

**THE INFLUENCE OF PARENTAL INVOLVEMENT ON PRIMARY  
SCHOOL LEARNERS' ACADEMIC PERFORMANCE IN  
NUMERACY AND LITERACY IN KALOMO DISTRICT, SOUTHERN  
PROVINCE**

**BY**

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A dissertation submitted to the University of Zambia in partial fulfillment of the requirements for the Award of the Degree in Master of Arts in Child and Adolescent Psychology

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## DECLARATION

I **Never Hantuba Simweleba** do declare that this dissertation is my own original work. It has not been previously submitted for a degree at any university. All published and unpublished literature has been highly acknowledged in this research work.

Date -----

Signed -----

## DEDICATION

This study is dedicated to my parents **Ms. Esnart Muleya** and the late **Mr. Phaniel Hantuba Simweleba** for educating me and nurturing my life. Special dedication also goes to my spouse **Mr. Malumo Nawa** and my family for their tireless support and encouragement during my research work.

## APPROVAL

The University of Zambia approves this dissertation for **Never Hantuba Simweleba** in partial fulfillment of the requirements for the Award of the Master of Arts in Child and Adolescent Psychology.

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## ABBREVIATIONS

ANOVA	:	Analysis of Variance
CPC	:	Child Parent Center
CRC	:	Convention on the Rights of the Child
CtC	:	Child to Child
CTS	:	Creative and Technology Studies
DEBS	:	District Education Board Secretary
DI	:	Discrimination Index
DL	:	Difficulty Level
ECCE	:	Early Childhood Care Education
ECD	:	Early Childhood Development Centers
ECZ	:	Examinations Council of Zambia
IPBS	:	Institutionalized Public Basic Schooling
MDG	:	Millennium Development Goals
MESVTEE	:	Ministry of Education Science Vocational Training and Early Education
NCLB	:	No Child Left Behind
PTA	:	Parents Teachers Association
RESUZ	:	Reading Support for Zambian Children
SD	:	Standard Deviation
SPSS	:	Statistical Package for Social Sciences
USA	:	United States of America

## TABLE OF CONTENTS

<b>DECLARATION</b> .....	i
<b>DEDICATION</b> .....	ii
<b>APPROVAL</b> .....	iii
<b>ACKNOWLEDGMENTS</b> .....	iv
<b>ABBREVIATIONS</b> .....	v
<b>LIST OF TABLES</b> .....	ix
<b>LIST OF FIGURES</b> .....	x
<b>LIST OF APPENDICES</b> .....	xi
<b>ABSTRACT</b> .....	xii
<b>CHAPTER ONE</b> .....	1
Introduction .....	1
1.1 Background.....	1
1.2 Statement of the problem.....	4
1.3 Purpose of the study .....	5
1.4 Rationale and significance of the study .....	5
1.5 Main objective .....	6
1.6 Specific objectives.....	6
1.7 Research Questions .....	6
1.8 Hypotheses.....	7
1.9 Operational definitions .....	7
1.10 Theoretical Framework.....	7
1.11 Summary of the chapter.....	9
<b>CHAPTER TWO</b> .....	10
Literature Review.....	10
2.1 Introduction.....	10
2.2 Parental involvement .....	10
2.3 Academic performance.....	13
2.4 Home resources .....	14
2.5 Homework and parental involvement.....	17

2.6 Home-school-communication.....	18
2.7 Learning at home.....	21
2.8 Summary.....	22
<b>CHAPTER THREE</b> .....	<b>23</b>
Methodology.....	23
3.1 Introduction.....	23
3.2 Research design.....	23
3.3 The intervention .....	23
3.4 Study population .....	25
3.5 Study sample.....	25
3.6 Sampling method .....	25
3.7 Data collection method.....	26
3.7.1 Research instruments .....	26
3.8 Data collection procedure .....	27
3.9 Data analysis .....	27
3.9.1 Quantitative data .....	27
3.9.2 Qualitative data .....	28
3.10 Problems faced during data collection.....	28
3.11 Delimitations .....	29
3.12 Limitations .....	29
3.13 Reliability and validity of the learners' tests.....	29
3.14 Reliability of the questionnaire .....	29
3.15 Ethical considerations.....	30
3.16 Summary of the chapter .....	31
<b>CHAPTER FOUR</b> .....	<b>32</b>
Presentation of the Findings .....	32
4.1 Introduction.....	32
4.2 Characteristics of learners.....	32
4.3 Parents' gender, occupation and education.....	33



4.4 Effects of sensitization of parents on the performance of learners in Math and Chitonga .....	35
4.5 The quality of parent-child interaction in homework .....	38
4.6 Home-school-communication.....	42
4.7 The use of home resources in the instruction of children to increase their literacy and numeracy skills. ....	44
4.8 Students focus group discussion .....	53
4.10 Summary of the findings .....	55
<b>CHAPTER FIVE</b> .....	56
Discussion of the Findings .....	56
5.1 Introduction.....	56
5.2 Performance of learners in Math and Chitonga .....	56
5.3 Quality of parent-child interaction in homework.....	57
5.4 Quality and frequency of parent-school communication in homework to improve learners' academic performance?.....	60
5.5 Use of home resources in the instruction of children to increase their literacy and numeracy skills. ....	61
5.7 Summary.....	65
<b>CHAPTER SIX</b> .....	66
Conclusion and Recommendations .....	66
6.1 Summary.....	66
6.2 Conclusion .....	66
6.3 Recommendations .....	67
6.4 Suggestions for further research.....	67
<b>REFERENCES</b> .....	70
<b>APPENDICES</b> .....	77

## LIST OF TABLES

Table 1:	Cronbach's alpha reliability coefficients.....	30
Table 2:	Parents' gender, education and occupation .....	34
Table 3:	Summary of parents' occupation .....	35
Table 4:	Paired t-test before and after intervention .....	36
Table 5:	Paired t-test of mean scores for Chitonga tests at T1 and T2 .....	37
Table 6:	Paired t-test of mean scores of the control and intervention in Math ....	37
Table 7:	Mean difference scores between time 1 and time 2 in Math and Chitonga.....	37
Table 8:	Mann-Whitney U test on parent-child interaction .....	39
Table 9:	Correlations on home-school communication .....	43
Table 10:	ANOVA on home resources at baseline for the control and intervention groups.....	45
Table 11:	ANOVA on the use of home resources between the control and the intervention group at time 2 .....	46
Table 12:	ANOVA on the use of home resources at time 2.....	47

## LIST OF FIGURES

Figure 1:	Mother monitoring her child in homework .....	39
Figure 2:	A parent demonstrating how to divide numbers using maize stalks....	48
Figure 3:	A mother explaining division using containers of different volumes ..	50
Figure 4:	Children helping their parent pour milk in storage container while milking .....	51
Figure 5:	A parent helping the child through counting cattle .....	52
Figure 6:	A parent using a bed as a resource of shapes in Math .....	52

## LIST OF APPENDICES

Appendix A: Parental involvement questionnaire.....	78
Appendix B: Translated parents' involvement questionnaire (Tonga version).....	83
Appendix C: Interview questions for parents.....	88
Appendix D: Focus group discussion guide for learners.....	89
Appendix E: Research budget.....	90
Appendix F: Application letter to translate research instruments.....	91
Appendix G: Translated Assent Form (Tonga version).....	92
Appendix H: Written assent form.....	93
Appendix I: Grade four Chitonga test.....	94
Appendix J: Grade four Mathematics test.....	99

## ABSTRACT

Parental involvement is one of the important factors in pupil academic achievement. This study was conducted in Kalomo district, Southern Province, Zambia to assess whether an intervention to enhance the quality of interaction of parents with Grade four learners in homework would improve the learners' performance in numeracy and literacy. The impact of the intervention was assessed on four indicators: the performance of learners on tests of elementary Math and Chitonga reading, vocabulary and spelling; the quality of parent-child interaction in homework; the quality and frequency of parent-school communication in homework; and the use of home resources in the instruction of children to increase numeracy and literacy skills. Two rural primary schools were selected; one as a control and the other as target of intervention. Forty-two learners and their parents were enlisted. The intervention group of parents received sensitization on how to support their children in homework using available local resources and on parent-child-interactions. Questionnaires and interviews were used to collect data from parents while nationally standardized tests in Math and Chitonga were used to collect data from learners to assess their performance. The study found that performance of learners in Math and Chitonga in the intervention school was significantly higher at post-test, and this improvement was significantly greater than in the control school. This was attributed to the increased parent-child-interaction in homework and use of home resources in home instruction of children on learners' academic performance. No relationship was found between parental ratings of home-school-communication and the academic performance of learners. It is concluded that policies, programmes and interventions that involve parents in the educational activities of children can be used to improve learners' performance. Therefore, the study recommends that the Ministry of Education should consider ways of engaging parents on how they can make use of local resources to assist their children in different subjects so that learning skills through using concrete objects can begin at home. In addition, homework should be considered as one way of working together with parents in order to improve learners' academic performance as learners continue learning at home.

## **CHAPTER ONE**

### **INTRODUCTION**

This chapter presents the background to the study, statement of the problem, purpose, rationale/significance and objectives that guided the study, research questions, hypotheses and operational terms.

#### **1.1 Background**

Education is universally recognized as a fundamental agent towards achievement of sustainable development especially in this era of globalization and technological revolution. It is a productive investment because of its centrality to knowledge, skills, and technology that are key in shaping productivity of any economy (Ministry of Education, 1996). In addition, it also fosters international competitiveness of a country. Thus, an increase in the levels of education in a country will have a major effect on the growth of the economy through increased knowledge and skills that make individuals multiply the quality and productivity of life (Hanushek, 2014).

Previously, the provision of learning to learners was regarded as a preserve of teachers. However, there is growing recognition of parents as significant partners in the provision of formal education to children. This is because parents influence the academic achievement and social success of children not only in school but life in general. In the United States of America (USA) and other high-income and industrialized countries, studies have shown a positive relationship between the child's academic success and parental involvement (Henderson & Mapp, 2000; Epstein, 2001). Arising from this, there are now educational initiatives that encourage parental involvement; all with the objective of empowering parents with skills and knowledge (Smith, 1998; Jabar, 2010). Despite such interventions, the challenge still remains of how to meaningfully and actively engage parents to harness resources that can so easily be used in child learning (Angell, 2001; Ngwaru, 2014; Henderson & Mapp, 2000). This can only be achieved if functional partnerships are established between schools and parents that empower parents to fulfill their respective roles in the education of children, (Bronfenbrenner, 1994; Serpell, Baker & Sonnenschein, 2005). The challenge of parental involvement spans local, national, regional and global levels. Studies indicate that parents are best engaged during the early childhood of learners (Krishnan, 2010; Ngwaru, 2014).

Chan (2007) conducted a study on how to increase parental participation through the use of home materials. This comprised 256 children aged 5-6 years and their parents drawn from both middle and low income households in Singapore. Workshops were used to sensitize parents on how home resources and activities could be utilized to help children learn at home. The study reported that parents can instruct their children to do different activities in homes to promote their learning, such as filling containers with water. Eighty-eight percent of the parents who attended the workshop revealed that they gained knowledge on how to use certain materials at home to assist their children in learning. The study further recognized the need of teacher-parent interaction to help with identifying learning resources at home for children's learning. It further revealed that activities that involve parents should be focused on student learning at home.

Ngwaru (2014) provides insight on parent-teacher empowerment and early literacy development in the context of rural and low-resourced areas in Africa in his study in Lindi District of Southern Tanzania. Ethnographic questionnaires and interviews were used to collect data from 276, three to eight-year-old pre-school and primary school learners and their teachers. He found that resources were readily available in schools and homes that could be used in child instruction. Therefore, this spells out the importance for schools to work together with parents in order to enhance the learning of learners. Despite 81% of the parents having attained only primary education and depended largely on farming as their main occupation, children could learn from daily household activities. Household items such as tables, chairs, beds and stools could be used for learning literacy and numeracy if parents were sensitized on how to use them effectively.

Since literacy syllabus covers household items, it would be easy for children to draw, read and spell those items present in the home. Parents can easily assist their children as the learning resources are at their disposal. Legs of tables and beds can be used for counting, multiplication or addition in numeracy. The implication of the study was that school-based sensitization of parents and teachers about the importance of parental involvement and the use of children's social-cultural funds of literacy development should be encouraged. There are materials that parents and teachers can utilize to enrich children's curriculum. Therefore, children's experiences should be

incorporated in the curriculum for this will also make communities benefit (Ngwaru, 2014).

In Zambia, Chansa-Kabali (2016) carried out a study on parental involvement in early schooling of children in Lusaka urban. A sample of 72 first graders and their parents was used. The study assessed the impact of parental involvement on reading skills by using two early grade reading tests. The findings revealed that parents classified as highly and moderately involved had their children performing better in both orthographic awareness and decoding. Further, the study revealed that parents show involvement in children's schooling a factor that positively influence their academic skills. An intervention was recommended to be a good platform for the creation of teacher and parent training programs and this was the reason to fill that gap in the current study.

There are many ways in which parents can interact with schools. Some of the common forms of interaction between parents and schools in Zambia include sending school progress reports and participation in Parent Teacher Associations (P.T.A.) (Serpell, 1993). However, studies on parental involvement are still few in Zambia (Musonda, 2011; Kambilima, 2015). These studies showed that the level of parental involvement in children's education was still very low. Musonda's (2011) study of six schools of Central Province found that only 25% of the parents helped with homework and 10% participated in P.T.A. meetings. The study attributed the low assistance in homework to the low literacy levels of the parents.

Another study was conducted by Chansa-Kabali, Serpell and Lyytinen (2014) on the acquisition of early reading skills for first graders. The study was part of the larger project called Reading Support for Zambian children (RESUZ). It was an experimental design and recruited 576 children from 42 schools in Lusaka urban and a mixed method (quantitative and qualitative) method was adopted. The findings showed that children who experienced family literacy activities produced significantly higher scores than others. The qualitative findings corroborated with quantitative that learners who had high achievement experienced more literate interactions in the environment than low performers. It is therefore important to explore how parents' and teachers' interactions can be effectively enhanced to increase learning among learners. This research sought to provide such missing link by using a field experimental parallel



group method (equivalent group) where the relative effects of two treatments are compared on the basis of two groups which are equated in all relevant aspects. The second group which is the control group serves as a reference from which comparisons will be made. The treatment in this case involved interventions to increase parent-child-interaction in homework, home-school-communication and the use of home resources to assist learners in order to increase their knowledge and skills in numeracy and literacy.

