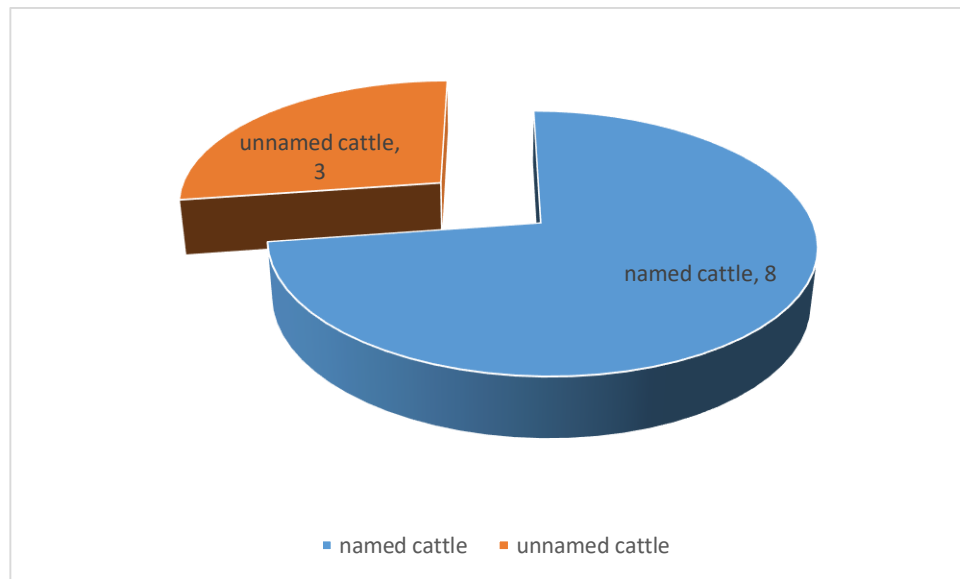


Figure 6 shows number of cattle that had names and those that didn't have names from one respondent.

One of the cattle herders interviewed mentioned that, out of the 11 cattle he was herding, eight had been given names and three didn't have names. The child went further to give examples of the names and meanings of the names given to cattle.

CH12 said that:

Madzina a ng'ombe zamene ndilusa ndi Cimalo [cifukwa ng'ombe iyi inabwera pamulandu wacimalo. Mtendere [mtendere ndiwa bwino mdziko.] sadamu [atate akuti Sadamu ndi munthu wamphavu

ngako] joeman, [sindidziwa kwamene kunachokera iyi dzina] ndiponso zina ng'ombe ndi polisi ndi docota.

Translation:

The name of the cattle I look after are Sadam to describe a powerful person. Another cow is named peace which also describes the peace that prevailed among the people in the village. Dowry is another name given to a cow under the circumstance that it is given as a payment for marriage in the family. Others are called police, Joeman and doctor.

Another child herding cattle also mentioned the names of cattle he was herding as shown below:

ng'ombe zanga ndi Soweto [ndi dzina la dziko ku sausafulika komwe kuchokera azungu], Kuseli kulinji [kuthanthauza kuti anthu akamba zambiri zaboza pali iwe], wanjiru [munthu amene sakondwera nawe ngati zinthu ziyenda bwino mu umoyo wako], jelasi [aaaaaa kaya ndi jelasi so cabe], alimi [uyu ndi bulu amene timangirira ku joko kukalima ndipo savuta], Malipiro [ndi malipiro so cabe], Bulaki [chifukwa ndiya kuda], Nyasa atate ankamba kuti ndimutundu wa ng'ombe kuchokera kudziko la Nyasa],(CH14)

Translation:

Among my cattle, the names of my cattle are Soweto named after a country in South Africa where the whites came from, Kuseli kulinji meaning that there is a lot that is said about behind your back, Wanjiru meaning that someone is not pleased if things are going on well in your life, Jelasi meaning that it is just Jelasi as it is, Alimi meaning that the bull that was mostly used for ploughing the fields, Malipiro meaning that it is just the name as it is, Bulaki meaning that it is black in colour, Nyasa according to my father is a type of cattle originated from the country called Nyasa.

The naming of cattle was one of the skills which cattle herders acquired in cattle herding activity. The researcher observed how the children communicated with the cattle whenever a particular name was called out. It was a special gift children herding cattle had. The child herding cattle would call out a name to one of a cow to command it to stop or to start moving in any direction they wanted the cow to go to, it responded without any difficulties. The cattle in turn recognised the sounds made by the boys herding them.

Sometimes cattle would move where the whistling or the sound of a flute was coming from and obeyed accordingly.

4.3.6 Feeding Cattle

Feeding cattle was another activity which was done on a daily basis by the children except when they were sick. The children herding cattle also have to take care of the sick cattle. This could include, firstly the identification of those which are sick and even collecting water and fodder for the cattle. From the findings, the children indicated that taking cattle for grazing was a particular skill in cattle herding.

CH16 respondent said that:

Nthawi zambiri ndiziwa malo abwino kuli msipu wabwino wodyesera ng'ombe zanga. Msipu wabwino uyera kukhala ofewa. Nthawi ya mvula msipu ukhala bwino ndipo upezeka pali ponse. Koma bvuto iliko ngati tafika m'malanga. Msipu wabwino usowa ndipo madzi abvuta.

Translation:

I am capable of identifying which type of grass was suitable for cattle grazing. The grass was green especially the rainy season and suitable for cattle. During the dry season, the grass was barely green and scarce and it was a challenge for us children involved in herding cattle.

During the interviews, children mentioned that they were able to know which areas to take cattle for grazing. From the findings, the research revealed that during the rainy season, there was significant amount of green pasture. In the dry season, the pasture was depleted and only overgrown grasses were available. Cattle were taken out for grazing to specific environment where the graze was still available. Children told the researcher that during the dry seasons especially around July to August after all the crops had been harvested; the animals were taken to the maize field for the animals to feed on the crop residue. Additionally, cattle were taken to the swampy areas [*dambo*] for grazing because the grass was still green and soft perfect for the cattle. Cattle were also fed on anthill soil because it contained salt. The soil contained salt was which was known as [*Chikulo*].

The children would normally take the cattle for grazing in the morning and come back in the late afternoon. Sometimes, children came back earlier if the cattle had enough grazing especially during the rainy season when there was plenty of green pasture. The children herding cattle further told the researcher about the challenges faced during the dry season. The children said that the insufficient water posed a challenge in cattle rearing. Due to the scarcity of watering holes, cattle were often required to move long distances in search of water areas and were often watered at longer intervals. The children also mentioned in the interview that they were able to tell if the animal was sick.

CH17 responded that:

Ng'ombe ngati yadwala, imaziwika cifukwa imayenda pang'ono pang'ono, kugona-gona ndipo kukana kudya. Maso aoneka ngati ifuna kugona. Ngati naona kuti ng'ombe yadwala, nimaibwezera ku mudzi kuti akaipase mankwala atate. Nthawi zina ng'ombe zimalumidwa ndi njoka olo kapena njoka kuthunyira mata ng'ombe m'maso. Timatema tumphini tuwiri pamene yalumiwa ng'ombe ndiku tenga masamba, kusasantha ndikumangirira pacilonda. Tikacita izo, ng'ombe tiibwezera kunyumba kuti akagule mankwala ndikuipatsa.

Translation

When the cow or a bull is sick, there are certain signs that entails that it is sick such as the cow or bull moves slowly, inactive, loss of appetite and generally the animal looks weak. The animal is returned back to the village so that medicine can be administered to it. Sometimes, the cattle are bitten by a snake or the snake would spit saliva into the animal's eyes. There are certain leaves which our fathers showed us in case of a snake bite which we put on the spot of the bite. The leaves are smashed or chewed as long as you don't swallow any of it. Then we make two tattoos on the spot and put the leaves on the wound. Thereafter, the animal is taken back to the village for further treatment.

4.4 How do the children who herd cattle utilise ELS to enable them start from a higher grade rather than Grade 1?

With regards to the third research question, the data was collected through the interview guide and observation.