The study is on literacy and numeracy specifically looking at reading and arithmetic skills using local resources. The numeracy skills which involved division, multiplication, subtraction and addition were assessed through Math test. Literacy skills which largely involved reading were assessed through Chitonga tests. The skills were considered through the activities that happen in homes.

## **1.2 Statement of the problem**

Although parents start teaching their children during early stages with resources that are available in their households, they fail to do so later as the children progress in school (Moll, 1995). This indicates that there is an existing gap between the two worlds of children; home and school. Literacy resources exist in families which can be channeled into classrooms to enrich the curriculum and improve the academic performance of students as well as empowering them to be responsible in various activities in their homes. Unfortunately, only a few parents know how to offer such help. Kambilima in the Daily Mail of 23<sup>rd</sup> December, (2014) reported that most parents were not helping with homework of their children in Zambia.

The problem of literacy is one of the greatest bottlenecks in the provision of basic education where most children are not able to fulfill grade-level tasks (Ngwaru, 2014; Chali, 2009). Parents are less involved in schoolwork of their children because of the rigidity in which learning is applied without taking cognizance of the valuable culturally appropriate local resources that are available within the communities. This form of instruction fails to identify and use culturally appropriate local resources in learning in the home and classroom situations. Research shows that parents can contribute significantly to the educational activities of their children (Innerebrener, 2010) specifically through the development of effective home-school literacy programs unlike the prevailing situation in many Zambian public schools.

Therefore, the study aimed at determining how parent-child-interaction can be improved and how local resources can be used to enhance parental participation and resultant effects on the literacy and numeracy of children.

### **1.3 Purpose of the study**

To increase parental involvement through sensitizing parents in order to promote parent-child-interaction in homework and the identification of local resources to improve the academic performance of learners.

### **1.4 Rationale and significance of the study**

With an aim to increase parental involvement in order to improve learner's academic performance, the study focused on empowering parents. This was done through sensitizing parents and teachers in order to find out how parent-child-interaction in homework and the use of local resources could be used to improve literacy and numeracy of learners. This study sheds light on barriers and offer guidelines on how parents might be better engaged.

It is estimated that 26 000 children in Zambia aged 7-13 years are not enrolled in school most of which are in rural areas where poverty is estimated at 78% (Roomtoread, 2015). If parents are engaged in partnership with schools within their prevailing cultural and socio-economic contexts, they will be able to provide literacy skills through the use of locally available resources. With about 64% of the population being unable to read and write, in particular women, the study provides an opportunity on how such parents can help with learning of their children without necessarily having writing and reading skills. Cole (1996) observed that early intervention on literacy practices is important to help children develop the required skills at early grades. Early intervention is cardinal as it minimizes the challenges in academic performance of learners. When parents are involved at an early stage, there are long lasting results for the children in the later grades.

Learning at school should not only give children new skills, but also help them acquire different responsibilities in their homes by applying the knowledge they gain at school and what they learn through interacting with their parents. Effective parental involvement largely happens at home. If parents are equipped with knowledge on how to assist their children in home work and make use of local resources they will increase their understanding towards their children' schooling.

One of the mandates of education in Zambia is that all districts should see to it that all children are able to read by the time they are in Grade four (Chali, 2009). The study therefore provides an insight on the importance of parental involvement in the education of their children by using local resources. Additionally, researchers, educational planners, schools and other stakeholders may use the information to enrich their understanding on how to increase parental involvement.

### **1.5 Main objective**

The main objective of the study was to demonstrate the effectiveness of increasing parental involvement in parent-child-interaction in homework and the use of local resources in children's learning for Grade four learners to improve their performance in numeracy and literacy.

### **1.6 Specific objectives**

The specific objectives were to:

- (a) Assess the effects of parental involvement on the academic performance of learners in literacy and numeracy.
- (b) Assess the quality of parent-child-interaction in learners' home work.
- (c) Explore the quality and frequency of parent-school communication in homework to improve learners' academic performance.
- (d) Examine the use of home resources in the instruction of children to increase their literacy and numeracy skills.

### **1.7 Research Questions**

- a) How will parental involvement affect the academic performance of learners in numeracy and literacy?
- b) How will parental involvement influence parent-child-interaction in learners' homework?
- c) How will home-school-communication improve the academic performance of learners in numeracy and literacy?
- d) In which ways will the sensitization of parents in the use of home resources affect the academic performance of students in numeracy and literacy?

## 1.8 Hypotheses

- a) Parental involvement will improve the academic performance of learners in Math and Chitonga.
- b) The sensitization of parents will increase parent-child-interaction in children's homework.
- c) Increased home-school-communication will improve the academic performance of learners in Math and Chitonga.
- d) Sensitization of parents in the use of home resources will result in improved academic performance of learners in Math and Chitonga.

## 1.9 Operational definitions

- a) **Academic Performance:** refers to the extent to which students will meet the desired achievement or make progress in the subject areas under study.
- b) **Home work:** academic work assigned in the school that is designed to extend practice of academic skills into other environments during non-school hours.
- c) **Parental involvement:** parents assisting their children through checking homework, communicating with teachers on educational issues and engaging them in home based activities to enhance their learning.
- c) **Parent-school communication:** Two-way school-home means of informing, educating and empowering families to be actively and effectively involved in children's education.
- d) **Literacy:** The ability to read and write.
- e) **Numeracy:** Skills with numbers in relation to addition, division, multiplication and subtraction.
- f) **Home resources:** Elements found within homes and in the immediate surroundings that can be used to aid parents in the instruction of their children in Numeracy and Literacy.

## 1.10 Theoretical Framework

Bronfenbrenner's (1994) Ecological systems theory as elaborated by Lewthwaite (2011) postulates that human development is complex and as such cannot be explained by a single concept but must be considered as a sum of relationships between the

person and his wide environment. It recognizes that the relationship between the child and the environment is mutual; the environment influences the child and the child influences the environment. Therefore, it is a framework for conceptualizing children's development from a holistic perspective.

It holds that a child's development is influenced by several interrelated environmental systems that cannot be separated from each other. These are the microsystem, mesosystem, exosystem, macrosystem and the chronosystem. Microsystem are systems that shape human development including the child's behavior and thoughts like parents, close friends, children's homes, teachers and school. Adults in the microsystem affect children's behavior through interacting with them in everyday life. The mesosystem refers to immediate settings and surroundings including microsystem like home, school and neighbourhood that facilitate the child's development. Other influences of the child are from the exosystem which comprises of all the indirect effects on the child because the influence from the exosystem generally impacts the child as he interacts with other people in life. The connections between the family and school experiences help the child bridge the gap between the two environments. In a school situation (Epstein, 1996) emphasized a two-way communication and involvement in decision making by parents and teachers. Her model further revealed that elementary students whose parents were involved in decision making showed greater achievement in higher grades.

The macrosystem refers to the cultural patterns of the institutions such as economy, customs and knowledge embedded in those bodies. Human development occurs through progressive processes which involve reciprocal interactions between an active growing bio-psychological human organism and the person, symbols and objects in the immediate surrounding (Bronfenbrenner, 1994). The cultural pattern in this respect covers people's way of life, households, community resources, traditional stories and socialization. Socialization is one way of promoting the children's culture rather than depending on modernized Western culture.

In line with promoting children's culture Gonzalez, Moll and Amanti (2005) coined the concept of "Funds of Knowledge". The researchers developed it by studying participants in their daily lives using an ethnographic approach. They revealed that households had plenty of cultural and cognitive resources which could influence

children's learning. The concept highly recognizes the use of locally available resources in respect of promoting one's culture in everyday life.

Epstein (1995) framework is another theory that was used in this research. The model covers the overlapping spheres to elaborate on the shared responsibilities which include the home, school and community. The study posits that parents and teachers should communicate about the children's progress and developmental issues in the school. The two theories are important to educators and parents in working together and building a strong partnership in order to improve the academic performance of the student. The theory of overlapping spheres provides a conceptual framework for a general understanding of children's development and academic success. It proposes that schools, families and communities share responsibilities for the socialization of the child (Chan, 2007; Musonda, 2011). Partnership among the three spheres (home, school and community) places the child at the center and when it is meaningful it can help motivate and guide students to improve their learning.

This theory stresses the need for the families to recognize that the child is a learner to whom the importance of school, homework and learning in general needs to be pointed out, while the school is to make every child feel special, accepted and included as it is within the family. Similar principles go also for the community level and its interaction with both families and schools. Since the child is the reason for the connections between home and school, the model focuses on the key role of the child as student in interactions between families and schools, parents and teachers, or the community. If children feel cared for and encouraged to work hard in their role of students, they are more likely to do their best academically, and to remain in school.

### **1.11 Summary of the chapter**

This chapter has discussed the methodology applied in this study. Under methodology, the following items have been covered; research design, study population and sample, sampling method, data collection method and procedure, data analysis and ethical considerations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents relevant research literature on parental involvement and the academic performance of students. The review explores the influence of parental involvement on academic performance of students. Parents are believed to be the first teachers of the children as they are with them most of the time. This can be enhanced if they are sensitized on how they can assist their children in school work. They are involved in different activities which can connect their children to school work especially in homework because children do it during non-contact hours. Resources in the environment then could be beneficial in linking children to a classroom situation. Therefore, partnership between parents and teachers in terms of how children can improve their performance could be helpful.

The following sub-headings will be presented under this chapter; parental involvement, academic performance, home resources, homework and parental involvement, home-school-communication and learning at home. A summary of the literature review will close the chapter.

#### **2.2 Parental involvement**

Parental involvement has been defined in various ways by different researchers (Scribner, Young & Pedroza, 1999). It has been a matter of interest in Western countries and across Africa. With an aim of improving children's academic success, initiatives like 'No Child Left Behind' policy was developed in the United States of America (US Department, 2003). The policy encourages elementary schools to provide parents with basic knowledge to enhance their children's learning in the home.

Parental involvement means being involved in school activities such as assisting teachers and students with lessons in terms of homework. On the other hand, it means providing food, shelter, clothing, assuring health and safety of the children, providing school materials, parenting, working in collaboration with the school and decision making in school affairs (Epstein, 1988). Parental involvement in this study refers to significant participation of caregivers in promoting the educational process of their children in order to enhance their academic performance and social wellbeing, (Scribner, Young & Pedroza, 1999; Epstein, 2001). The involvement enables parents

to participate in the educational process at home, school or any other setting. The participation includes parents assisting children or inviting them to participate in informal activities such as looking after small livestock, agricultural activities, domestic chores (Nsamenang & Tchombe, 2011), checking homework and reading to the child (Ngwaru, 2014). Parental involvement especially during elementary school is important as it is the period when children start to incorporate knowledge from the interactions with teachers, peers and families in order to deal with their everyday lives (Harvard Research Project, 2007). Other areas for parents to participate include parenting in terms of dedicating time towards educational activities of the child, supporting and encouraging them with school.

Ngwaru (2014) and Wason-Ellam and Grandall (2009) cite parental involvement as the missing link for early literacy development between the family and the school experiences. This is because literacy incorporates a variety of ways parents and children use at home and within their local community. Homes provide an environment where literacy is learnt differently from a formal set up or schooling due to various roles and values people take. It is naturally braided into what people do every day. This makes a good connection between informal and formal learning in terms of incorporating the curriculum. Ngwaru (2014) laments these missed opportunities not only by curriculum developers and teachers but also with parents.

There is need to underscore the role of parents in supporting the education of their children. Parents usually feel they are not adequately vested with knowledge to help their children in education activities. Serpell (1993) observed that in Zambia's Eastern Province, when parents are invited to PTA meetings, the concerns are usually dominated by teachers. In most cases, teachers' interests are to see to it that the school system works the way they desire. They take such meetings as opportunities to inform parents what they don't know without according them time to express their concerns about their children's education. Such meetings can be used to discuss educational issues of their children especially matters like clarifying roles in partnership. This calls for enhanced home-school relations in terms of communication (Bartel, 2010) and involvement in school programs such as assisting with homework, literacy activities both at school and at home (Nyarko,2007).



Vygotsky's theory (1978) on the other hand stresses the role of culture in providing individuals with abilities in understanding their environment and ideas about what they can learn from it. His theory states that the intellectual development of human beings is a product of the intervention of actions through artifacts and practices that people do in their daily lives. Children learn to use items that are found in the home through interaction and observing adults, peers and other older siblings around them in the home and community (Nga'sike, 2014). Literacy is regarded as a resource for socially distributed cognition (Egli, 1994). This means parents start imparting literacy knowledge to their children before they enter school. It is a cultural resource which people in different communities use in various organized activities in their daily lives. Individual competence in such activities is linked to particular set of cognitive skills which may prepare children for formal learning. Literacy practices prepare children for the demands of the instructional curriculum in their local school with regard to what is happening in the community. Socialization is another significant process where children acquire sense of their environment. The locally available items or resources provide rich grounds for children to develop cognitively because they physically see the items as adults handle them. These resources can largely be helpful in the learning of the child.

In Africa, parental involvement is a subject of concern and some scholars have conducted studies with a view of finding out how parents can be actively involved in the educational activities of children. Kibaara and Ndirangu (2014) carried out a study in 21 public secondary schools in Kiene West Sub Country in Nyeni County, Kenya to establish the extent to which parents were involved in their children's academic achievement. The participants were Form three students. The design of the study was descriptive and mixed methods (qualitative and quantitative). Although the study revealed that parents were actively involved in regards to academic activities of their children (84.7%), quite a number of these parents were not aware that homework was assigned to their children. Another important finding in this study was that 20.4% of the parents did not discuss the academic progress of their children with teachers. This shows that parents and teachers were not collaborating in fostering the learning of learners. This implies that intervention programmes with parents in their children's schooling and the use of local resources to improve the academic achievement of students are cardinal. Therefore, the current study will assess how parent-child-

interaction in homework and the use of local resources can improve their academic performance.