4.4.1 Stories and songs

The researcher found that while the cattle herders waited for their mothers or sisters to prepare supper, children would do other activities such as singing. Sometimes elderly male or women folks would start telling traditional stories and riddles while sitting around the fire. From the findings of the study, songs and storytelling compose values, attitudes as well as respect to elders. Children compose songs as they are herding cattle and they enjoy singing. Some songs had connotative meaning relating to cattle herding activity. Furthermore, the study found that storytelling was another emergent literacy activity which children acquired both at home and out in the field while herding cattle. The stories were told among themselves as cattle herders while relaxing. Other stories were told by the elders at home. The stories had different teachings and values. Some stories were about looking after the cattle and others were about morals and values.

The children interviewed stated that listening to stories was the best form of relaxing as well as entertainment that could be found in their villages. Children who were interviewed agreed that they enjoyed themselves listening to the stories and riddles. Storytelling was mainly done to help the children relax after they came back from herding cattle. One of the children interviewed mentioned that he liked listening to stories especially that one of the hare and the tortoise. CH1 said that: *Ndimakonda kumverera nthano ya Kalulu ndi fulu cifukwa kalulu ndinyama yochenjera ngako pa nyama zonse.* [I like listening to the story of the hare and the tortoise because the hare is the cleverest among other animals]. Storytelling and songs were basic skills of speaking and listening in the teaching of initial literacy. TR2 also mentioned that: *Traditional songs and storytelling are helpful and valuable activities during the teaching of listening and speaking skills which are part of initial literacy.*

After a nice evening meal, children herding cattle together with other members of the family would sit around the fire and listen to different stories and riddles told by the elders. The researcher found that storytelling was one way of uniting the family members where the children herding cattle came from. Children herding cattle are able to acquire emergent literacy skills both in the field while herding cattle and at home through the elders. The

storyteller helped cattle herders follow the stories by answering in unison. The story teller would start by saying:

Storyteller: *Panangotere* “once upon the time”

Listeners: *Tiri tonse* “we are together”

Storyteller: *Panali* “there was once”

Listeners: *Tiri tonse* “we are together”

Storyteller: *Kalulu ndi fulu* “the hare and the tortoise”

Listeners: *Tiri tonse* “we are together”

The chant would go on until the end of the story. This was done to make sure that children were kept awake throughout the evening activities. The study revealed that stories which were told included songs and the listeners were asked to sing along with the storyteller. The songs were promoting oral language in children. Storytelling was one of the richest sources of emergent literacy as children also composed and told their fellow children while herding cattle. Storytelling did not last long because cattle herders were already tired and needed to rest.

From the research findings, storytelling was also accompanied by riddles. Children interviewed responded that riddles were done either in the bush while herding cattle or at home. The researcher also found out that riddles [*Zirapi*] are brainteasers used during family or village gatherings on moonshine nights. Their main purpose was to test children’s intelligence as well as for entertainment. Riddles were done by both children and the elders. Children would as well practice the riddles amongst themselves in order to test one another and those who knew more riddles than the others gained popular esteem. The local riddles had a pattern of question and answer. When listeners failed to guess the correct answer, they are asked, as a group, to pay something. The riddles were mostly used for entertainment in the evenings in villages.

4.5 What learning and teaching materials teachers in Grade 1 take into account the ELS children come a long with?

In response to the fourth research question the data was collected from the teachers teaching grade ones through the interview guide. Other teachers who felt they had information concerning children herding cattle also were interviewed because the researcher intended to interview as many teachers as possible so as to get a wider variety of in-depth responses.

4.5.1 Teaching and learning materials

The teachers who were interviewed said that it was difficult for them to start by identifying what the children already know especially those that were herding cattle. Some teachers who were interviewed stated that they did not know exactly what skills were referred to as emergent literacy skills children came along with especially those that were once cattle herders.

Tr1 further said that:

I treat the children the same, whether they were herding cattle or not. And how will I know that this one was once herding cattle, it is difficult to tell. I take children as coming from unknown backgrounds, and this does not matter, I have to begin everything with them right from the scratch. Maybe preschool learners can do better than those who came direct from home but again most of the children are involved in different activities such as looking after cattle or goats they don't even have time to attend preschool and moreover there are no preschool schools around the villages. Children's background does not matter in the teaching of initial literacy because learners come from different homes with various backgrounds.

Another teacher who showed concern because he once taught the grade ones mentioned that it was important to use a local language as to allow the learners to participate and interact freely during lessons and learners capture information quickly. Oral language, which is a component of emergent literacy, is the basis for teaching learners the initial reading and writing skills. One response from another teacher was that traditional songs and storytelling are helpful and valuable during literacy lessons.”

Tr2 also mentioned that:

I know that these children who herd cattle have a special gift which seem to be different from the others. When these children come in grade one they know already how to count and explain the simple mathematics of addition and subtraction because these two are applied when looking after cattle. But again I just treat them the same, I start teaching from the scratch because they are also some children who are not cattle herders but they try to count. Sometimes I just encourage children who herd cattle to participate fully because they tend to be shy to participate in class activities.

The researcher asked the teachers if at all they used any other teaching and learning materials apart from what was provided by the Ministry of General Education.

Tr3 had this to say:

I don't use any other extra teaching and learning materials during the initial literacy lessons. In fact most of us teachers relied on the teaching and learning materials provided in the teacher's guide and pupils' book. It is very difficult to find any other materials. So I just follow step by step what is in the teacher's guide and I am afraid when these people come for monitoring, I might be asked why I am not following what is in the book. I don't even know whether these children have the background knowledge so we teach according to the instructions in the teacher's guide.

The findings revealed that teachers were not using any extra materials for teaching and learning but teachers entirely relied on the materials provided by the Ministry of General Education (MoGE) for the teaching of reading and writing skills. As a result, teachers did not pay attention to the emergent literacy skills children herding cattle came along with. The children with a background of cattle herding could have been helped if teachers started with what the learners already know and going through with them to the unknown material. This was based on the theory of this study that children acquire knowledge and skills long before they are enrolled in formal schooling. Tr4 from Mnukwa Primary school was in agreement to the assertion that cattle herders possess emergent literacy skills before being enrolled in formal schooling:

Yes madam I come from the same background of herding cattle. I started herding my father's cattle at the age of five until when I was

seven years, I stopped looking after cattle because I wanted to go to school to learn how to read and write. The time I spent herding cattle I learnt a lot such as counting numbers, identifying cattle by colours, drawing and many other activities which I discovered that when I came into school I used the same knowledge I had to learn new things. Actually I do not regret that I was once a cattle herder. I was doing very well even better than those who were just in the village waiting for their parents to come back from their various activities. Unfortunately, the teachers as well as the teaching materials seem not to recognise this knowledge which children come along with from herding cattle. We need to recognise this knowledge because it can help us to know what the children already know and what they don't know.

Summary of the Chapter

This chapter presented findings based on data collected using different research methods and instruments following the the research questions. Data has been presented according to the participant's views which are evidenced in the verbatim and pictures. Based on the findings of this research, Emergent literacy skills children herding cattle have such as colours, shapes, counting, songs storytelling, naming, size, height, weight as well as games and plays with phonological and phonemic awareness skills were the foundation to the teaching of initial literacy in school. These are the same skills teachers spend plenty time teaching as reading readiness activities to check whether or not the children are ready for initial literacy teaching. The findings showed that cattle herders interacted with the rich literacy environment which enhanced the acquisition of different emergent literacy skills. It also disclosed that the emergent literacy skills acquired through herding cattle could be utilised as a foundation to teach initial literacy once such children were in formal schooling. The next chapter presents a discussion of research findings.

CHAPTER FIVE: DISCUSSION OF RESEARCH FINDINGS

5.1 Overview

This chapter discusses the findings presented in chapter four in relation to each of the questions of the study. The purpose of this research was to establish emergent literacy skills children herding cattle have as a foundation to the teaching of initial literacy once enrolled in school. The discussion of the findings will be done in line with the emerging themes under the four objectives of the study presented below:

- (a) To identify the types of ELS children herding cattle in Chipata District have that could be used as a foundation to learning of initial literacy and numeracy skills.
- (b) To determine if the learning of initial literacy and numeracy skills could be enhanced by ELS, once such children start formal learning in Grade one.
- (c) To investigate if the children who herd cattle utilise ELS to enable them start from a higher grade rather than Grade 1.
- (d) To ascertain if learning and teaching materials teachers use in Grade 1 take into account ELS which children who herd cattle may possess.

5.2. ELS children herding cattle in Chipata District have that could be used as a foundation to learning of initial literacy and numeracy skills.

The emergent literacy activities were characteristic of the developmental niche in Zambia's rural communities where herding cattle constituted a significant part of the indigenous cultural traditions. The researcher discusses the findings of the study pertaining to types of emergent literacy skills the children herding cattle in Chipata District have that could be used as a foundation to the learning of the initial literacy skills once such children start formal schooling. From the findings in the previous chapter, the responses from the selected children herding cattle on emergent literacy skills were mostly similar. The findings of the study stated in chapter four elaborated that emergent literacy skills had considerable possibilities that could be used as a foundation to teaching initial literacy skills once in school. If correctly employed by the grade one teachers, emergent literacy skills could significantly support the growth of their learners' abilities in initial reading and writing skills. Children herding cattle encountered various meaningful

experiences such that they developed the emergent literacy skills which could be used as a foundation to learning initial literacy in school. This means that the teaching of initial literacy should impart children herding cattle with literacy skills which would make them break through to literacy at the right grade. The findings of this study revealed that children displayed a range of emergent literacy skills which are discussed below:

5.2.1 The skill of identification in teaching initial literacy

The study identified the different emergent literacy skills children herding cattle have through the responses from the children interviewed. The research revealed that children were able to identify their cattle by sight, shape, colour, size and length. The skill of identification children acquired through herding cattle could be used as a foundation to the learning of initial literacy in school. The different colours on cattle for instance which the children herding cattle recognised would have an impact to improve their visual and cognitive processes in teaching and learning of initial reading and writing.

Children usually learnt about colours during their emergent literacy activities through herding cattle. The colours which were identified by the children herding cattle were black, white and brown. The research further established that the ability to identify colours was considered a marker and a breakthrough in a child's cognitive process and was often part of initial literacy development once enrolled in school. Recognising the colours and identifying the colour names was an important part of a child's development in emergent literacy with children herding cattle. Early identification of colours would help the children to create the cognitive link between visual signs and words as well as letter sounds.

It was also discovered that identification of cattle through different colours could help children in learning. Teachers should make their drawings using different colours to capture the attention of the learners. For instance, teachers can make pictures with different colours matching with the letter sound for teaching and learning purposes in initial literacy lesson in school. The teaching and learning aids should as well be drawn by using different colours to motivate the learners during the lesson. Learners' books should also include coloured pictures to improve the learners' memory. The skill of

identifying colours by the children would help them set a goal and sharpen their minds to assimilate new information. Therefore, the children would improve on the reading and writing skills once in school. Children would be able to connect the colours they learnt before enrollment in school and make use of the skill to what is being taught in class in relation to colours.

The findings on identification of cattle by different colours were supported by Olurinola and Tayo's (2015) research who commended that colour was a powerful tool, which had many uses in the teaching and learning process in schools. Colours could be used to get attention, enhanced clarity, establish a code, label things in nature and differentiate items. Olurinola and Tayo further ascertained that colour drew on both symbolic and cognitive powers to affect the learning and teaching process, facilitating memorisation and identification of concept. Colour also influenced the way children saw and processed information. Colours played a positive role in affecting learners' cognitive retention. Therefore, the skill of identifying things by colour should be encouraged in the learners to help them attain the learning skills of initial literacy. The skill of identification of colour substantiates with Clays theory which which commends that children start learning long before conventional writing and reading.

5.2.2 The skill of counting in teaching initial literacy and numeracy

The findings from the study established that the skill of counting in herding cattle was equally significant in the teaching of initial literacy at school. At this point, it was important for the researcher to point out that the emergent literacy skills acquired by children herding cattle were not just limited to the teaching of initial literacy but can equally be applied to other subjects such as mathematics. The respondents were able to count at least up to 50. Agreeing to the responses from the children herding cattle, different objects such as stones, sticks and leaves were used to count the number of cattle. Counting cattle was done on a daily basis which meant that children practiced the skill of counting even before starting formal school. Counting was one of the skills children came along with from home that could be used as a foundation to the teaching of initial literacy and numeracy once in school. Children would be able to apply the knowledge and skill of counting in initial literacy. This would be done in the activity of teaching syllables and

children could be asked to count the number of syllables in a given word or to clap the number of syllables identified in a word.

Furthermore, children had already acquired the concept of adding, subtracting, multiplication and division while herding cattle. As the children herding cattle start formal schooling, they would be able to utilise the skill of counting to work on other mathematical work in class such as addition, division, multiplication and subtraction. Findings of the research showed that children herding cattle actually acquired the skill of addition while herding cattle. The skill of addition was practiced whenever a cow had a calf or two then the children would add one or two more stones or sticks to match the current total number of the cattle. Sometimes a cow or a bull would be added to the number and the same process would be applied and children were able to notice that the number of cattle was increasing. In a similar way, when one or two of the cattle were sold or killed, children would take away the stones or sticks to match the total number of the cattle. By doing that, children had acquired the skill of subtraction which could be used when teaching subtraction in school. The children would go in school fully equipped with the skills of addition and subtraction which the teacher should at least take advantage when teaching the skills of addition, subtraction, multiplication and division. It is imperative that teachers handling Grade one with a background of herding cattle should take advantage of the emergent literacy skills children come along with and use it as a foundation to learn new things during the teaching and learning process.

The findings of the research on the skill of counting were in tandem to Banda (2008) who raised a concern why teachers and textbooks seem not to take advantage of the experience in the counting systems that children had from their communities which could be used as a foundation to the teaching of initial literacy and numeracy in school. Banda further affirmed that teachers opted not to acknowledge the basic skills of counting through emergent literacy worse still children with a background of herding cattle. That had contributed to the poor performance in mathematics subject and so much to drop out rates reason being that teachers ignored the counting skills children came along with from home.

Learners would actually benefit a lot if primary teachers utilised the knowledge and skills in counting as a foundation for teaching and learning process in schools especially for the teaching of initial literacy. Hence, there was need for the teachers to utilise the knowledge and skills in counting children herding cattle came along with to teach initial numeracy in class. This theory that children are tabular rasa (blank sheet) or a bank where knowledge can be deposited should not be encouraged in the teaching and learning process. Teachers of the early graders should be keen to first identify how much knowledge the children have before introducing new things. The skill of counting corroborates with Clays theory which commends that children start learning long before conventional writing and reading.

5.2.3 The skill of naming in teaching initial literacy

The researcher further established that naming cattle was yet another very important skill in the activity of herding cattle. The skill of naming cattle by children was a foundation to the teaching of initial literacy. If children went in school, they would be able to identify different objects by name as well as letter naming and sounds. The skill of naming can as well be used in other subjects such as Social and Development Studies, Science or Zambian Language. During an initial literacy lesson children could be asked to name what was on the picture and even explaining what it was. The findings on naming cattle were in harmony with a research carried out by Borkfelt (2011) who described the act of naming as the most basic actions of language. Indeed, it was naming something that enabled children to communicate about it in specific terms, whether the object named was human or non-human. Naming was thus not only the first and most basic of linguistic processes, it was also an excellent example of the power or control that was in many ways essential to language use.

Another study which was in agreement with the research findings of naming skill in cattle herding was Nkolola (2013) who commended that just like personal names, names of cattle among Tongas were not given unmindfully. Rather names of cattle related to the immediate natural environment and social setup and reflected the beliefs and customs of the Tonga people. Nkolola's assertion on the importance of naming cattle was in line with the current research findings. The findings revealed children herding cattle had acquired

the skill of naming which would help them to identify and name the letter sounds. The skill of naming would also facilitate oral language skills in teaching initial literacy in school. Oral language skills can be used to teach the phonological and phonemic awareness which will lead children to develop a reading culture in school.