### **2.3 Academic performance**

Numerous studies have been conducted on parental involvement in relation to academic performance of students (Epstein, 1988; Englund, Luckner, Whaley & Egeland, 2004; Pedzek, Berry & Renno, 2002; Scribner, Young & Pedroza, 1999). Most of them postulate that there is a direct relationship between parental involvement and the academic performance of learners. It is because of evidence from such studies that policies such as ‘No Child Left Behind’ in the United States of America whose aim is to improve the academic success of children were developed (US Department, 2003). This policy stipulates that elementary schools should provide parents with requisite instruments to enhance their children’s learning in the home.

Englund *et al*, (2004) conducted a longitudinal study on parental involvement and children’s achievement in early elementary school in Minnesota, U.S.A. They found that parental involvement was directly significant on 1<sup>st</sup> and 3<sup>rd</sup> graders. This is because the mothers were more involved in their children’s school activities during this time. The results of students’ intelligence assessment at 64 months revealed that children who received quality instructions showed high intelligence in 1<sup>st</sup> and 3<sup>rd</sup> grades. On parental involvement, both grades gave a strong correlation, ( $r = 0.78$ ).

Early childhood education has been reported to be a major challenge in many countries in Africa (Ng’asike, 2014; Ngwaru, 2014); attributed largely to inappropriate policies. The two researchers expound greatly on the mismatch between the current “western” based education systems that fail to take into consideration the input of African or local learning systems. This alienates learners from their local communities because it does not allow the children to learn skills which can help them survive and integrate effectively in their communities.

Parental involvement has been found to be beneficial to both parents, teachers and learners (Ngwaru, 2014). Studies by Lambiase (2014) and Ngwaru (2014) found that equipping parents with knowledge on educational activities will motivate them to create partnerships with schools. Such relationships should be based on mutual expectations, positive direction and on agreed goals between the two environments (Serpell, Baker & Sonnenschein, 2005). This will create more room for the developing

child to interact between the two settings and excel in school. When parents are involved, they encourage their children in schooling and this promotes academic performance. Wason-Ellam and Grandall, (2009) state that when parents are involved, their self-identity and self-esteem is reinforced as they realize that they can support their children.

#### **2.4 Home resources**

Chan, (2007) conducted an intervention study on parental involvement in children's numeracy homework in Singapore. The sample was 259 learners, five to six years old from 21 classes from different districts of Singapore. The distribution of the learners was; Chinese (89%), Malays (4.7%) and Indians (3.5%). These children came from low to middle income groups with the medium of instruction at school being English. The study revealed activities and different resources that can provide opportunities for children to learn at home especially when parents talk about them as they perform those tasks, for example, cooking, shopping and digging in the garden. The study used a pre-test and posttest randomized control. Parents were involved in a workshop which sensitized them on how home resources can be utilized to help children learn at home. Some of the things that were discussed in the workshop were different sizes of cooking pots or pans, buttons, plastic containers of different sizes and shapes and bottles (different shapes that can hold the same quantity of water). When parents are cooking, measuring, weighing, cutting and dividing items, learners can be involved. Additionally, when children are playing in sand, they can also make some demonstrations using sand to fill in different containers. Eighty-eight percent of the parents who attended the workshop agreed that they gained knowledge on how to use materials at home to assist their children in learning. One of the implications of the study is that teacher-parent interaction is required in order to identify learning resources at home.

In case of Kalomo district, farming is the main activity, therefore materials that are used in farming like bags of seeds and fertilizer can be learning resources for children in numeracy because they are sold in kilograms. Milk from cows, bottles of cooking oil and water are measured in liters which is another rich learning resource for children. After they have harvested, some of their farming products are for consumption while some are for sale. Children can be involved in selling transactions for them to learn money calculations though they may not be allowed to handle money

by their parents. This can be a good practical exercise to supplement their learning since money is included in their syllabus. When children have knowledge in money transactions, they can help a lot of people in the community including their parents and neighbours. They can also be sent by their parents to buy some items from local shops commonly known as “*tuntemba*”.

In contrast to the above findings, Blevins and Musun (1996) found no significant correlations between parents’ home numeracy activities and children’s numeracy skills. Parents were involved in different numeracy skills that can improve the academic performance of learners. Despite such contradictions, Moll, Amanti, Neff and Gonzalez (1992) and Ngásike, (2014) strongly advocate that households and other resources in the communities can be arranged for instruction to enrich the understanding of the children to minimize rote instruction they face in schools. For example, in a typical Early Childhood Development (ECD) center in Kenya, children are given direct instructions in English and stories that are read to them are of Western content. In addition to that, children recite the letters of the alphabet and numbers or symbols with minimal understanding. Ngásike, (2014) also observed one teacher who was reading a story to the Turkana children about climbing a mango tree which children had never seen. The emphasis is that the story could have been based on a local resource, such as an *Egol* (palm tree) which children were familiar with. The culturally appropriate local resources provide a rich foundation of knowledge of nature, environment, soil, water and plants are not adequately put to use by teachers and parents.

In an effort to increase literacy levels of students and as a mandate for children’s human rights, the Zambian government has included early childhood in its National Education Policy (Ministry of Education, 1966) whose aim is to serve the individuals and improve the quality of life. One of the guiding principles of this policy is to work in partnership with the communities where parents will be involved in school and educational activities. This in turn can catalyze the integration of household and community resources that can help teachers in instruction in classroom to minimize rote learning whereby children memorize things they do not understand. When traditional stories from parents and community resources are integrated and used for classroom instruction, it becomes one way of uplifting children’s culture unlike depending entirely on the modernized Western curriculum, (Moll & Greenberg, 1990).

Serpell and Nsamenang (2014) observed that, suitable, effective and appropriate services of Early Child Care Education (ECCE) services for African societies need particular attention as regards the curriculum content so that it benefits rural areas. The cultural activities that take place every day in different homes can help children's learning both at home and at school. This is because the communities have rich resources which can be channeled in the curriculum to make it rich enough to accommodate an African child. According to the United Nations (2005), Zambia was among the 190 countries that adopted the Millenium Development Goals and dedicated to fulfilling the goal of achieving universal primary education by the year 2015. This need strategic measures to meet the desired goals.

Serpell (1993) conducted a study in Zambia in Kondwelani community focusing on different ideas about the suitability of some school activities and how the community viewed such activities in relation to their goals. When it came to the issue of the school production unit, the community was able to actively participate and articulate issues in favour or against in the discussions as they were involved in the same at their homes. Some of the benefits indicated were the acquirement of agricultural knowledge to students that would be helpful to them when they would be farmers in future. Similar debates on the role of primary care among learners indicated that parents appreciated this as learners who went to school were cleaner and helped to teach some of these lessons to their parents. This indicates that communities are more appreciative of school curriculum that not only improves knowledge but skills of learners as well being relevant to communities.

Musonda (2011) conducted a study to investigate the involvement of parents in their children's education in schools in Central Province, Zambia. In this study, a survey design was used with a mixed approach (qualitative and quantitative). The sample comprised six school managers, six deputy managers, 10 teachers and 40 parents from six communities. The study found that 25 percent of parents helped with homework, 10 percent attended PTA meetings, 15 percent checked children's school work and 90 percent responded when called to discuss the academic performance of their children with teachers. The study further revealed that though it is important to establish good learning environment for learners, it was a challenge to achieve that in terms of providing reading materials due to unfavourable economy in rural places. It also showed that since most of the parents could not read and understand English; this

became a barrier to communication and parental involvement. In such situations, parents can be helped by providing interpreters so that they are able to get the message.

The role parents can play at home and school, especially if they have been empowered to work with teachers is tremendous (Ng'asike, 2014; Ngwaru, 2014). This is because parents possess great funds of knowledge which in most cases have not been connected to the development of literacy skills of children within their given socio-economic circumstances. Ngwaru (2014) observed that most parents are not made aware of their potentials in instructing children. Even if participants had no materials in form of paper, pencil or books, the families had tools which were used in their daily lives that could be helpful in literacy development. Unfortunately, they were not recognized for the purpose of learning literacy because parents were not sensitized on that. Through interacting in different activities with their children, parents assist their children in educational activities but most of them do not realize the knowledge they are imparting to them. Though some studies show that parents are not actively involved in the educational activities of their children, they are involved in other aspects like attending P.T.A. meetings and giving verbal encouragement which are some of the ways of helping their children (Musonda, 2011). The major issue then is on the ways in which parents can be involved in the educational activities of their children.

In an African context, Ngwaru (2014) advocates for the creation of literacy rich environments that harmonize school based activities with socio-cultural resources that are part of the daily activities of the household and community. This will ensure maximum engagement of not only the learners but the parents in activities relevant to both.

## **2.5 Homework and parental involvement**

Homework has been discussed by a number of researchers and is a great concern for parents and teachers in terms of improving the academic performance of learners. Both parents and learners benefit from homework. To the pupil, homework increases practice in the absence of the teacher, as a result his/her skills also increase. To the parent, homework improves interaction between the pupil and the parent.

To investigate the relationship between homework and parental involvement, Balli, Demo, and Wedman (1998) conducted an intervention study involving three schools. The participants were 74 Grade 6 students from mid-western schools. There were three

Mathematics classes in the study handled by one teacher. In the first class, there were no homework involvement prompts, in the second learners were prompted to involve family members while in the third while in the third learners were prompted to involve family members and family participation elicited directly. The findings reveal that families that had reminders for participation in the homework got more involved. In addition, it shows that parents get involved when they are requested to assist to do so especially when they are directly requested to do so.

This is also confirmed by a study in Japanese elementary schools (Jabar, 2010). This was an observational study where some of the Japanese schools were part of the larger doctoral study on the experiences of bicultural children in Japan. In this study, parents were perceived as volunteers, teachers and partners in the education activities of their children. The researcher observed that when parents were invited on open days to listen to teachers' lectures, parents would pay attention to their children's work and interact with the teachers. Additionally, when students were given summer homework, parents helped to make sure it was done and completed. Parents also guided their children on what to do and not to do during the holiday.

## **2.6 Home-school-communication**

Communication is the foundation of a successful partnership. In this study, it refers to the two-way school-home communication which informs, educates and empowers families to be actively involved in children's education. Communication involves making and establishing two-way channels between home and school (Mutodi & Ngirande, 2014). It includes knowledge about the students' performance, behavioural problems, concerns from parents and teachers in order to have a common goal towards assisting students. In order to have an effective partnership between parents and the schools, communication is cardinal. Through communicating between parents and teachers, a wide range of information is shared between the two parties which can provide information on concerns from teachers and parents on students' performance and behavioural problems. In addition to that, it can also be used for curriculum development and giving information to parents to promote confidence and involvement at home in the learning of their children (Jacobs, 2008; Chan, 2007; US Department, 2003). One of the most important areas of communication is to inform parents how the student is performing in different subjects. Schools are responsible for passing on information from school to home and avail the information about among

other things the progress or performance of students (Epstein, 1996). This type of communication should be suitable for all parents regardless of their cultural background, education and socio-economic status. Zarate (2007) recognizes that parents may face many challenges in their quest to help with their children's school activities.

Jacobs (2008) investigated the activities that were instrumental in raising the academic performance of first to third grade students at Montessori School in USA. The sample was 21 teachers and 12 parents with children in the elementary level of Montessori School. He observed that some of the strategies to improve school work was the utilizing a tour to a shop to support facts and skills in Math. On the African side (Ng'asike, 2014), study on early childhood development curriculum and pedagogy for Turkana nomadic pastoralist communities of Kenya observed that Western practice on ECE have largely dominated over the indigenous knowledge that the children are supposed to gain through their daily lives. The main activities in their communities were based on hunting, herding animals and gathering fruits. As the children grow old, they also gain the skill and understanding of what their parents do and this knowledge could be used in a classroom situation to build on what they already know from their daily lives. Jacobs (2008) recommends that teachers should use a variety of learning resources to supplement the curriculum of the students in order to suit their needs. For a child who lives in USA, it becomes easy to gain Math skills by utilizing a tour to a shop because that is what parents do and through interacting with parents, the children gain more understanding just like how a Kenyan child would understand pastoralist activities. Child development is influenced by the tasks they do in their daily lives. They gain knowledge through interacting with the adults and peers in the surrounding.

Reading and writing are also part of the activities that should be done at home as the large part of the curriculum is centered on that (Epstein, 2001). Jacobs (2008) adds that such activities are important in cementing the understanding of children's learning. Communication provides a means of exchanging information between parents and teachers hence enriching the curriculum. This can occur through the knowledge teachers acquire in using the locally available resources or items and also knowing the problems of their students from parents. In a Zambian rural set up, the school can communicate to parents through written notes, phones, verbally through students or report cards in case of students' progress or other related issues pertaining



to schooling. Nevertheless, Serpell *et al* (2005) and Chansa-Kabali (2016) noted that the usual way of communicating through the report cards is not enough to bring out desired progress. Some comments may not be understood by parents; as such an interpretation may be needed for them to take further action towards the performance of their child or behaviour-related issues. Additionally, communication brings encouragement to those parents who do not interact with the school.

When there is regular communication between parents and teachers, the relationship between the two parties will be enhanced. Barnard (2004) reported that home-school relationships minimize the negative impacts of poverty on the academic and behavior of poor children. This is a case in which children of low income parents took part in Chicago Child-Parent Centre (CPC). The results indicated that the chances of children being placed in special classes were minimal. In addition to that, their reading level in the eighth grade and completion rates were high.

Smith, Stein and Shatrova (2008) undertook a qualitative study in USA on Hispanic youths which comprised 15 Hispanic parents who understood little or no English language. The study investigated some of the factors that were inhibiting Hispanic parental involvement in non-metropolitan schools. Focus group discussions were conducted and in order to facilitate effective communication during the study, a bilingual female teacher was involved in the interpretation of the discussion. The findings revealed that the failure of parents to speak and understand English was the main problem impeding effective communication between the school and Hispanic parents. Scribner, Young and Pedroza (1999) in a Texas study found that different cultures perceive parental involvement differently. There is a mismatch between parent's and teachers' definition of parent involvement. Teachers defined parent involvement as participation in formal activities such as school events, parents attending Parents' School Conferences or helping as teacher aids. Parents defined parent involvement as doing informal activities at home, inculcating cultural values, checking homework and talking to them. Such divergent views can be clarified through effective partnerships to help children in their learning. This implies that teachers' views on parental involvement is very narrow. One way to recognize culture in education is to integrate it in the curriculum (Ngwaru, 2014). When this happens, students feel confident that their parents can contribute and teachers will also appreciate that parents as partners in education are also resourceful.