The research discovered that the acquisition of the skill of naming through herding cattle was also commended by Whitehurst and Lonigan's (1998) model of Emergent Literacy who described the two interdependent domains "Outside-In" and "Inside-out" of processes and skills. The models were represented as a continuum with the knowledge of context at one end and understanding of rules of letters and their sounds at the other. The outside-in processes were used to describe conceptual knowledge, such as the function of print, particularly in the context of narrative. Inside-out processes included knowledge of graphemes or letter naming knowledge, phonological awareness, and repair of grammatical errors, letter-sound knowledge and emergent writing. To comprehend a written sentence, a child has to translate and categorise graphemes into sounds and also be able to understand the concepts and context in which the sentence occurs.

5.2.4 The skill of identification of sound

From the findings, the study established that children herding cattle used a flute and some used whistling to direct the cattle. The findings further established that different sounds were made using a flute or whistling which were part of emergent literacy skills acquired during herding cattle. The different sounds made by the children using a flute or whistling were established from the study that could be used as a foundation to the teaching of initial reading and writing which involved identification of different letter sounds, blending, segmentation and word building. Identification of different sounds in the learning of letter sounds, sounds in syllables as well as words were a very good foundation to the learning of initial literacy in school. Furthermore, children herding cattle were able to identify sounds made by different birds which could be used to identify various sounds in learning initial literacy in school. When children were able to identify a sound by listening, it would be easy for them to connect the same sound in written form. By doing that, children would be heading in the right direction of a viable reading and writing culture in schools.

The identification of different sounds made by birds could be used as foundation by the children herding cattle once they were enrolled in school. Hence, the skill of naming can be incorporated to name the letter sound, syllables and words during the teaching and learning process of initial literacy. The sounds could be used in the teaching of initial reading and writing in phonological and phonemic awareness. Eventually, the children would be put in the rightful direction to identify different letter sounds to make syllables, words and finally sentences. In agreement with the findings of this study on the skill of identification of sound was Cunningham *et al* (2009) who argued that teachers needed to recognize the vital role of word recognition skills in early reading acquisition and development, how phonological awareness and the alphabetic principle were at the very foundation of learning to decode accurately. Later on phonologic, orthographic, syntactic and semantic knowledge would lead to automatic and fluent reading which, in turn, led to making meaning from text. Teachers needed the associated content knowledge to support children as they developed initial reading and writing skills. The skill of identification of sound corroborates with Clays theory which which commends that children start learning long before conventional writing and reading.

5.3 Learning of initial literacy and numeracy skills could be enhanced by ELS, once such children start formal learning in Grade one.

In reference to the second objective, the study established that emergent literacy skills which cattle herders acquired could enhance the learning of initial literacy once such children were in school.

5.3.1 Storytelling and songs in teaching initial literacy

The study revealed that while herding cattle, children were able to compose songs and told many stories which could be utilised by the teacher during the teaching and learning process of initial literacy. Songs and stories played a major role in teaching oral skills which were mainly speaking and listening skills. Songs could be used when introducing lessons in oral languages to motivate the learners and capture their attention. Sometimes a teacher can select a song which comprised particular letter sounds, syllables or words which he intended to teach initial literacy on that day. The findings in chapter four

revealed that phonological awareness were present in the songs the children herding cattle sang in the targeted villages. Songs reinforced and motivated the learners to understand certain concepts of the subjects. Songs can be used as a teaching and learning method to help the slow learners to understand the lesson easily and help them recall the concepts easily. The rhythms of the songs improved children's oral language. To learn the songs that the children sang with their friends they used their sense of hearing. Sometimes the children just derived pleasure from listening to themselves repeating the sounds of words, phrases or mere sounds in a song. That was sensory experience which exposed children to facts about their bodies, senses and qualities of things in the environment.

The formal education can borrow a lot of teaching and learning methods from the informal education e.g. use of songs, games and play. That could be through the different songs that the children sang while herding cattle in the field. Singing was one of the popular forms of play among all the children herding cattle under the study. Most of the songs were Zambian indigenous songs sung in Chewa. Songs involved the use of sounds and rhymes. The basic units of sound are phonemes. Therefore, songs and rhymes indicated that children herding cattle had an exposure to sounds that could aid phonemic awareness during the learning of initial literacy. Phonemic awareness sets the foundation to phonological awareness which involved understanding that words were made up of smaller sounds like syllables and phonemes. The findings of the research on the importance of the use of songs were substantiated by Kakoma (2017) who commended that songs were used for different purposes such as appreciating God's creations, mockery, expressing happiness, recalling names of months of the year, learning about health and warnings for safety, therapy and communicating the ancestors. Indigenous songs helped to promote children's physical development through jumping, limping, running and dancing and developed them socially through their singing together. To further underscore the meaning of indigenous songs for pre-school learners, it was evident that indigenous songs promoted children's mother-tongue learning, making it easy for them to understand what they were doing.

The research further established that people in all times and places have told stories and that included the children herding cattle. In the oral tradition, storytelling included a teller

and an audience. The storyteller brings out the experience, while the audience perceives the message and creates personal mental images from the words heard and the gestures seen. Stories would help children to understand the world that they live in and to establish a relationship between what they know and experience. Stories have a bridge function between the languages used in the educational environment starting from an early age and in everyday life, for a developing child. Another important finding that emerged from this study was the importance of storytelling and riddles as part of emergent literacy skills children herding cattle acquired. The children interviewed confirmed that through storytelling and riddles their way of thinking, speaking and perception of different events improved day by day. The findings revealed the value of riddles which could be useful to improve children's vocabulary, train their memory, and provide instruction in local traditions and culture. A teacher teaching shapes in mathematics could easily use riddles to introduce a lesson on shapes since children already have interacted and participated in stories and riddles from home. Riddles had various functions such as the ones that could be used to extend children's knowledge of various subjects such as cause and effect, shapes, sizes and lengths.

The findings of the current study suggested that herding cattle supported young children in developing emergent literacy skills, bridging the gaps among children's literacy skills that may result from their different home literacy environments. The value of storytelling and riddles were part of the findings of the study on emergent literacy skills that could enhance listening and speaking skills in children when they started formal school. The expectation was that the richer the oral vocabulary learners exhibited the more emergent literacy there was in the learners for the foundation of teaching initial reading and writing. Oral language through storytelling would also improve the skill of pronunciation. The advantage of pronunciation was that the children were guaranteed to reading and writing correct letters, words and eventually sentences.

The findings on story telling were similar to St. Amours, (2003) who acknowledged that naturally stories were a vehicle on what children built on oral language skills to develop literacy. Hence, allowing children listen to stories enabled them to gain the insight about their knowledge, creativity, and language ability and strengthen their thinking processes.

The scholar also stressed that the stories which the children were exposed to at home also prepared them for structure and development of narratives in learning initial literacy. That implied that storytelling furnished children with knowledge and skills that were believed to enhance literacy. The study also established that encouraging children to participate in storytelling may expand the child's language to literacy and make him/her become good at the time they get into formal school.

The study further established that some of the traditional stories that were told to the selected children herding cattle by the elders had lessons on how to look after the cattle as well as maintaining the value of literacy skills that were acquired through storytelling. Emergent literacy skills children herding cattle had acquired through storytelling could be best utilised under the current language policy in the Zambian education that children should be taught in a familiar language from Grades one to four. The advantage would be that children herding cattle had already acquired the skills of listening and speaking from their homes through storytelling which was the foundation to the teaching of initial writing and reading in school.

Children herding cattle were coming from home with new vocabulary acquired through storytelling which could be used as a foundation to the teaching of initial literacy. The findings on storytelling and riddles were reinforced by the *The National Literacy Framework* (2013) which stated that learning in one's first language was 'essential for the initial teaching of reading. Children arrived on the first day of school with thousands of oral vocabulary words and implicit knowledge of the sound system of their mother tongue, but were unable to use and build upon those linguistic skills because they were instructed in a foreign language. Hence, the method of storytelling using familiar language at home as well as in the first four grades was supported with a purpose to improve initial reading and writing skills in class.

Tambulukani (2015) was also in agreement with the findings of the home environment in relation to storytelling as a foundation to teaching of initial reading and writing. Tambulukani in his research confirmed that the use of the local language and the teaching methods created a stronger relationship between school and homes where children came

from thereby reducing some of the cultural shock which children met when they first reported to a formal school. The basic literacy skills were supported by the fact that children herding cattle were coming from homes with some already acquired knowledge and skills through stories and songs which acted as a bridge to the knowledge they would receive in school. Children herding cattle would be at an advantage because they would be learning from known material to unknown. The study revealed that, if teachers ignored the emergent literacy skills children herding cattle came along with from home, the four primary domains of emergent literacy would be lost. The four primary domains of emergent literacy were the phonological awareness, print knowledge, phonological processing as well as oral language.

5. 4 Children who herd cattle utilise ELS to enable them start from a higher grade rather than Grade 1

In reference to the third objective, the study established that actually children who were herding cattle had a possibility of starting school from a higher grade other than Grade one. Children had acquired a number of emergent literacy skills which would be adequate to start on a higher grade. The findings from the research had further implemented the systematic classification of the primary domains of emergent literacy skills by Whitehurst and Lonigan (1998) to analyse further findings if Children who herd cattle utilise ELS to enable them start from a higher grade rather than Grade one. The emergent literacy components included oral language, concepts about environmental print, alphabet knowledge, phonological and phonemic awareness skills, emergent (pretend) reading and emergent (pretend) writing. These components will form the subheadings for the discussion.

5.4.1 Oral language as a foundation to teaching initial literacy

The answers that children herding cattle gave during interviews revealed the presence of oral language as an emergent literacy skill through songs and storytelling. Oral language and narrative skills were considered under this component. Oral language was an important prerequisite to reading as it involved speaking and listening skills. During oral language the learners could be asked to retell the stories and with the skill of speaking

which had already been acquired through storytelling children would have no problems to perform such a task. Oral language was supported by Banda in his presentation “*Travelling from ‘Emergent’ Literacy to Reading to Learn on a Meandering language Policy Road (2017)*” at the National Reflection workshop on Improving Early Grade Reading who quoted Vygotsky (1979:83). Banda argued that it was not practical to teach reading and writing of words and meanings of concepts directly without first teaching the children orally in a much natural way such as through language games, songs, storytelling, etc.

Vygotsky further warned that a teacher who tried to ignore this usually accomplished nothing but empty verbalism, a parrot like repetition of the words by the children, simulating knowledge of the corresponding concepts but actually covering up a vacuum. In the same way Chan et al (2000) espoused the idea of teaching oral language as being fundamental in teaching initial literacy in school. Chan et al further reported that there was a large body of evidence linking oral language proficiency to the development of literacy skills and they argued that limitations in oral language abilities were the basis of early reading difficulties experienced by pupils.

Hence, allowing children to listen to stories enabled them to gain the insight about their knowledge, creativity, and language ability and strengthen their thinking processes. The scholar also stressed that the stories to which the child was exposed to at home also prepared the child for structure and development of narratives. Colon-Vila (1997) in the same way agreed that storytelling helped teach children to listen; it helped the children developed skills in both oral and written communication, while developing understanding of story schema. Storytelling was the most effective way to develop listening and speaking skills. Storytelling also provided an opportunity to experience the difference between listening quietly and listening actively, by participating in the process. Teachers could use storytelling to teach initial literacy considering the background knowledge and skills in speaking and listening skills through storytelling children came along with from their homes.

The researcher also found that apart from storytelling and riddles, other emergent literacy activities such as naming cattle, singing as well as identifying cattle allowed for the use and acquisition of new vocabulary. That meant children who acquired those emergent literacy skills while herding cattle were able to use the words they already knew as well as learn new ones to enrich their speech as they prepared for learning how to read in various subjects once in school. The assertion of oral language in this study was also confirmed by Whitehurst & Lonigan (1998) who said that reading, writing, and oral language would develop in early age when children were exposed to the social contexts in which literacy was an important phenomenon. It had been shown that parents were able to build a home environment that persuaded children's learning and communication. Furthermore, the experiences, attitudes, and materials that a child interacted with at home had an effect on child's home literacy environment.

5.4.2 Concepts about environmental print

The findings in chapter four showed that children displayed knowledge of concepts about environmental print. The findings on concepts of environmental print were substantiated by Teale and Sulzby (1989) who confirmed that emergent literacy as the term used to describe a child's developing concept and behaviour as print becomes meaningful. The process was influenced by cognitive and social interactional factors which begin at home before formal schooling and develop into conventional literacy at school. Children herding cattle were exposed to environmental print. For example, the flowers which were drawn on the walls of the huts helped the children herding cattle to acquire the knowledge of print in what was drawn on walls which were a foundation to the teaching of initial literacy. The children also practiced drawing things on the ground and that set a background for initial writing in school.

In relation to emergent literacy skills, Banda cited Vuolab (2000) who explained that someone needed not to have books in order to have literature and to have literacy. Vuolab further mentioned that his family, his home, and nature around his home were his libraries. His literary events took place in our cowshed as we were milking cows". Children were bound to acquire different emergent literacy skills through herding cattle which prepared them for initial learning in school.

The findings were substantiated with Clay (2001)'s assertion, that children arrived at formal literacy instruction with developed systems to process non-print information (processing systems related to: the syntax of oral language; meanings of words; visual forms of objects, pictures, scenes; making sense of daily activities, and understanding stories). Subsequently, children herding cattle equally developed these processing systems as a result of their early life-experiences. Clay's findings demonstrated that through the simultaneous development of reading, writing, listening and speaking skills, children entered literacy.

5.4.3 Phonological and phonemic awareness skills

The findings in chapter four revealed that phonological awareness was present in the selected children herding cattle who were interviewed. This was through the different emergent literacy activities such as naming cattle, songs that the children sang while herding cattle as well as listening to the sounds made by the birds. Songs involved the use of sounds and rhythms. The basic units of sound are phonemes. Therefore, songs, sounds and names indicated the children's exposure to sounds that could aid in phonemic awareness. Phonemic awareness sets the foundation for phonological awareness which involved understanding that words were made up of smaller sounds like syllables and phonemes (Whitehurst and Lonigan, 1998). Phonological and phonemic awareness skills in this study were supported by Griffith & Olson (1992)'s assertion who established that when children learn to speak a language, they naturally become well acquainted with its elementary speech sounds, or phonemes. Children pronounced these sounds with every word, and they heard them spoken in every utterance. Despite their remarkable expertise in speech, children ordinarily spent little time thinking consciously about the phonemes they used. Their focus was quite properly on getting meaning and on producing understandable messages. Therefore, phonemic awareness would be irrelevant were it not for the fact that phonemes were the units encoded by the letters of the alphabetic languages used in most of the modern world, the raw material of reading and writing.

Likewise, Strickland and Morrow (1989) described emergent literacy as a framework which includes conventions of print, literacy environments, phonological awareness, letter or sound identification and language abilities as components or skills that predict

later success in reading and writing. This is because in some cases the sound of these letters gives the upcoming reader a clue on the pronunciation of the word. Letter knowledge brings about understanding that letters are different from each other. The children herding cattle then come to learn the names and sounds of the letters and start associating the letters with their sounds.

The sounds could be within the words or independent of words' meanings. Children coming from the background of herding cattle would be able to hear and identify the distinct sounds of the individual phonemes when words were pronounced even though the sounds that made up the word were articulated. The other important point to note was that as children would talk about what to write, they would increase their knowledge about phonology and phonemic awareness. The connection between reading and writing on one hand and oral language on the other was that children used the cultural tool to talk about things they observed in the natural world. It was that same cultural tool which they began to learn which was represented in print and decoded. What children herding cattle would say in class comes from their emergent literacy background. This is what the teacher should encourage as a way of building on learners' emergent literacy skills in the classroom. All the aforementioned established emergent literacy skills children herding cattle had could be used as a foundation to the teaching of initial literacy once enrolled in school. Hence, the findings were substantiated with Clay's theory which postulates that children come along with different knowledge and skills before such children start conventional reading and writing.