## **2.7 Learning at home**

Programmes which promote learning at home increase parent-child interaction (Chan, 2007). Both parents and students get involved in the activities which give opportunity to parents to gauge their children's learning abilities. In order to supplement parents' efforts in regard to assisting their children in educational activities, the Zambian government through the Ministry of General Education will implement the use of familiar local languages of instruction in teaching Literacy (MESVTEE, 2013). The main idea is to increase the teaching and learning process as children first think in local languages (Zulu, 2013). This gives an added advantage to parents who are not competent enough to assist their children in English. Parents have embraced the idea and several meetings have been held in regard to the sensitization of parents to the new curriculum. Learning at home means empowering parents about how they can assist and monitor the children's learning activities. It incorporates the educational activities that are related with children's homes that promote enhanced learning and development (Mendoza, 2008). Similar findings were observed by Clemensen (2010) that children participate well in class when they understand the language being used and participation becomes high. The study revealed that children's learning should be related to their first language despite some books being written in English. Their first language should not be used as a mere tool for communication but a means which can be associated to their learning situations.

To establish the influence of parental involvement on the academic performance of pre-school children in Kangeta division, Meru country in Kenya, Mwirichia (2013) found that home environment was the most important factor that influenced the academic performance of students. Parents who managed to provide study rooms for students had their children scoring a high mean of 79% compared to the mean of 20% for students whose parents failed to provide better study places for their children. Musonda (2011) alludes that creating a good learning environment may involve giving children enough time to do their homework and setting rules to control their after-school programs. For parents who were not adequately accommodated, students did not have enough space for doing their homework, and as a result the students ended up using bedrooms and this affected their academic performance.

Ng'asike (2014) strongly advocated for the need to contextualize the education of the children in relation to the local conditions of communities. Creating partnership

through sensitization or sensitization of parents to identify the local resources and activities that take place in their areas can greatly help in their children's learning. For instance, in Kalomo, farming and livestock rearing are the most common activities. Students learn about animals and plants in early grades. If students can be helped to connect what they see or do at home and what they learn at schools, their survival skills will improve after they have gained knowledge and parents will appreciate school. The curriculum may not sufficiently include what is happening in different communities as they are culturally different from one another. Teachers have always been encouraged to use a variety of resources to enrich their teaching; hence this may motivate their delivery in classrooms. Some of the resources which teachers use have been provided by the Ministry of Education especially in Science while some are provided by themselves. It is this recognition on identifying household resources that needs to be contextualized in the education of the children (Ngasike, 2014). It is therefore, important these factors are also investigated in the Zambian case to identify entry points to increase literacy and the academic performance of learners which remains a challenge in the country.

## **2.8 Summary**

The literature reviewed sought to review studies that were conducted on parental involvement on the improvement of academic performance of their children. In most cases the studies have indicated that parents have a significant role in the academic performance of children. However, in some instances parents showed lack of knowledge on how they can be better engaged in the learning activities of their children. For example, Musonda's (2011) found that only 25% of parents were involved in children's school work. In addition to that, the study revealed that the highest percentage (50%) of parents who were involved was in terms of providing school requisites. Therefore, the current study aims at assessing how sensitization of parents can increase parent-child-interaction in homework to improve the academic performance of Grade four students in Math and Chitonga. It will also examine the use of home resources in the instruction of children to increase their Math and Literacy skills. Additionally, the frequency of home-school-communication will also be explored.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research design, the intervention, study sample and population, sampling method and data collection methods. It also describes the research instruments, data collection procedures and data analysis. Limitations, delimitations, instruments' reliability as well as ethical considerations are also covered. The summary of the chapter is given at the end.

#### **3.2 Research design**

The study used a mixed design using quantitative and qualitative methods. The qualitative methods helped to provide a deeper understanding to the study from the perspective of the research participants in their natural environments (Yoshikawa et al, 2008), in this case factors affecting the quality of home-school relations. Quantitative methods helped to determine the relationship between the dependent and independent variables of the study.

The quantitative method is a quasi experimental design (non equivalent groups, pretest-posttest). This design was chosen because it was very difficult to randomize the treatments as the participants had to consent. The method allowed for the measurement of the dependent variable before and after the intervention and thus enabled the assessment of the effects of the intervention. The intervention was conducted on Grade four learners and their parents from the two selected schools where parents from the intervention school who were sensitized on integrating or identifying local resources with what learners learn at school. The first step was to establish the perceptions of both parents and teachers on existing constraints on the quality of home-school relations. This information was then used to refine the intervention strategies to be used in the study. The second stage involved the sensitization of the parents followed by execution of the interventions, data collection and analysis.

#### **3.3 The intervention**

Before the intervention commenced, permission was sought from DEBS' office to carry out the intervention on the sampled schools and the office wrote letters to the Head teachers of the schools under the study. After that, the headteachers informed

their teachers about the programme the researcher had and this was done prior to Term Two of the year when the intervention was to be carried out. The researcher wrote letters (approved and signed by the headteachers) to the respective parents inviting them to the meetings and fill in or sign relevant forms pertaining to the study. A pilot study was conducted on how parents use local home resources to assist their children with learning, parent-school communication, homework and learning at home with an aim to modify the areas of concern for parents.

The researcher met the facilitators to discuss how the programme was to be done at the beginning of Term Two. The first administration for parents' questionnaires and learners' tests in Math and Chitonga were administered. This was followed by the sensitization of parents in the following areas to enhance their children's learning:

- (a) Parent-school communication. Parents were sensitized on the importance of communication and communication methods. Additionally, comments in the homework checklist were another way of communicating. Parents indicated problems they encountered in assisting their children. Parents who were not able to assist their children with learning activities were encouraged to use other members of the family like the siblings to the child under study if there were any. Homework was communicated between parents and teachers on a daily basis through children's work.
- (b) Homework- parents were sensitized on the importance of homework and how they were to be engaged. They were checked homework for their children whether done and marked by the teacher. Apart from checking homework, parents guided their children in using home resources such as using different sizes of containers in measuring liquids, (water and milk) in Math.
- (c) Home resources- parents were sensitized how to identify local resources and how to guide their children in using different items in homework. Literacy was done in the following activities; drawing, naming, making words and spelling different things in the home and environment. These included tables, chairs, tomatoes, maize grains, eggs, trees, field or garden crops.

In Math activities included, weighing, measuring adding, subtracting and dividing objects using locally available household objects. The basic operations in Math were done through numeracy skills and these are; addition,

subtraction, division and multiplication. The skills equip children with knowledge on to solve different Mathematical problems once they grasp the concept.

During the course of the intervention a few visits were done by the researcher as follow ups on what the parents were sensitized on. Reports were taken on what they implemented in their daily activities or interactions with their children. At the end of term 2 a second administration of Parents' questionnaires and learners' tests in Chitonga and Math were done to assess whether the intervention worked or not. The intervention took 13 weeks and 2 schools were involved.

### **3.4 Study population**

The study population was Grade four students in Kalomo district with ages of 10-15 years. This grade was chosen because parental involvement is greater at elementary levels, since parents become less involved as children progress into higher grades. Grade five is termed as a '*middle level*' in Zambia and a lot of students face challenges if they had insufficient mastery of basic literacy skills in the lower grades.

### **3.5 Study sample**

The sample of this study was one hundred sixty eighty (168) consisting of 84 parents and 84 learners drawn from two government schools in Kalomo district, Southern Province, Zambia.

### **3.6 Sampling method**

Selection of the participant's involved two methods; these were convenience purposive and simple random. The learners were selected using simple random sampling in order to give participants equal chances. Parents of the learners who were attending Grade four at the two schools automatically qualified to take part in the study. The schools were chosen using convenience sampling.

The sample of parents was drawn from those who had children in Grade four at the two selected schools. The two schools were chosen on the basis that participation of parents in their children's schooling is generally weaker in families with low income and less formal education. The two schools are situated in a low socio-economic area where most of the parents' lack understanding of the connection between the

curriculum and their everyday life. Additionally, due to long term familiarity with the neighbourhood, the researcher was confident that catchment populations of these selected schools were quite typical of rural neighbourhoods in Kalomo district.

The purpose of the study was clearly explained to both parents and their children. Parents were given consent forms and permission to allow their children to participate in the study was sought from them. Children who were allowed to participate by their parents signed the assent forms. Permission to translate the consent and assent forms was obtained from the relevant authorities.

The children assented in the presence of their parents. Only those parents who consented and children who signed the assent forms participated in the study. The target was 84 learners and 84 parents. Eighty-four learners signed the assent forms and same number of parents filled in the consent forms.

### **3.7 Data collection method**

Data was collected through questionnaires, interviews, focus group discussion and pre and posttests in Math and Chitonga.

#### **3.7.1 Research instruments**

##### **3.7.1.1 Questionnaire**

A questionnaire was designed by the researcher to collect demographic data, as well as indicators of the perceptions and attitudes of parents and teachers towards working together to enhance the academic performance of students (Appendix A).

##### **3.7.1.2 Focus group discussions**

These were used to collect the views of learners on parental involvement. A discussion was held with some learners after writing their posttests in order to capture their experience as well as any ideas of help they may wish to suggest.

##### **3.7.1.3 Parents' interviews**

These were conducted by the researcher. The purpose of the interviews was communicated to the participants and permission to record the proceedings was sought from them.

##### **3.7.1.4 Survey questionnaires**

The researcher administered parents' and teachers' questionnaires after the consent and assent forms were signed. The questionnaires were meant to capture the

understanding of parental involvement in order to refine the research instruments and make necessary adjustments.

### **3.7.1.5 Pre-tests and posttests in Math and Chitonga**

Pre and posttests (Appendices I & J) were given to the learners in both groups, (the control and experimental) before and after the interventions. This helped to assess the effectiveness of the intervention. The pre-tests involved Math and Chitonga. In Chitonga, the tests involved reading, vocabulary and spelling skills while in Math it was subtraction, weighing, and addition, comparing and counting activity questions. The researcher monitored the administration of the tests, invigilation, marking and recording of the results.

## **3.8 Data collection procedure**

Before data collection commenced, an introductory letter was sought from the University of Zambia to present to relevant authorities. The District Education Board Secretary (DEBS) was also contacted for an introductory letter to the schools where the research was conducted. After that, arrangements to meet the headteachers in order to introduce the study were made. Other logistics like meeting teachers and parents were done to prepare for data collection activities. Letters were written to the parents with the help of the headteachers to invite for meetings at the schools where the researcher introduced and explained the aim of the research to the parents. Questions from the parents were clearly explained that information was strictly meant for academic purposes.

Participants were requested to answer the questions sincerely as the findings of the study would help shed light on how parents could be engaged in the education of their children. The questionnaire was self-administered to the parents who were able to read and answer the questionnaire while others were helped by reading the questions both in English and Tonga. The responses were recorded as given by the respondents.

## **3.9 Data analysis**

### **3.9.1 Quantitative data**

Data collected through questionnaires was analyzed using the Statistical Package for Social Sciences (SPSS) software version 20. The t-test was used to compare the mean scores between the control and intervention groups while correlation was used to assess the relationship between home-school-communication and the academic



performance of learners. Mann-Whitney U test was used to compare the rank average scores for learners' academic performance in Chitonga and Math between the control and the intervention groups. This technique was used because data was ordinal.

For age, gender and parental education, and for systematic observations on home resources, parent-teacher communication, homework and learning at home, the following descriptive statistics were calculated: means, frequencies and standard deviations (SD). The educational level of parents was put in six categories. These are; None, Primary (Grades 1 -7), Basic (Grades 8-9), Secondary (Grades 10-12), College and University.

### **3.9.1.1 Paired t-test**

In order to assess if there were differences in the scores of learners' performance between schools A and B in Math and Chitonga tests, the researcher used a paired t-test to find the mean.

### **3.9.1.2 Correlation**

To find out if there was a relationship between Home-School-Communication and the performance of learners in Math and Chitonga, the researcher used Pearson' Correlation ('r').

### **3.9.2 Qualitative data**

For qualitative data, field notes from observations and description of events, participant behavior and personal impressions were cleaned and interpreted into main themes for reporting. Responses from the semi structured questionnaires were analyzed for the major themes and reconciled with participant observations. The parents' reports in interviews and focus group discussions were examined qualitatively in search of evidence of how much of an impact they observed of the intervention programme on their child's academic progress and growth of social responsibility.

### **3.10 Problems faced during data collection**

A few parents delayed in responding to the questionnaires due to community and national activities. However, the questionnaires were answered and the researcher collected them. Most of the parents were very busy with marketing of their agricultural products to town during that time as they heavily depend on farming. This caused some difficulties in meeting them at the scheduled times. Nevertheless, the researcher adjusted the programme to their individual activities.

### **3.11 Delimitations**

The research did not document variables outside those mentioned in the study. The focus was also only on the target learners and parents recruited for the study in the two schools. Lastly, only the resource materials identified for the study were considered.

### **3.12 Limitations**

Due to time and financial resource constraints, this research was only conducted in two schools in Kalomo district and as such it was not possible to collect data from a representative sample of schools in the district. The other limitation was that the generalization of the findings was limited to the community where the study was carried out. This is because the economic activities in other communities may not be the same with Kalomo since resources are used and understood differently from one school or community to the other.

### **3.13 Reliability and validity of the learners' tests**

The test items were developed by the researcher. In order to ensure reliability and validity of the pre and post-tests, the tests were piloted in one of the rural schools after which they were evaluated and standardized by the Examinations Council of Zambia (ECZ). The Difficulty Level (DL) and the Discrimination Index (DI) were determined in the evaluation. For the DL and DI, a range of 0.2 – 0.8 was considered acceptable. Discrimination index is a measure or assessment of how much the response rate on a particular question by overall strong students differs from the response rate by overall weak students. Parent involvement questionnaires were piloted too; the researcher did a pilot study involving Grade four learners' parents and 10 participants were selected to answer the questionnaires.

### **3.14 Reliability of the questionnaire**

To determine the internal consistency reliability of the questionnaire, Cronbach's alpha coefficient was used. The overall Cronbach's alpha reliability coefficient was 0.856 while the other coefficients for the other constructs are shown below in Table 1.