5.5 Learning and teaching materials teachers use in Grade 1 take into account ELS which children who herd cattle may possess.

Furthermore, the researcher established that the emergent literacy skills children herding cattle had were a foundation to the teaching of initial literacy in school. Children herding cattle should not be judged as mere beginners who did not know anything about such literacy skills as holding a book or a pencil. The research was considered necessary due to the current grade one curriculum which considers first graders as empty vessels to be filled with knowledge. The theory that children are tabular rasa (blank sheet) as they come

from their homes as blank slates for teachers to write on has been disputed by many psychologists and emergent literacy theorists such as Marie Clay. Clay's emergent literacy theory posits that there are levels of literacy behaviors which children acquire before they formally get into classroom which facilitates the acquisition of reading and writing skills at a conventional level. It is for the teacher to take advantage of these emergent literacy skills children herding cattle have that will act as a spring board to learn initial reading and writing.

The study established that the teachers who were interviewed explained that it was somehow wasting time to find out what emergent literacy skills the children came along with that could be used as a foundation to teaching reading and writing in school. Furthermore, the teachers looked upon their children as not knowledgeable about anything to do with reading and writing. The teachers ignored most of the prior knowledge. Most of the knowledge children came along with could be used to teach reading and writing in all the subjects at school. Children's performance in other subjects depended on how much they could read and write. The findings of the research were in agreement with Banda (2017) who pointed out that treating the learners as if they come from their homes as blank slates for teachers to write on should not be encouraged when they first come into school. Banda quoted Michael Stubbs who says that "the general consensus in educational thinking is that education should be child-centered in the sense that learning is most effective if it is based on the child's own experiences. Teaching has to start from where the child is, because there is, logically, nowhere else to start."

In another study conducted by Iimage (2013) established that Grade 1 teachers observed and interviewed did not know what emergent literacy is. Neither did they know how useful emergent literacy was for teaching children the conventional reading and writing skills on a continuum model. It implied that teachers lacked knowledge of emergent literacy skills, which was children's most useful foundational knowledge in the classroom set up for teaching them the reading and writing skills. Iimage's argument was that lack of emergent literacy skills renders the teachers incapable of creating the necessary classroom conditions that would bring about continuity in the teaching of reading and writing. Iimage further elaborated that the teachers ignored most of the prior knowledge to formal

reading and writing which learners acquired before entry into Grade 1. Teachers judged their learners as mere beginners who did not know anything about such literacy skills as holding books right side up, identifying ‘print’ on a page and that they were without any early writing development such as scribbles.

The study further established that teachers did not use any extra materials apart from books that were provided by the Ministry of General Education. In addition, it was fundamental that the use of appropriate extra teaching materials with emergent literacy background may stimulate and broaden the chances of utilizing the essential prior knowledge to reading and writing that learners earlier acquired through herding cattle. The research findings were in agreement with Serpell (2016) who in the same way pointed out that with learners receiving literacy and numeracy instructions in abstraction from most of the real world tasks to which those skills could usefully be applied in their everyday lives. Similarly, Ng’asike (2014) in Serpell (2016) had advanced a similar critique of the absence of any connection between formal programs of early childhood education offered to children of the cattle-herding. Ng’asike gave an example of the Turkana people of Kenya and the indigenous knowledge system as well as animal husbandry skills that inform the non-formal educational practices of the society.

5.6 Summary of Chapter Five

The research objectives were the source of the emerging themes used in this chapter to discuss and analyze the research findings from the field. The discussion of findings which has been done by referring to the literature review and bringing in the voice of the researcher has revealed that the selected children acquired the emergent literacy skills through herding cattle. Generally, herding cattle know-how, if used correctly, can be set as a foundation to learning initial literacy once these children are in formal school. The outcomes on the research objectives were in corroboration with Clay’s emergent literacy theory this study adopted which postulates that children come along with knowledge and skills acquired through emergent literacy skills. Therefore, teachers of the first graders are advised to first find out what the children know when they come into school. The emergent literacy skills children come along with from home are the building blocks for

the teaching of initial literacy. The next chapter presents a summary of the conclusions and proposes recommendations for further research developments.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Overview

The preceding chapter discussed the findings of the study while this chapter will present the conclusion and the recommendations of the study on establishing emergent literacy skills children herding cattle have; a foundation to the teaching of initial literacy in school. The study aimed at establishing the emergent literacy skills children herding cattle had. The study further endeavoured to establish whether the emergent literacy skills children herding cattle had were a foundation to the teaching of initial literacy in schools of Chipata district. The chapter ends with a presentation of the necessary recommendations for the study which are meant to give feedback to initial literacy planners, teachers of initial literacy as well as other stake holders.

6.2 Conclusion

Emergent literacy skills are acquired informally through the various activities and contexts in which children are engaged. For instance, emergent literacy skills are acquired through songs, riddles, games, dances, crafts as well as herding cattle. Children herding cattle actually are not as blank as teachers may think because they display quite a variety of skills acquired through herding cattle. If the emergent literacy skills children herding cattle bring along from home are skillfully utilised by the early grade teachers, the learners will have very few problems towards the learning of initial literacy in school. Children generally exhibited enough emergent literacy skills which could be used as a foundation to the teaching of initial literacy in school. With support, children herding cattle can progress from emergent literacy to conventional reading and writing. Through experiences and meaningful literacy activities, teachers and parents or guardians can model and scaffold literacy skills for emerging learners.

The study established that children herding cattle acquired emergent literacy skills such as identification of cattle by its colour, size, shape, length, height and weight were the foundation to the teaching of initial literacy in school. The study further established that naming and counting skills were emergent literacy skills children herding cattle acquired

that enhanced phonological and phonemic awareness skills once enrolled in school. The emergent literacy skills acquired through herding cattle will continue to serve as a vital purpose in children as a foundation to the teaching of initial literacy once enrolled in primary school. Apart from that, the study also indicated that activities such as stories relate to listening and speaking skills which children learn when they get into formal school. This means that parents should continue narrating these stories to their children so that they develop literacy skills even prior to formal school. The study further established and concluded that through the identified emergent literacy skills children herding cattle had were the foundation to the teaching of initial literacy in school.

6.3 Recommendations

The recommendations that have come out of this study are as follows:

- (a) Teachers of the Grade One to take into account the emergent literacy skills among the cattle herders such as counting, naming and identification skills to be used as a foundation to teaching of initial literacy once children are in school. This can be the procedure as a child moves from a cattle rearing environment full of emergent literacy skills to school environment and starts learning initial literacy in primary school.
- (b) The Ministry of General Education (MoGE) needs to recognise such findings of researches like this one to the awareness of curriculum planners so that they may include emergent literacy skills acquired by children herding cattle as a foundation to the teaching of initial literacy.
- (c) Teachers need to support children herding cattle to progress from emergent literacy to conventional reading and writing. Through experiences and meaningful literacy activities, teachers and parents or guardians can model and scaffold literacy skills for emerging learners.

6.4 Suggestions for further research

- (a) Since this study was aimed at only to establishing what emergent literacy skills children among cattle herders have in Chipata district had that could be used as a foundation to teaching of initial literacy before such children entered formal schooling: it is recommended that more research is done to establish the connections between the skills and initial literacy during a literacy lesson.
- (b) How those who herd cattle for seven years and decide not to go to school would be assessed to establish at what level they can join the formal schooling.
- (c) Further studies need to be carried out in other parts of the country to collect more emergent literacy skills children herding cattle have for the foundation of teaching initial literacy. Need to conduct the same study on a larger sample.

6.5 Summary of Chapter Six

This chapter has brought this research report to a close by the presentation of a conclusion in line with the objectives of the study. The conclusion has been followed by recommendations based on the findings of the study. The recommendations consist of what needs to be done for the research to be beneficial to the society for which it is intended. The last three are suggestions for further research.