Table 1: Cronbach's alpha reliability coefficients

Variable	Number of items	Alpha
Homework	6	0.723
Home-School-Communication	17	0.700
Home resources	8	0.769
Overall questionnaire	31	0.856

(Source: Field data, 2016)

### 3.15 Ethical considerations

The researcher adhered to all ethical considerations in order to build trust and respect with the participants (Cresswell, 2009). Since the schools were the main centers for the activities in this research, School Managers were involved in putting up logistics for the study. Appointments were made at the beginning of the research and for all subsequent activities. For parents who agreed to take part in the study, letters of informed consent were given to them with clear explanations both in English and Tonga. Permission to involve their children was sought from parents after which, their children were given assent forms to sign. Only those who signed the consent forms were recruited for the study. Before their engagement, the purpose of the study was clearly explained to them. Risks and benefits of the study were also explained to the participants. One of the risks was that more work was added to the students and parents. In this case, they worked together with the researcher and the Guidance and Counselling teacher who counselled them in case either a parent or a student felt overburdened with work during research. Some of the benefits mentioned were: some children were motivated to learn when they saw that their parents were involved in the educational activities and that some parents gained more knowledge and skills in assisting their children with school work. The flow of information between the parents and teachers in terms of enhancing children's learning will improve. Participants were free to withdraw anytime during the research process. The recorded material was kept confidentially and safely. During the workshop food and refreshments were provided to participants.

### **3.16 Summary of the chapter**

This chapter has discussed the methodology applied in this study. Under methodology, the following items have been covered; research design, study population and sample, sampling method, data collection method and procedure, data analysis and ethical considerations.

## **CHAPTER FOUR**

### **PRESENTATION OF THE FINDINGS**

#### **4.1 Introduction**

This chapter presents research findings collected from parents and learners on the influence of parental involvement on the academic performance of learners in Math and Literacy in Kalomo District, Southern Province. The presentation of the findings is done under the headings derived from the research objectives. It should be considered that the study's objectives were to: (a) Assess the performance of learners in Math and Chitonga, (b) assess the quality of parent-child interaction in homework, (c) explore the quality and frequency of parent-school communication in homework and, (d) examine the use of home resources in the instruction of children to increase Literacy and Numeracy skills. The aim of the study was to demonstrate the effectiveness of increasing parental involvement to enhance the quality of interaction of parents with Grade four learners in homework and use local resources to improve the learners' performance in Math and Chitonga.

The presentation is arranged as follows; learners' performance in Math and Chitonga tests and parents' involvement in their children's school work. Finally, the presentation of results from the interviews will close the chapter. The participants were answering in Chitonga and the Quantitative data for learners' performance and parents' questionnaires were analyzed using paired t-tests, Mann-Whitney U test, ANOVA and correlation. The findings are given using tables and figures.

#### **4.2 Characteristics of learners**

The total number of learners who participated in the research was 84 of which 43 (51.8%) were females and 41 (48.2%) were boys. At the control school there were 20 boys and 22 girls while at the intervention school there was an equal number of boys and girls (21). Learners' mean age was 10.70 years with a standard deviation of 1.015. Age of the learners ranged from 10 years to 15 years and 10 years to 13 years for the control and intervention school respectively. The mean age (10.40 years) of the learners from the intervention group was slightly lower than those from the control school (11.00 years). The age variability of learners was higher for the control (1.230) compared to the intervention group (0.623).

### **4.3 Parents' gender, occupation and education.**

Table 2 provides basic characteristics of the 84 parents that were involved in the study. The parents were given questionnaires to answer and all of these were returned giving a 100% response rate. The number of parents was 42 per school. There were more male parents (45) compared to females (39). Between the schools, there were more female parents from the control while males were more from the intervention group. The ages of the parents ranged from 19 to 84 years with an average age of 40.30 years and SD of 11.118. Table 5 shows that even if the mean age for the parents from the control group was lower (39.74 years), there were greater differences among them (SD = 13.991). The mean age for the parents from the intervention group was higher (40.86 years) but differences in the ages of the parents was much lower (SD = 7.293). The minimum age for parents was 19 and 22 years for the control and the intervention group respectively.

Most of the parents (76) had some formal education with the majority of the parents having attained primary school education (36), then basic (32) and tertiary (10). The control group had more parents with primary, Grade one<sup>2</sup> and tertiary education while the intervention group had more with basic education.

Table 2: Parents' gender, education and occupation

Variable	School	Category	Frequency	Percentage
Parents' gender	Control	Female	22	52.4
		Male	20	47.6
		Total	42	100.0
	Intervention	Female	17	40.5
		male	25	59.5
		Total	42	100.0
Parents' education	Control	none	5	11.9
		primary	20	47.6
		basic	6	14.3
		Grade one2	5	11.9
		tertially	6	14.3
		Total	42	100.0
	Intervention	none	3	7.1
		primary	16	38.1
		basic	16	38.1
		Grade one2	3	7.1
		tertially	4	9.5
		Total	42	100.0
Parents' occupation	Control	public worker	4	9.5
		business	4	9.5
		farming	34	81.0
		Total	42	100.0
	Intervention	public worker	6	14.3
		business	2	4.8
		farming	34	81.0
		Total	42	100.0

(Source: Field data, 2016)

Table 3 indicates that most of the parents were farmers followed by public workers while those engaged in business were the least.

Table 3: Summary of parents' occupation

Occupation	Frequency	Percentage (%)
Farming	68	81
Public worker	10	11.9
Business	6	7.1
Total	84	100

(Source: Field data, 2016)

#### **4.4 Effects of sensitization of parents on the performance of learners in Math and Chitonga.**

Learners wrote two tests in Chitonga and Math before and after their parents were sensitized on how they could be involved in their children's education. A paired t-test was then used to find out if there was a difference in the mean scores for the performance of learners between time one (T1) and time two (T2) in Chitonga and Math. According to hypothesis (a) the difference between T1 and T2 scores was expected to be greater in the intervention school than in the control school.

A paired t-test was used to find out if there were significant differences between the pre and posttests for the control in Tonga and Math. Table 4 shows that there were no significant differences in pre and posttests for both subjects (Tonga=  $t(82), 1.750, p=.088, p>.05$ ; Math= $t(82) -.510, p=.613, p>.05$ ).

Table 4 further shows a pre and posttest in Chitonga and Math for the intervention group. A paired t-test was used to find out if there were significant differences between the pre and posttests for the control and intervention group in the two subjects. The results show that there were significant differences between the control and the intervention groups in pre and posttests for both subjects (Tonga=  $t(82), -4.25, p=.000, p<.01$ ; Math= $t(82)-6.204, p=.000, p<.01$ ).



Table 4: Paired t-test before and after intervention

		Paired Differences					T	df	Sig. (2-tailed)
		Mean* difference	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Chitonga Performance	Control Group	0.881	3.263	0.503	-0.136	1.898	1.75	41	0.088
	Intervention group	-2.929	4.251	0.656	-4.253	-1.604	-4.465	41	0.000**
Math Performance	Control Group	-0.19	2.422	0.374	-0.945	0.564	-0.51	41	0.613
	Intervention group	-3.786	3.954	0.61	-5.018	-2.553	-6.205	41	0.000**
		Paired Differences					T	df	Sig. (2-tailed)
		Mean* difference	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Chitonga Performance	Control Group	0.881	3.263	0.503	-0.136	1.898	1.75	41	0.088
	Intervention group	-2.929	4.251	0.656	-4.253	-1.604	-4.465	41	0.000**
Math Performance	Control Group	-0.19	2.422	0.374	-0.945	0.564	-0.51	41	0.613
	Intervention group	-3.786	3.954	0.61	-5.018	-2.553	-6.205	41	0.000**
		Paired Differences					T	df	Sig. (2-tailed)
		Mean* difference	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Chitonga Performance	Control Group	0.881	3.263	0.503	-0.136	1.898	1.75	41	0.088
	Intervention group	-2.929	4.251	0.656	-4.253	-1.604	-4.465	41	0.000**
Math Performance	Control Group	-0.19	2.422	0.374	-0.945	0.564	-0.51	41	0.613
	Intervention group	-3.786	3.954	0.61	-5.018	-2.553	-6.205	41	0.000**

(Source: Field data, 2016)

Table 5 shows the combined mean scores of the learners from the learners in Chitonga tests at T1 and T2. The results show that learners performed better in Chitonga at T2 and the results were statistically significant different at alpha level 0.05. The mean scores for T1 (11.3) and T2 (14.2).

Table 5: Paired t-test of mean scores for Chitonga tests at T1 and T2

Test variable	Mean	S.D.	t	df	p value
Chitonga Pre-test	11.3	4.7	- 4.5	42	0.001***
Chitonga Post-test	14.2	5.5			

(Source: Field data, 2016) \*\*\*  $p < .01$

The table below (Table 6) shows the mean scores of the combined scores for Math tests at T1 and T2. A paired t-test was howed that there was a statistically significant difference between the pre-test and post-test of children in Math  $t(42) -4.5, p=.000, p < .01$ ).

Table 6: Paired t-test of mean scores of the control and intervention in Math

Test variable	Mean	S.D.	T	df	P value
Math pre-test	10.6	3.5	- 6.1	42	0.001***
Math post-test	14.4	5.1			

(Source: Field data, 2016) \*\*\*  $p < 0.01$

In Table 7 a t-test was used to compare the time 1 and 2 difference scores for learners in Math and Chitonga between the control and the intervention groups. The results indicated a statistical significant difference in Chitonga ( $t(82) -4.6, p=.048, < .05$ ) and in Math ( $t(82) -5.1, p=.000, < .05$ ) all in favour of the intervention school. It was then concluded that these statistical significant differences in scores at time 1 and time 2 in both subjects was a result of the sentization of parents at the intervention school.

Table 7: Mean difference scores between time 1 and time 2 in Math and Chitonga

Test variable	School	Mean	S.D.	T	F	Df	P value
Tonga performance	Control	-9	3.3	-4.6	4		.048**
	Intervention	2.9	4.3			82	
Math performance	Control	0.19	2.4	-5.1	14		.000***
	Intervention	3.8	4				

(Source: Field data, 2016) \*\*\*  $p < .01$ ; \*\*  $p < .05$

#### **4.5 The quality of parent-child interaction in homework.**

Parent-child interaction in homework was determined by using Mann-Whitney U test since the data was ordinal (Table 8). A Likert-scale with a range of opinions upon which parents had to choose as a measure of interaction in homework with their children was used. This assessment included the following items:

1. I am adequately able to help my child with homework.
2. To what extent are you involved with homework of your child?
3. How much time do you spend per session on helping your child with homework?
4. How many times in a month do you help your child with homework?
5. What are your views on the frequency of homework given to your child?
6. To what extent do you agree that teachers assist you on how to help your child with homework?

The homework items were scored on a 5-point scale with options ranging from: (i) strongly disagree, (ii) disagree, (iii) partially agree, (iv) agree, (v) strongly agree. For the purpose of analysis, the five options for parents' responses were analyzed for time 1 and time 2. A scale for items on parent-child-interaction was computed based on pre and post interviews with parents to form total supportive interaction. The supportive interaction difference score between each respondent's self-reported interaction with the child around homework at time 1 (pre) and time 2 (post) was computed. The supportive interaction difference score variable reflected an ordinal scale.

Mann-Whitney U test was then used to compare the rank average scores for students' academic performance in Math and Chitonga between the control and the intervention groups. The results indicated a higher rank average score for the intervention (56.30) compared to the control group (28.70). The results also showed a statistical difference ( $Z=-5.189$ ,  $p=.000$ ,  $<.05$ ). The difference in the rank average scores between the control and the intervention groups could be attributed to the high interaction in homework of students for parents who received intervention.

Table 8: Mann-Whitney U test on parent-child interaction

Group	N	Rank average	Sum of ranks	U	Z	P
Control group	42	28.70	1205.50	302.500	-5.189	0.000
Intervention group	42	56.30	2364.50			

(Source: Field data, 2016)

Parent-child-interaction was also assessed through observing parents assisting their children in homework.



Figure 1: Mother monitoring her child in homework

(Source: Field data, 2016)

Findings in this study are also supported by the qualitative data gathered by the researcher from parents through interviews and observations on homework. The interviews also give an attractive illustration in explaining parents' involvement in their children's school work. They demonstrate the knowledge parents had before the sensitization, knowledge which they gained after the sensitization, how they were assisting their children's learning in Math and Chitonga as well as some of the challenges they had in terms of helping their children with school work. For example, during interviews a respondent was questioned about how he helped his child with homework. His answer was:

*“Taakwe neekali kumugwasya mwana kumilimo njobapegwa kucikolo kuti babelekele angánda ndakali kulimvwa kuti nkusowa ciindi kumugwasya. Kufumbwa mwana alomba lugwasyo ndaali kumwaambila kuti ndijisi bubi amilimo yamukwasyi koya ukalembe nzyooiya kucikolo. Kwiina necimwaambila boobo mwana nkaambo kakuti kusensemunwa kwannidijula mizeezo kwiinda mukugwasya akuyumya-yumya mwana kumilimo yakucikolo”.*

(I never used to help my child with homework. I felt like I was wasting my time to assist him. Whenever my child requested for assistance, I used to tell him that I am busy with family schedules, **“go and write what you have learnt at school”**. This time, I no longer tell my child like that because the sensitization has opened up my understanding to help and encourage my child with school work”).

The response from the above respondent clearly shows that some parents think it is solely the duty of the teacher to teach children yet they are equally instrumental in the schooling of their children. Such parents feel occupied with their family schedules without realizing that it is within those activities where learners start learning.

When another parent was questioned about how she helped her child in homework she had this to say:

*“Ndilamugwasya mwana kweendelena alwiiyo lusyoonto ndweekajana kucikolo nokuba kuti nzyobaiya mazuba ano ziyaakucinca. Zyobaiya zilaandeene anzyotwakali kwiiya. Kwiinda mulwiiyo ndweejana mukusensemunwa mwanaangu waandaana abana boonse bamumukwasyi nkaambo ulacikonzya kubala. Abamwi bana bali mumukwasyi bajana lugwasyo kuzwa kumabambe aaya. Twalikulombozya kuti bamayi nobali kufwambaana kutupa luziyibo oolu kutegwa tucikonzye kugwasya bana besu kumilimo yakucikolo”.*

(I help my child according to the little education I gained from school though the syllabus keeps on changing. Your syllabus is different from what we were learning. Through the knowledge I have gained from the workshop, my child has become

different from the rest of my children because she is able to read. Other children in my family have also benefited from this programme. I wish teachers had oriented us much earlier because our older children would have benefited as well.

The above response was given by a parent coming from a low-income family with very little formal education. Despite coming from a low socio-economic area with little understanding of the link between the curriculum and her everyday life, she was able to assist her child after the sensitization. The missing link between parents' knowledge about the curriculum and what children learn at school could be minimized by teachers because they act like *bridges* between the school and parents.

Another respondent observed by the researcher on how she helped her child with homework despite the fact that she did not have enough knowledge to help explain what the learner was required to do. Despite this apparent handicap, sat with the child and offered encouragement while the child was writing.

One of the parents, an 84-year-old gave the following comments on assisting his child with homework;

*“Tiindakali kucikonzya kugwasya mwanaangu kumilimo yakucikolo ndakali kwaambila biyo bapati bakwe kuti bamugwasye”.*

*“Kubala ndepenzi lipati ndejisi kumakani aakugwasya mwana kumilimo yakucikolo”. Tiindakaiya cikolo aboobo lyakali penzi kugwasya mwana. Lugwasyo biyo ndweekali kupa nkuula mabbuku ampesulo. Nikwakainda kunsensemunwa ndilacikonzya kubelesya zyintu zyijanika munsu lyangu kuti ndigwasye mwana kumilio yakucikolo”.*

(I didn't have the ability to help my child with school work, instead, I used to ask the older sibling to help him. Reading is my major problem in terms of helping my children. Since I never went to school, therefore, it was a challenge for me to assist him. The only help I could give was providing school materials like books and pencils. After the workshop, I am able to use resources around me to help my child in school work).

Observing this old man using local materials in instructing his child despite not knowing how to read and write indicated that even parents with humble educational backgrounds were able to help their children with school work if they were sensitized on how to do it. Some parents are satisfied with only providing school materials like pencils and books to their children but they could go a step further by developing skills on how to use resources in their environment to enhance children's learning.

#### **4.6 Home-school-communication**

In order to assess if there was a relationship between home-school-communication and academic performance of learners, the researcher used correlation (Table 9). The difference index that was computed using the first and second responses. The items were scored on a 5-point scale with options ranging from: (1) not at all, (2) daily, (3) weekly, (4) monthly and (5) termly. For the purpose of analysis, the five options for parents' responses were analyzed for time 1 and time 2. A variable computing the difference between the pre and post intervention scores was then used in the analysis.

The correlation analysis revealed that there was no relationship between home-school-communication and the academic performance of learners in Chitonga ( $r = .197$ ,  $p = .073$ ). In addition, there was no relationship between home-school-communication and the academic performance of learners in Math ( $r = .039$ ,  $p = .725$ ). Therefore, there was no relationship between home-school-communication and academic performance of learners.

Table 9: Correlations on home-school communication

		Difference index on home school communication	Change in Tonga performance	Change in Math performance
Change in Tonga performance	Pearson Correlation	.197	1	.411**
	Sig. (2-tailed)	.073		.001
	N	84	84	83
Change in Math performance	Pearson Correlation	.039	.411**	1
	Sig. (2-tailed)	.725	.001	
	N	83	83	83

(Source: Field data, 2016)

When one respondent was questioned on how communication is between parents and the school, she stated that:

*“Communication between parents and the school was quite good. Whenever I am needed teachers inform me in advance through writing notes or letters and give them to my children. Though the common form of communication is when we are called for work on the school projects and PTA meetings. I have never been called to discuss the academic performance of my child or behavior related issues”.*

Despite having good communication between parents and the school, the activities were based on improving the structures of the school and not on improving the academic performance of the children. In a few circumstances, children’s performance is discussed in PTA meetings but time is usually limited to talk about challenges faced by learners or how they can progress.



#### **4.7 The use of home resources in the instruction of children to increase their literacy and numeracy skills.**

A questionnaire based on Likert-scale was administered to parents at the two schools at time 1 and 2 with regards to their involvement in their children's school activities. They rated their involvement on the use of home resources on the education activities of their children between "did not occur" and "almost daily" Likert-scale options from 1 to 5 options. These were then calculated to find the results. Equally, learners from the above mentioned schools wrote tests in Chitonga and Math at time 1 and time 2.

To test if there were significant differences in Math and Chitonga performance of learners whose parents received intervention and those who did not, an ANOVA was used. The following items were used on home resources:

1. Filling 750mls, 2.5lts, 5lts or 20 liter containers with milk or water.
2. Doing activities involving the use of bags of fertilizer and maize seeds.
3. Sending children to buy different items from small shops around the village commonly known as "tuntemba".
4. Talking about money when shopping different items with children.
5. Involving children in cutting different things in the home. For example, cutting tomatoes when cooking.
6. Engaging children in counting legs of goats, cattle, tables, chairs or beds.
7. Weighing sand using empty plastics of sugar or salt.

Generally, Table 10 below indicated that only item 4 showed a significance ( $.001$   $p < .05$ ). The rest of the items were not significant.

Table 10: ANOVA on home resources at baseline for the control and intervention groups

		Sum	of	Mean		
		Squares	Df	Square	F	Sig.
1. How often do engage your child in filling containers of 750ml, 2.5,5 or 20lts with your child?	Between Groups	.762	1	.762	.377	.541
	Within Groups	165.524	82	2.019		
	Total	166.286	83			
2. How often do you send your child to buy different items from the shop?	Between Groups	2.333	1	2.333	1.163	.284
	Within Groups	164.476	82	2.006		
	Total	166.810	83			
3. How often do you engage your child in talking about money when shopping?	Between Groups	7.440	1	7.440	3.629	.060
	Within Groups	168.119	82	2.050		
	Total	175.560	83			
4. How often do you involve your child in cutting tomatoes into parts when cooking?	Between Groups	19.048	1	19.048	9.829	.002
	Within Groups	158.905	82	1.938		
	Total	177.952	83			
5. How often do you engage your child in counting legs of goats and cattle?	Between Groups	.000	1	.000	.000	1.000
	Within Groups	155.952	82	1.902		
	Total	155.952	83			
6. How often do you engage your child in weighing sand using empty plastics of sugar?	Between Groups	.190	1	.190	.101	.751
	Within Groups	153.952	82	1.877		
	Total	154.143	83			
7. How often do you engage your child in using bags of fertilizer and maize seeds?	Between Groups	4.762	1	4.762	2.369	.128
	Within Groups	164.810	82	2.010		
	Total	169.571	83			

(Source: Field data, 2016)

Table 11 below shows the results of the test of the differences between the first and second responses from parents who received sensitization on using home resources to increase the academic performance of learners at posttest. The test shows that all the constructs are significant at 5% level.

Table 11: ANOVA on the use of home resources between the control and the intervention group at time 2

			Sum of Squares	df	Mean Square	F	Sig.
1.	Filling2	Between Groups	19.048	1	19.048	13.290	.000
		Within Groups	117.524	82	1.433		
		Total	136.571	83			
2.	Buy2	Between Groups	32.190	1	32.190	24.049	.000
		Within Groups	109.762	82	1.339		
		Total	141.952	83			
3.	Talk2	Between Groups	50.298	1	50.298	34.749	.000
		Within Groups	118.690	82	1.447		
		Total	168.988	83			
4.	Involve2	Between Groups	63.440	1	63.440	53.018	.000
		Within Groups	98.119	82	1.197		
		Total	161.560	83			
5.	Count2	Between Groups	72.429	1	72.429	66.341	.000
		Within Groups	89.524	82	1.092		
		Total	161.952	83			
6.	Weighing2	Between Groups	53.440	1	53.440	43.153	.000
		Within Groups	101.548	82	1.238		
		Total	154.988	83			
7.	Use2	Between Groups	7.440	1	7.440	4.313	.041
		Within Groups	141.452	82	1.725		
		Total	148.893	83			

(Source: Field data, 2016)

Table 12 shows the sum of squares and mean squares between the control group and the intervention group. Learners' performance (Change in Tonga performance and Change in Math performance) were considered to assess the difference between the two schools. The results of the test on change in Chitonga performance demonstrate that ( $df=1$ ,  $df=82$ ,  $F=21.229$ ,  $p=.001$ ). Additionally, the results on change in Math performance illustrate that ( $df=1$ ,  $df=82$ ,  $F=23.868$ ,  $p=.001$ ). Therefore, we reject the

null hypothesis since  $p < 0.5$  and conclude that sensitization of parents in the use of home resources increased the academic performance of learners.

Table 12: ANOVA on the use of home resources at time 2

Variable				Sum of squares	df	Mean square	F	Sig.
Change in performance	in	Tonga	Between Groups	304.762	1	304.762	21.229	.001
			Within Groups	1177.190	82	14.36		
			Total	1481.952	83			
Change in performance	in	Math	Between Groups	256.687	1	256.69	23.868	.001
			Within Groups	871.120	82	10.76		
			Total	1127.807	83			

(Source: Field data, 2016)

In this study local resources were used by parents in the intervention group to assist their children in Math and Chitonga. The resources included those that are found in their households and those in their immediate surroundings. It was interesting to note that parents came up with initiatives in identifying different resources that were used in assisting their children with school work. The resources include the following:

#### a. Maize stalks

During my interaction with one of the parents from the intervention group, one parent used maize stalks in assisting the children with an exercise in Math. After the parent explained how the stalks were a resource he let the children demonstrate as well to assess their understanding. The observation was done during a follow-up activity.

The stalks already have pieces which are divided in small pieces. This resource was easily used in the Ratio and Division topics in Math. Below is what the parent said;

*“Mbuli mbeekazumanana kubeleka abana mumilimo yaandeene ndakabona zyintu zyimbi zyakubelesya mbuli makuba amapopwe kuti inga abelesegwa kugwasyilizya mwana kumilimo yakucikolo. Umwi mulimo wamakuba ngweekazyi kanditana iya nkusanizya ngómbe mbuli cilengwa eeci mbobacizyibide bunji bwabantu bjanika mubusena oobu.*

(As I continued working with my children in different activities I found other resources like maize stalks to be useful in assisting my child with school work. One of the uses of maize stalks I knew before the workshop was to feed my animals, a trend which is common to other members in the community).



Figure 2: A parent demonstrating how to divide numbers using maize stalks

(Source: Field data, 2016)

Findings derived from the participants were that if parents are sensitized on how to make use of home resources they are able to discover certain items on their own. This parent strictly used the maize stalks in Division exercises though the resource could be used on other concepts in Math like addition, subtraction and multiplication. These are basic concepts in Math and if children are able to use them before they go to school they will have the basic knowledge required to do the operations at school. The resource (maize stalk) is naturally divided into small pieces which makes it easy for use in different operations as explained above. In addition, home activities are a better source of learning for children and they create a foundation for parents to teach their children rather than leaving the whole work to teachers as perceived by some parents before they were sensitized.

#### **b. Packets of biscuits, salt and sugar, bottles of cooking oil as resources for learning**

Another respondent was questioned about what resources were used in assisting the child with school work. He stated that:

*“Nitwatakana njila muswaangano tiindakazyi kuti zyilengwaleza azyibelesyo zyaangánda inga zyabelesyegwa kugwasya bana mumilimo yakucikolo. Nitwakamna kwiiya ndilakonzya kubuzya mwana cilembedwe azyintu nzyotuula mbuli ccukela, nkukkisi, munyo amungwimba wamucisyu. Azyintu mpoona awo ambozilema zililembedwe. Mbuli ccukela amunyo zipimwa mbuli mbozilema naa makkilo nkabela mungwimba wamucisyu upimwa mumusyobo wameenda. Ndilayobola tugabba motuulila mingwimba yamucisyu kutegwa mwana kabelesya kwiiya’.*

(Before the workshop I never knew that local resources can be used in helping children with school work. After the workshop, I am able to ask my child to read what is written on the items that we buy, for example packets of sugar, biscuits, salt and bottles of cooking oil are some of the items I use to teach my child to read. On the same items weight is written on them. For example, sugar and salt are weighed in kilograms while cooking oil is measured in millimeters. I keep the containers as we buy the commodities so that they are used as learning resources).

During the interviews with parents the researcher noticed that they continued expressing their knowledge on how to assist their children. The mentioned items in the above response helped children learn from concrete objects through handling and interacting with elderly people, in this case reading which was a requisite for learners. Such kind of learning is important because the child continues learning outside the classroom.

### **c. Containers of different sizes**

In the picture (Figure 3) the containers were used to measure volumes of water from 2.5 liters to 20 liter containers. This is one of the commonest resources parents use in their daily lives. Water is used every day and all the time. They are found in different sizes which makes it easy for children to integrate the resource in their day-to-day lives. Containers in a rural set up are widely used for drawing water and for storing other liquid foods like milk (sour or fresh) for those who are milking. An empty tube of a tooth paste (colgate) lying near the foot of the mother is another resource whose units were used in Math.

Measurement is one of the major topics found in Mathematics. The containers which are in different sizes are commonly found in homes and are used on a daily basis for drawing water and other purposes. This made it easy for parents to guide their children in Mathematical concepts namely; addition, subtraction, multiplication and division with the latter being found easier to use on containers as a learning resource.



Figure 3: A mother explaining division using containers of different volumes

(Source: Field data, 2016)

Another respondent was questioned how cattle was helpful in the instruction of children with school work as shown in the picture below. He explained that;

*“Mebo ndakazyi biyo kuti ngómbé zyakubelesya akuligwasya kumilimo yamali, acakulya akulimvwa kuti ulivwubide mbuli cilengwa caba Tonga. Caino ndilakonzya kugwasya mwanaangu kubala kwiinda mukubelesya mau, amatwi azyinyama eezi”.*

(I only knew that cattle are for power, economic gains, food and ‘*prestige*’ as per culture among some Tonga people (Figures 4 & 5). Now I am able to teach my child counting using different features like legs and ears of the same animals).

A parent from the intervention was being assisted to put milk in the storage container. As the girl was helping out she was counting the number of cups that would fill the 5 liters’ container (Figure 4).