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APPENDICES

APPENDIX A : Informed Consent Form



THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

Telephone: +260-211-290258/293937

P O Box 32379

Fax: +260-211-290258/293937

Lusaka, Zambia

E-mail drgs@unza.zm

HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

PARTICIPANT INFORMATION SHEET & CONSENT FORMS

(This template is for research interventions that use questionnaires, in-depth interviews or focus group discussions)

(Language used throughout form should be at the level of a local student of 6th/8th grade)

Notes to Researchers:

1. Please note that this is a template developed by the WHO ERC to assist the Principal Investigator in the design of their informed consent forms (ICF). It is important that Principal Investigators adapt their own ICFs to the outline and requirements of their particular study.

2. The informed consent form consists of two parts: the information sheet and the consent certificate.

3. Do not be concerned by the length of this template. It is long only because it contains guidance and explanations which are for you and which you will not include in the informed consent forms that you develop and provide to participants in your research.

4. This template includes examples of key questions that may be asked at the end of each section that could ensure the understanding of the information being provided, especially if the research study is complex. These are just examples, and suggestions, and the investigators will have to modify the questions depending upon their study.

5. in this template:

- square brackets indicate where specific information is to be inserted
- bold lettering indicates sections or wording which should be included
- Standard lettering is used for explanations to researchers only and must not be included in your consent forms. The explanation is provided in black, and examples are provided in red in italics. Suggested questions to elucidate understanding are given in black in italics.

Informed Consent Form for: Children herding cattle

This informed consent form is for the children herding cattle (boys and girls) who have been enrolled in grade one from Mnukwa and Chambawa villages who I am inviting to participate in the academic research, 'Emergent literacy skills among cattle herders as a foundation to teaching initial literacy in schools of Chipata district.'

Name of Principle Investigator: GODFRIDAH TEMBO

Name of Organization: THE UNIVERSITY OF ZAMBIA, SCHOOL OF EDUCATION

Name of Sponsor: SELF

Name of Project and Version: EMRGENT LITERACY SKILLS AMONG CHILDREN HERDING CATTLE AS A FOUNDATION TO TEACHING EMERGENT LITERACY IN SCHOOL

This Informed Consent Form has two parts:

- **Information Sheet (to share information about the study with you)**
- **Certificate of Consent (for signatures if you choose to participate)**
- **You will be given a copy of the full Informed Consent Form**

Part I: Information Sheet

Introduction

I am **Godfridah Tembo**, a master student in the School of Education at The University of Zambia. I am doing a research on children who are engaged in herding cattle and especially that they were enrolled in school and find out what type of emergent literacy skills do they have and how it will benefit them as they go into school. I am going to give you information and invite you to be part of this research. You do not have to decide today whether or not you will participate in the research. This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain. If you have questions later, you should feel free to ask them.

Purpose of the research

Herding cattle is a very important activity especially for you as children who are living in this part of the town. I believe that you can help me by explain what knowledge you acquire as you are herding cattle. I want to find out what type of activities you normally do as you are looking after cattle. I want to know how you are able to identify your cattle, I want to learn how you are able to know that all the cattle are there or one or two are missing. I also want to know how important the environment is where you take the cattle for grazing, I want to know what you do in case one of your cattle you are herding is sick. I also want to learn how the knowledge you have acquired will be applied in school as you are already enrolled in school.

Type of Research Intervention

This research will involve your participation in a group discussion that will take about one and a half hour, and a twenty minutes interview.

Participant Selection

You are being invited to take part in this research because I feel that you are the suitable people with the data as a cattle herder that can contribute much to my understanding and knowledge to the research that I am undertaking. The information obtained will as well help the teachers who will be teaching you and how best they will utilise the knowledge that you have acquired through herding cattle.

- Do you know why I am asking you to take part in this study?
- Do you know what the study is about?

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate, its fine and nothing will change. You are free to decide.

- Do you know that you do not have to take part in this research study, if you do not wish to?
- Do you have any questions?

Procedures

A. I am here to find out what activities that you do when herding cattle and the knowledge you gain during the period of herding cattle. I am inviting you to take part in this research project. If you accept, you will be asked to give me the details on how you do it or you state what you learn when herding cattle

B. For focus group discussions

This discussion will be guided by myself. I can also answer questions about the research that you might have. I would like to have a discussion with you on the emergent literacy skills that you acquire when you are herding cattle. Be rest assured that there is no wrong or right answer; feel free to participate by sharing your true feelings and opinions about this topic. The discussion will be kept confidential. I will not ask you to share personal practices or stories and you do not have to share any knowledge that you are not comfortable sharing.

I will be writing down whatever would be discussed and I can assure you that it will be kept confidential.

For unstructured guided interviews)

I would like you to participate in an interview with me. During the interview, I will sit down with you in a comfortable place or under the tree. If it is better for you, the interview can take place in your home or a friend's home. If you do not wish to answer any of the questions during the interview, you may say so and I will move on to the next question. No one else but the interviewer will be present unless you would like someone else to be there.

Duration

The research takes place over four weeks in total. During that time, I will visit you once or twice in case there is something I need you to clarify more and each interview will last for about 20 minutes each. The group discussion will be held once and will take about one and a half hour.

- If you decide to take part in the study, do you know how much time will the interview take?
- Where will it take place?
- If you agree to take part, do you know if you can stop participating?
- Do you know that you may not respond to the questions that you do not wish to respond to?
- Do you have any more questions?

Risks

There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the experiences and challenges you encounter when herding cattle. However, I do not wish for this to happen. You do not have to answer any question or take part in the discussion/interview/if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Benefits

There will be direct benefit to you as a participant because you will be helped to realize how much knowledge you and that it can be used for writing and reading in many subjects as you go to school, but your participation is likely to help us find out more about how I can best utilise the knowledge that you acquire during the herding of cattle as a foundation to teaching initial literacy in school.

Reimbursements

You will not be provided with any incentive to take part in the research because this is purely an academic research intended for academic purposes.

- Can you tell me if you have understood correctly the benefits that you will have if you take part in the study?

Confidentiality

The research being done in the villages may draw attention and if you participate you may be asked questions by other people in the village. I will not be sharing information about you to anyone outside of the research team. The information that I am collecting from this research project will be kept private. Any information about you will have a number on it instead of your name. It is only me who will have this information. It will not be shared with or given to anyone.

The following applies to focus groups:

I will ask you and others in the group not to talk to people outside the group about what was

said in the group. I will, in other words, ask each of you to keep what was said in the group confidential. You should know, however, that we cannot stop or prevent participants who were in the group from sharing things that should be confidential.

- Did you understand the procedures that I will be using to make sure that any information that as a researchers collect about you will remain confidential?
- Do you understand that I cannot guarantee complete confidentiality of information that you share with us in a group discussion?
- Do you have any more questions?

Sharing the Results

Nothing that you tell me today will be shared with anybody outside the research apart from being published in the dissertation and nothing will be attributed to you by name. No information will be shared as this is a purely academic research.

Right to Refuse or Withdraw

You do not have to take part in this research if you do not wish to do so, and choosing to participate will not affect your learning at school in any way. You may stop participating in the [discussion/interview] at any time that you wish without.

Who to Contact

This proposal has been reviewed and approved by, which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact [.....It has also been reviewed by the Ethics Review Committee of the World Health Organization (WHO), which is funding/sponsoring/supporting the study.

- Do you know that you do not have to take part in this study if you do not wish to? You can say No if you wish to?
- Do you know that you can ask me questions later, if you wish to?
- Do you know that I have given the contact details of the person who can give you more information about the study? Etc.
- You can ask me any more questions about any part of the research study, if you wish to.
- Do you have any questions?

Part II: Certificate of Consent

I have been invited to participate in research about the emergent literacy skills among children herding cattle as a foundation to teaching initial literacy.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Print Name of Participant _____

Signature of Participant _____

Date _____

Day/month/year

If illiterate ¹

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness _____

Thumb print of participant

Signature of witness _____

Date _____

Day/month/year

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that the following will be done:

¹ A literate witness must sign (if possible, this person should be selected by the participant and should have no connection to the research team). Participants who are illiterate should include their thumb print as well.