Using cattle as a resource, it is culturally and widely reared among the Tonga people (Figures 4 and 5). In this respect it implies that parents can integrate their culture in assisting their children with school work.



Figure 4: Children helping their parent pour milk in storage container while milking

*(Source: Field data, 2016)*





Figure 5: A parent helping the child through counting cattle

(Source: Field data, 2016)

One parent who lives near the school from the intervention group has cattle. It was so interesting to hear a testimony from a Grade one teacher when one of her learners used the knowledge from the workshop in a Math test. One of the Grade one item test was based on how many legs two cows have. The teacher heard the learner saying, “(Mary, the name of the cow, has four legs, -----)”.

If children can have such type of knowledge as early as in Grade one by the time they are in Grade four (which was the grade under study) they will have acquired a lot of knowledge from their parents’ homes.

Figure 6 shows another resource which was used by one of the parents as a means of connecting children’s learning between home and school. A bed was another item that was used after the workshop. Though its main function is for sleeping, lessons were deduced from this type of a bed. The parent was explaining on different ‘boxes’ found on it which are related to shapes (squares and rectangles) in Math.



Figure 6: A parent using a bed as a resource of shapes in Math  
(Source: Field data, 2016)

#### 4.8 Students focus group discussion

A focus group discussion was held with the learners at the intervention school. They were asked what challenges they had in doing homework. Some of the answers that came from learners were as follows;

*“Ciindi cakulemba milimo yakucikolo ncisyoonto nkaambo kamilimo yakumbewu akweembela ngómbe.”*

(We have little time to do homework because of gardening and herding cattle).

*“Bazyali besu inga batwaambila kuti tubweze mabbuku twainka kukweembela ngómbe tukalebele musyokwe”.*

(Parents tell us to carry our homework books when we go for herding animals and write while in the bush).

In line with the comment on carrying books when children go for heading animals, they may not necessarily need to carry books for them to learn in the bush. Learners can learn a lot from animal features and connect them to classroom activities. For example, each animal has two ears. How many ears do 5 animals have? In Math, multiplication is termed as “*repeated addition*”? Such type of learning may not require books and pens.

Other comments from learners were:

*“Bazyali besu bajisi mapenzi kukutugwasya milimo yakubelekela angánda”.*

(Parents have challenges in assisting us with homework).

*“Muzimwi ziindi balakaka ati bakatala kugwasya milimo yakucikolo yakubelekela ang’anda.*

(Sometimes they refuse to say they are fed up with homework).

*Masyikati baamba kuti bajisi milimo minji yakucita masiku baamba kuti bayanda koona”.*

(During the day they say “*they are busy*” while at night they say “*they want to sleep*”).

*“Ndakazwa kaindi kucikolo”.*

(I came out of school a long time ago).

*“Ndikkala abasyaanene aboobo tabacikonzyi kundigwasya milimo yakucikolo”.*

(I stay with my grandfather as such he is not able to help me with my school work).

Students’ focus group discussion revealed that learners have challenges from parents or guardians in terms of being assisted in their schooling. Some learners failed to access help because they were staying with their grandparents. Though age was not considered as one of the variables in this study, one learner reported inability from the parent as a challenge in school work. Generally, learners bemoaned their parents’ inability and little concern towards school work. The participants indicated that some parents lacked knowledge on how to be meaningfully engaged in their children’s schooling.

#### **4.9 Learners’ expectations from parents**

Learners’ focus group discussion was conducted on learners in line with what they expected from parents. The following were their views;

*“Bamazali tabeelede kupa twaambo twakwaalilwa kutugwasya milimo yakucikolo yakubelekela angánda.*

(Parents should not give excuses on issues pertaining to homework).

Another respondent explained that:

*“Beelede kunoobala andiswe, kucesyá kusumpya kutugwasya akutupa zyintu zyelede zyakubelesya kucikolo”.*

(They should read with us, minimize postponing helping us when need arises and provide materials needed for school work).

The researcher also sought to find out learners’ views on parental involvement in the children’s schooling. It was revealed that children valued their parents’ involvement in different activities they were engaged in. Therefore, sensitization equips parents to be able to fulfill expectations of their children in terms of school work. Additionally, helping children with their school work could be one way of motivating them.

Thus it was notable that in the current study parents can be involved in their children's homework through interaction in homework and using resources in their homes and the immediate surrounding. They are already involved in activities like providing school requirements, building structures for the school. However, their daily activities need to be connected to their children's classroom situation through sensitization on generating resources to use for academic purposes.

#### **4.10 Summary of the findings**

The findings were based on the general objective which aimed at demonstrating the feasibility and evaluating the effectiveness of increasing parental involvement in the educational activities of students to improve literacy and numeracy of children. Data was collected using parents' involvement questionnaires and standard tests for the control and experimental groups. Parental involvement was based on parent-child interaction in homework, home-school-communication and the use of home resources in the education activities of children. Parents from the intervention school were sensitized on how to make use of home resources that were available in their homes and in the immediate surroundings.

The findings showed that learners of parents who were sensitized together with teachers of the intervention school on how to involve parents in the education activities of the children did better than students whose parents were not sensitized. A t-test revealed that learners from the intervention school had statistically better marks in both Math and Chitonga after the intervention.

Qualitative results also showed that parents became more actively involved in the learning of their children through monitoring homework and using home resources in children's school work after they were sensitized (Figures 1, 2, 3, 4, 5 & 6).

## **CHAPTER FIVE**

### **DISCUSSION OF THE FINDINGS**

#### **5.1 Introduction**

This chapter discusses the findings in line with the following objectives;(a) to assess the performance of learners in Math and Literacy, (b) to assess the quality of parent-child interaction in homework, (c) to explore the quality and frequency of parent-school communication in homework and, (d) to examine the use of home resources in the instruction of children to increase Literacy and Numeracy skills.

This was done comparatively between learners whose parents were sensitized in the involvement of their children's school activities and those whose parents were not sensitized. The findings were based on Math and Chitonga Grade four tests which learners from the control and intervention groups wrote.

#### **5.2 Performance of learners in Math and Chitonga**

From the study, the tests which learners wrote in Math and Chitonga from the two schools established that there were significant differences between learners whose parents were sensitized and those who were not sensitized in parental involvement.

The children whose parents received intervention showed greater academic improvement on Grade four test in Chitonga and Math than the control group children (Table 4). The high mean score from the intervention school could be attributed to the intervention which was offered to the parents. The mean score between the control and the intervention group before the intervention was insignificant. Such significant differences in mean scores was attributed to the intervention because of the increased knowledge that parents acquired after being sensitized on how to assist their children with school work.

These findings are in line with those of Menheere and Hooge (2010) who observed that parental involvement in learning could be intensified through sensitization strategies. The study which was conducted in Amsterdam explored parental involvement in children's education with a view of involving illiterate parents. The study revealed that good practices like family interventions were good for the academic improvement of children. When parents are sensitized, they will have the potential to assist their children in their educational activities. Additionally, when

parents are involved in the educational activities of their children' learning during noncontact hours with teachers, the performance of learners improve. Sensitizing parents also makes them realize the importance of school in terms of community development and the nation at large. As evidenced from some of the participants with low literacy levels, they were able to utilize the knowledge they got from the workshop to influence their children as well as other members of the community who did not have the opportunity participate in the sensitization programme. Even in the absence of the researcher, people in that community will still benefit from the knowledge they gained from the workshop.

The Ministry of Education (1996) advocates that education is widely considered to bring about development as it increases skills and knowledge to people. In Kalomo, farming is one of the main occupations and the economy of people could be improved if they were helped to realize the importance of education.

### **5.3 Quality of parent-child interaction in homework**

Mann-Whitney U was used to assess the statistical significance on the difference between the control and intervention groups in the level of parent-child-interaction. The difference in parent-child-interaction in homework was compared between parents from the control and the intervention groups.

Parent-child-interaction was considered in terms of the ability for parents to help in homework, the degree of involvement, time spent on helping the child and the frequency of helping. The findings showed statistical differences between the control and the intervention group. This could be attributed to the sensitization that was given to the intervention group as the results showed a higher mean rank than the control group. The study found that there was a connection between what learners do at home in their daily activities with their parents and what they learn at school. The study distinguished gains in the performance of learners and confirms the significance of involving parents in homework.

Involving parents in homework is one way of incorporating parents' engagement in the strategy of promoting instructions and the use of resources in their children's learning. In most cases teachers consider parents to be part of their children's learning and this is one way of showing effective teaching and improving academic performance especially when children are given homework (Echaune, Ndiku & Sang,

2015; Huntsinger & Jose, 2009). Echaune et al (2015) examined three effects of parental involvement in homework on academic performance in public primary schools in Teso North Sub Country, Busia-Kenya. The objectives were to establish homework assistance children get from parents, to ascertain the extent of homework and examine the association between parental involvement in homework and school academic performance. The study revealed that parents offered limited assistance in areas such as reading and working out difficult mathematical problems. Additionally, parental involvement positively correlated with academic performance of learners and educational increase on parental involvement were observed and confirmed in children's schooling. The study further recommended that parents who lack knowledge in assisting children with homework should be sensitized.

Another study on parental involvement was conducted by Huntsinger and Jose (2009) in USA. Communication, volunteering at school and learning at home were explored in two cultures within the United States' immigrant Chinese parents and European American parents. Parents of the young children showed their different traditions in the manner they involved themselves in their children's academic life. The study found that parents' home teaching methods showed stability in the academic life of their children overtime. In line with the above study, the current study revealed that children whose parents were involved in home learning improved their academic performance than the children from the control group. The concept of homework was largely considered both in work given at school and activities learners do at home with their parents. The activities can be a source curriculum generation and parents from low literate communities will benefit in helping their children with school work. Ball and Pence (2006) advocated that generated curriculum enhance students' learning as connections are made easy through their life experiences. Epstein's theory (1995) states that learning at home involves parents' help in homework and this encourages the learner. Teachers are encouraged to create homework that promotes parents' discussions on educational concepts.

The other benefit is motivation that children receive from their parents and this was revealed in a focus group discussion that the researcher had with learners where one pupil stressed the need for parents to be involved in their children' school work. Children are more interested in school work when they see that parents are involved in their learning and this is commonly done in homework since it is done at home

during non-contact hours with teachers (Huntsinger & Jose, 2009). Teachers find it easy to teach when parents are involved because weaknesses or strengths of the learners are discussed appropriately. This leads to a favourable environment for children's learning and the progress of the learner.

Bronfenbrenner's (1994) ecological theory emphasizes that parents provide conditions in which their children can learn as they are found in their immediate surroundings (homes). Parents and teachers are part of the microsystem to the learners and this creates more opportunities for them to support children in their daily lives with parents being more integral. Children start learning things from their parents before any other person teaches them. It is this concept that can help parents and teachers to assist learners in homework in order to build the link between home and school. The more the involvement the more the learner will benefit.

The theory further states that environmental conditions are important for child development. Adults must encourage their children to spend time doing things together inside and outside their homes as the child learns how to do things while interacting with parents. In an effort to support parents' efforts in regard to assisting their children's schooling, the Zambian government through the Ministry of General Education implemented the use of familiar local languages of instruction in teaching Literacy (MESVTEE, 2013). The main idea was to enhance the teaching and learning of the children since they are familiar with their first language as they enter school (Zulu, 2013). This equips parents with more ability to help their children in school work.

In another finding Clemensen (2011) observed that it is important for children to spend time on concrete tasks including reading and writing outside the classroom which are key areas to improving performance. Parents who are not able to read can assist their children by encouraging them to read to them. The introduction of household activities and others like farming, assisting their parents in the fields, gardens, market places and maintaining the house are helpful in connecting children to the classroom situation. Additionally, when children get involved in farming activities, looking after cattle they acquire a lot of knowledge about school. Most of the children's lives are formed by duties in their homes which could be a fertile avenue for learning basic concepts in classroom to enhance their learning (Figures 2, 3 & 4).



#### **5.4 Quality and frequency of parent-school communication in homework to improve learners' academic performance?**

This study revealed that there was no relationship between parental reports on the quality of home-school communication and the performance of learners in Math and Chitonga. However, effective communication between parents and schools is reported to be vital in assisting learners' academic gains as observed by Merkley, Schmidt, Dirkson, and Fullen (2006). The study examined how reading was used as a technology to communicate with parents on the child's progress in literacy. The method improved the communication process with parents while sharing the learning material and student progress reports. The difference in these findings could be explained by the fact that the intervention period in the present study may not have been adequate to bring out such a change. Some parents may have needed more time to be able to develop the ability to help their children with school work. This is supported by Patrikakou (2008) who found that home-school-communication needs time and commitment to set up and maintain. The study revealed that participation of parents in regular two-way and meaningful communication is important towards students' learning. The three types of involvement were home, school and home-school-communication. The findings also indicated that parents play an important role in helping their children learn and they were important partners in helping their child learn in a meaningful way. Additionally, the study sought to review the ideas schools and parents could use to build successful partnerships and discuss general factors affecting parent involvement.

There were substantial measures that needed to be done in order to reach out to parents in a favourable way. It was likely that some parents did not want to reveal that they were not willing to communicate with the school for various individual reasons. Although communication is important, Musonda (2011) found that communication between home and school was still very low in Zambia (10%) and this was largely through the participation of parents in PTA meetings. When parents and schools have a sound and frequent communication they can shape a partnership that creates benefits to the learner. Understanding increases knowledge in terms of helping the learner because ideas are shared between parents and teachers. Additionally, there is an anticipation that social desirability biasness could have arose because some

participants could have different views in answering the questionnaire (Patrikakou, 2008). Such aspects are difficult to control.

The qualitative analysis showed that communication between parents and teachers was good in certain areas such as those PTA meetings or building activities in the school. Nevertheless, communication in terms of discussing learners' academic issues still remains a challenge as more time is allocated to infrastructure programmes.