1. Confidentiality would be considered
2. Risks if any will be taken care off
3. Anonymity of the participants would be maintained

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this ICF has been provided to the participant.

Print Name of Researcher/person taking the consent GODFRIDAH
TEMBO/.....

**Signature of Researcher /person taking the
consent...../.....**

Date _____

Day/month/year

APPENDIX B: Unstructured Interview Guide For Children Herding Cattle

THE UNIVERSITY OF ZAMBIA

SCHOOL OF EDUCATION

DEPARTMENT OF LANGUAGE AND SOCIAL SCIENCES EDUCATION

**UNSTRUCTURED INTERVIEWS GUIDE FOR THE CHILDREN HERDING
CATTLE**

I am postgraduate student at the University of Zambia pursuing a master of education degree in language and literacy. I am conducting a research on establishing emergent literacy children herding cattle have that could be a foundation to conventional literacy once enrolled in school. Kindly feel free and be honest in your responses as all answers you give will be treated confidentially.

1. How old are you? [.....]
2. How old where you when you started herding cattle?
.....
3. What other activities do you do when herding cattle?
.....
4. How many cattle (cows) do you have?
.....
How are you able to count the cattle before you go out and when the day is over?
.....
5. Who taught how to count the animals?
.....
6. How are you able to identify your animals from other peoples' animals?
.....
7. How is the environment important for cattle herding?
.....

8. How do you read the environment to show you whether or not it will rain or not before you take your animals for grazing?
.....

9. Is there any specific environment suitable for the cattle herding?
.....

10. How do you know that a given environment is a suitable one for your cattle?
.....

11. Do you normally go alone or you are always in a group of other cattle herders?
.....

12. What time of the day do you take the cattle for grazing? (Morning or afternoon)
.....

13. What do you prepare to carry before taking the cattle for grazing?
.....

14. Do you give your animals names for identification?
.....

What is the importance of colors on of the animals?
.....

15. How do you identify your animals when they are in a group?
.....

16. Are you able to tell if the animal is sick [Yes/ No]

17. If yes, what are the indications?
.....

18. If you know it is sick, what type of medicine do you give the animals?
.....

In what quantities do you administer those medicines?
.....

Are you able to tell if the animal is missing or not? How?
.....

19. How do you know whether one animal is missing or not?
.....
.....

20. Would you recognize your cow from the sound it makes if it went missing and it cried out from afar?

.....

APPENDIX C: Focus Group Discussion Guide For The Children

I would like to have a discussion with the children on the emergent literacy skills that you acquire when you are herding cattle. Be rest assured that there is no wrong or right answer; feel free to participate by sharing your true feelings and opinions about this topic. The discussion will be kept confidential.

1. Let us start by talking about the activities that are involved in herding cattle that are important to you.
.....
2. What is the first thing that you do before taking the cattle to the grazing field?
.....
3. Do you herd cattle as a group or individually?.....
4. What time do you normally come back and what do you do before the cattle go into the kraal?
5. How do you read time since you have no watches?
6. What are the challenges do you face when herding cattle?
.....
7. If you were to start grade one today what things would you tell your teacher that you knew them already during cattle rearing from these given here: (colors, shapes, sizes, weights, patterns, drawings of various types)
.....
8. Other than cattle rearing, what other things do you do?
.....
9. What kinds of games do you play, either when rearing your cattle or playing in the village which involve counting and reading signs?
.....
10. How many of you have played Nsoro while rearing cattle or when relaxing at home?
.....
11. If you have, how many stones are used in the game?
.....

APPENDIX D: Unstructured Interviews Guide For The Teachers

I am postgraduate student at the University of Zambia pursuing a master of education degree in language and literacy. I am conducting a research on establishing emergent literacy children herding cattle have that could be a foundation to conventional literacy once enrolled in school. Kindly feel free and be honest in your responses as all answers you give will be treated confidentially.

1. How do you handle children who have come in Grade one for the first time.

.....

2. Do you understand what emergent literacy is all about?

3. Does the knowledge the children get while cattle herding help them participate in folktale telling in learning initial literacy? [Yes/No]

4. Do the games children play and songs they sing depict the experiences they encounter while herding cattle?

5. What kind of literacies do you offer to the children who have just come in grade from herding cattle that you think would be helpful when teaching initial literacy?

.....

6. What are the possible benefits that may come as a result of engaging your children in cattle herding before that child starts formal schooling?

.....

7. What teaching materials do you use for teaching and learning process do you use during the teaching of initial literacy?

.....

8. How is the participation of children herding cattle promote literacy in terms of both oral and written?

.....

9. What activities do you think the learners do while herding cattle which you think could enhance the knowledge of the following once such children are in school?

- (a) Counting
- (b) Identifying things by sight, shape, colour, smell, touch
- (c) Writing.

APPENDIX E: Approval of Study



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

HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

Approval of Study

26th September, 2018

REF. No. HSSREC: 2018-JUL-025

The Principal Investigator

Dear Godfridah Tembo,

RE: "ESTABLISHING EMERGENT LITERACY SKILLS CHILDREN HERDING CATTLE HAVE: A FOUNDATION TO TEACHING OF INITIAL LITERACY? A CASE STUDY OF SELECTED CHILDREN IN CHIPATA DISTRICT"

Reference is made to your submission. The University Of Zambia Humanities And Social Sciences Research Ethics Committee IRB resolved to approve this study and your participation as Principal Investigator for a period of one.

Review Type	Expedited/Ordinary Review	Approval No. 2018-JUL-025
Approval and Expiry Date	Approval Date: 24 th September, 2018	Expiry Date: 23 rd September, 2019
Protocol Version and Date	Version-Nil	-
Information Sheet, Consent Forms and Dates	<ul style="list-style-type: none">English.	To be provided
Consent form ID and Date	Version	To be provided
Recruitment Materials	Nil	Nil

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Excellence in Teaching, Research and Community Service

There are specific conditions that 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.

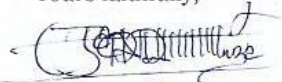
Conditions of Approval

- Provide information sheets and consent letters as these were not attached. The information sheets should have had the essential features included. Please use the WHO templates which you could download at www.who.int/rpc/research_ethics/informed_consent/en/. REC would appreciate if the PI could customise the WHO templates and include the domains of what the submitted protocol is positing on tools and the sampling units (people who have been or shall be participating in this study).
- 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 the IRB within 5 days.
- All protocol modifications must be IRB approved by 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 and approval. In all cases, except where noted above regarding subject safety, any changes to any protocol document or procedure must first be approved by the IRB before they can be implemented.
- All protocol deviations must be reported to the IRB within 5 working days.
- All recruitment materials must be approved by the IRB prior to being used.
- Principal investigators are responsible for initiating Continuing Review proceedings. Documents must be received by the IRB at least 30 days before the expiry date. This is for the purpose of facilitating the review process. Any documents received less than 30 days before expiry will be labelled "late submissions" and will incur a penalty.
- Every 6 (six) months a progress report form supplied by The University of Zambia Humanities And Social Sciences Research Ethics Committee IRB must be filled in and submitted to us. There is a penalty of K500.00 for failure to submit the report.
- The University Of Zambia Humanities And Social Sciences Research Ethics Committee IRB does not "stamp" approval letters, consent forms or study documents unless requested for in writing. This is because the approval letter clearly indicates the documents approved by the IRB as well as other elements and conditions of approval.

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 The University of Zambia Humanities and Social Sciences Research Ethics Committee IRB, we would like to wish you all the success as you carry out your study.

Yours faithfully,



Dr. Jason Mwanza
BA, MSoc, Sc., PhD

CHAIRPERSON

The University Of Zambia Humanities and Social Sciences Research Ethics Committee IRB

Cc Director, Directorate of Research and Graduate Studies
 Assistant Director – Research, Directorate of Research and Graduate Studies
 Vice Chairperson, Humanities and Social Sciences Research Ethics Committee
 Assistant Registrar- Research, Directorate of Research and Graduate Studies
 Senior Administrative Officer – Research Affiliation, Directorate of Research and Graduate Studies