### **5.5 Use of home resources in the instruction of children to increase their literacy and numeracy skills.**

From the study, the sensitization of parents in the use of home resources showed some statistical differences between the control and the intervention school. In this study parents from the intervention group were sensitized on how to assist their children with school work using home resources in different activities. Home resources are a rich source of learning materials because they are at the children's disposal (Ngásike, 2014). While some activities were directly involved into quantitative skills like counting, some were indirectly involved like using bags of fertilizer and seeds to measure a variety of farm products. Parents' involvement in the use of home resources in the educational activities with their children included filling different sizes of containers with water or milk, doing activities involving the use of bags of fertilizer and maize seeds and sending children to buy items from small shops around the village commonly known as "*tuntemba*". In addition, parents talked about money when they were shopping with their children, involved in cooking activities like measuring and cutting, engaged them in counting legs of domestic animals like goats and cattle when herding animals and collecting them from grazing areas. Weighing sand in different empty plastics of sugar and salt was another activity for children guided by their parents to enhance their understanding of what they learn at school.

. Children spend most of their time outside school or within areas near homes. During this time there is a lot of interaction in relation to household activities. Even when they are playing, children continuously deal with household related issues and practices, discuss crops, animals and other resources in their immediate surroundings. For example, cutting and measurement are some of the activities involved in cooking and two important concepts can be learnt in Math. To elaborate more, fractions can be learnt when cutting tomatoes and measurement can be practiced when using water and

other liquids. Clemensen (2011) revealed that daily activities that are done in different homes can tap into knowledge that is beneficial to learning situations because learning is done on real objects which involved a lot of practices.

It is cardinal for learners to extend their learning outside the classroom in particular using concrete objects found in their parents' homes and possibly in their surroundings. Multiple learning occurs through observing their parents in different activities using home resources and helping their parents is one way of practicing. This is in line with Ng'asike (2014) posited that identifying household resources needs to be contextualized in the education of children. When this is done parents are made to understand how they can be involved in the primary curriculum of their children. If parents are made to understand the content of the curriculum it will be easy for them to create learning situations to their children as they are in the proximity area most the time. For example, the knowledge a child acquires on using containers in a Math homework exercise can be extended to dipping cattle. In this way parents will also find more benefits in terms of making use of the curriculum. They will also realize that their children are responsible by applying what they learn at school and apply them at home. Selling milk is another practical activity where parents can involve their children especially children who are staying with parents who never went to school or those who are old. Most of the parents in the current research heavily depend on farming which involves exchanging products of some kind. This creates a fertile ground for parents and learners to incorporate the cultural activities and learning at school. Other than parents teaching their children through using local resources it is another way of developing rural areas by increasing children's responsibility and parents' knowledge. If learners are taught such responsibilities as early as in Grade four they will develop that sense even as they grow into adults. In line with these practical activities by Serpell, Mumba and Chansa-Kabali (2011) conducted a study in Katete district, Zambia where learners were engaged in community nurturing activities using Child-to-Child (CtC) approach. The policy on using local language in lower grades gives an added opportunity to low literate parents to assist their children in school work.

A rich study was conducted (Serpell, Mumba & Chansa-Kabali, 2011) with the aim to foster social responsibility among Grade 5-7 children at Kabale Basic School in Mpika district, Zambia. The curriculum focused on health education, peer group cooperation,

gender equality and helping others in the community. CtC approach was superior to the institutionalized public basic schooling (IPBS) because it yielded high academic performance and also generated more long lasting socially responsible outcomes among learners. The approach was rooted in the Child's Rights Education which emphasizes that teachers should reach beyond their lesson plans in delivering their knowledge to the young children. The Convention on the Rights of the Child (CRC) demands that lessons should enable learners practice what they learn in their daily lives at home, school and in the community (UNICEF, 2014). When these activities are incorporated in the curriculum, the children will learn responsibility where the community benefits. Growth charts were used in the study to monitor the nutrition of young children which enabled older children to be more responsible over the young ones.

The significant differences in the study between the control and intervention group could be attributed to the intervention which was done. The findings are in consistence with Ishmaru, Lopez and Bang (2015); LeFevre, Skwarchuk, Smith-Chant, Kamawan, Fast and Bisanz, (2009) who found that indigenous agricultural activities practices of Mexican American communities can help in mathematical practices. Children's experiences through parental involvement are cardinal in understanding mathematical concepts. LeFevre et al (2009) revealed that mathematical experience had a relationship with how often parents involved their children in informal activities like shopping and cooking. Different practices in Math can change views of parents in the educational circles to bring about clear understanding between schools and parents. The relationship which builds in a home through experiences in using different resources by the child and parent has an impact on the child (Bronfenbrenner, 1994). There is need to appreciate the resources in the communities because they improve children's skills towards the community and the curriculum. The growing up children are participating in activities connected from their different homes to a larger part of the community which is Kalomo in this case. Learners have an opportunity to see the importance of farming through acquiring skills which are embedded in the Ecological theory.

The interaction which happens at home has also an impact on pupil to pupil and at school. They will grow up with the principal of working together and be responsible citizens as a result they will be responsible children in future. When the practices are

understood by teachers and parents they can assist narrow the gap as a result the learners will benefit academically.

## **5.6 Implications of the study**

The outcomes of the study have been in line with some studies conducted in Africa and other countries (Chan, 2007, Ngasike, 2014 & Mubanga, 2011). The studies observed that parental involvement in the children's education is beneficial in terms of improving their academic performance if parents are sensitized. In another study Ball and Pence (2006) found that programmes that can strengthen community abilities to identify generated curriculum in line with cultural appropriate programmes to support young children's learning were cardinal. The study illustrates an approach that creates community based learning to satisfy the needs and interests of the people. A programme on how young children's development can be supported in making connections between home and school was conducted.

Sensitization largely improves knowledge and ability of parents to assist their children with learning and communities can generate a curriculum in order to have valuable knowledge towards the contribution of their children's learning and the community at large. Such programs are helpful to low-literate and low-resourced communities as they enable parents identify and make use of sources at their disposal. Parents are the closest people and their experiences in the daily activities can help children connect their learning between home and school. For example, parents' interaction in homework with learners equip them with an update of what their children are learning at school and this creates a fertile ground to help and encourage their children.

Learners equally benefit from their parents through the experiences, encouragement, help and a variety of activities done with them. These activities offer a wide range of culture which should be incorporated in the children's learning of Grade four Math and Chitonga.

The views stated above give a strong indication that parental involvement through sensitization is beneficial in learning Math and Chitonga in elementary grades. It opens up opportunities for them to help their children in terms of learning starting from what is available in their immediate surrounding through to the classroom.

### **5.7 Summary**

The findings of the study as observed from this chapter are in line with other studies from Africa and other countries (Huntsinger & Jose, 2009, Chan, 2007; Echaune, Ndiku & Sang, 2015; Ng'asike, 2014; Musonda, 2011). In Africa Ng'asike' study (2014) on early childhood development curriculum and pedagogy for Turkana Nomadic pastoralist communities of Kenya observed that Western practice on ECE have largely dominated over the indigenous knowledge that the children are supposed to gain through their daily lives. Parents from low resourced communities can influence their children's learning in Math and Chitonga through different resources within their environment making the principle of teaching from known to known work well. Learning materials are widely found in communities and they can be utilized in children's learning through interaction between parents and children in order to cement learners' educational concept.

## **CHAPTER SIX**

### **CONCLUSION AND RECOMMENDATIONS**

The chapter covers the summary of the study, conclusions that are drawn from the study and the recommendations.

#### **6.1 Summary**

The study carried out an intervention on parental involvement in parent-child-interaction in homework and the use of local resources on Grade four learners in Math and Literacy in Kalomo. Four objectives guided the study and these are: (a) to assess the performance of learners in Math and Literacy, (b) to assess the quality of parent-child interaction in homework, (c) to explore the quality and frequency of parent-school communication in homework and, (d) to examine the use of home resources in the instruction of children to increase Literacy and Numeracy skills.

Quantitative research design was used to collect data. Questionnaires were used to collect data from parents and test items were used to assess learners' performance in Math and Literacy. The study has revealed that there were significant differences in learners' academic performance between learners whose parents received the intervention than those who did not.

The study has demonstrated that parental involvement through sensitizing parents on parent-child-interaction in homework and the use of home resources improved Grade four learners' academic performance in Math and Literacy. Therefore, it could be said that parents are able to generate learning resources from their communities regardless of their literate backgrounds. They are the closest people in the child's environment and this creates an opportunity for the child to connect learning from home to school. The study did not show any relationship between home-school-communication and the academic performance of learners in Math and Chitonga.

#### **6.2 Conclusion**

The results of this study have shown that sensitizing parents in low literate communities create opportunities to generate resources to assist their children in school work in order to improve children's performance. The interaction between parents and children improve when parents are sensitized creating more opportunities

for children to improve academically. In terms of the school curriculum parents become aware of what their children are learning as a result the potential for helping them could increase. The improvement in the academic performance of learners indicates that parents were able to integrate resources in their community or environment to assist their children in school activities. The study also indicated that when parents work with teachers in terms of assisting their children with homework, consult teachers and spend time with their children on homework the academic performance of learners improve. Different objects were identified to be useful in tapping knowledge from home to school by parents after sensitization. There was no relationship between home-school-communication and the academic performance of learners. Therefore, the study concluded that Grade four learners' academic performance in Math and Literacy improve when parents get involved in homework and use home resources in assisting their children with school work.

### **6.3 Recommendations**

Based on the findings and conclusions from this study the following recommendations are made;

1. The Ministry of Education should come up with strategies of involving parents more actively in the education activities of their children. Parents play an important role in the learning of their children. Without parents the link between school, learners and home becomes incomplete.
2. Homework should be considered as one way of working together with parents in order to improve learners' academic performance. When homework is given to learners, teachers, parents and learners benefit at large. Learners continue learning during noncontact hours with teachers, parents are kept abreast on what their children are learning and it becomes easy for teachers to share problems that they encounter with learners.
3. The Ministry of Education should consider ways of sensitizing parents on how they can make use of local resources to assist their children in different subjects so that learning skills through using concrete objects can begin at home.

### **6.4 Suggestions for further research**

The findings are limited to a rural set up and cannot declare to have covered all the settings. Nevertheless, it will be useful in encouraging readers and researchers to



investigate further. Therefore, the following are some of the suggestions for future research;

1. A similar study could be carried out in different subjects to find out which home resources can be used to assist learners improve their academic performance in other subjects. The resources could be used along with homework to enhance learning in other subjects like Integrated Science and Creative and Technology Studies (C.T.S.) in elementary grades. In the area where the study was carried out farming is the main occupation for most of the parents. This creates a meaningful environment for learners to learn about crops like maize, groundnuts, sunflowers and different types of vegetables grown in the area. In Science learners learn about different animals too and lessons can be learnt from animals that most of the parents keep.

Homework can also enhance learning in topics like traditional medicines and the importance of the forest because they use materials like grass, firewood, wooden stools and some live in houses made of roofs with poles. Learners will easily understand such topics because the environment is surrounded with the above mentioned materials.

In C.T.S. learners do crafts and painting which are some of the activities that happen at home. Some houses in rural areas are painted with different colours of soil (black, red, brown and ash) and some parents do crafts in their homes. This could be an opportunity for learners to connect learning through their parents' activities and integrating the locally available resources. Homework in modeling is another area where learners can benefit a lot from their parents. Modelling different items can give children a lot of skills if they are encouraged from childhood because such skills can easily be acquired from their parents whether they have formal education or not.

2. A comparative study on parent-child-interaction in homework between rural and urban schools using a larger sample. Urban and rural environments differ in many aspects like resources around them and this could have an impact on children as they grow. Most of the parents in urban areas have formal employment while business is also widely done in towns. Facilities like

computers, lighting systems and other household items which facilitate learning are commonly found in towns.

While parents from urban areas are mostly engaged in formal activities most of the parents from rural areas are engaged in informal activities like farming. It is within those activities like farming where they can interact and connect their children to a classroom situation.

A comparison study could reveal differences in how parents interact with their children between the two environments using the available resources.

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## APPENDICES

### Appendix A: Parental involvement questionnaire

This survey is on parental involvement. You are requested to answer ALL the questions in the survey.

- Below are statements which are followed by a range of answers.
- Please read them carefully and see the answer that best explains how much you agree with the statement.
- It will be helpful if you answer sincerely.
- Your accurate information will assist the school in designing activities and programs that are helpful to the students, teachers, school and educators and other stakeholders in the community.

1. Date of interview            [\_\_\_\_\_]\_\_\_\_\_]\_\_\_\_\_
2. Names of respondent
3. Gender:                            [\_\_\_\_\_]1= Male, 2= Female
4. Marital status:                    [\_\_\_\_\_]            1= married, 2 = single, 3= divorced, 4 = widowed
5. Name of School of child
6. Highest level of education of parent/guardian [\_\_\_\_\_]
   
1=None, 2= Primary, 3 = Basic, 4= Grade one2, 5= Tertiary
7. Age of parent/guardian in years: [\_\_\_\_\_]\_\_\_\_\_]
   
8. How many of your children/dependents are currently in school? [\_\_\_\_\_]
   
9. Household socio-economic status:

Occupation of parent[_____] 1=Public worker 2= Business 3= Farming	Type of housing [_____] 1= Brick with iron roof 2= Brick with grass roof 3= Mud plastered	Main source of lighting used [_____] 1= Solar 2= Kerosene 3= None
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#### Perceptions and Attitudes

10. How do you view the extent of your involvement in your child's education? [\_\_\_\_\_]
   
1= Not involved, 2= slightly involved,3= moderately involved,4= greatly involved

- Explain the extent of your involvement in the education of your child? -----  
-----  
-----

11. I believe it is my duty to get involved your child's education? [\_\_\_\_\_]

1= strongly disagree, 2= Disagree, 3= partially agree, 4= Agree, 5 = strongly agree

12. I am willing to be trained on how to better help your child with homework.

1= Strongly disagree, 2= Disagree, 3= Partially agree, 4= Agree, 5 = Strongly agree

[\_\_\_\_\_]

- What new knowledge have you gained from the training (if any)? -----  
-----  
-----

13. It is important that parents and teachers work together in academic activities of the children [\_\_\_\_\_]

1= strongly disagree, 2= Disagree, 3= partially agree, 4= Agree, 5 = strongly agree

- What activities can parent work together with teachers Math and Literacy? -----  
-----  
-----

14. To what extent are you involved with homework of your child? [\_\_\_\_\_]

1= Not involved, 2= Slightly involved, 3= Moderately involved, 4= Greatly involved

15. I am adequately able to help my child with homework? [\_\_\_\_\_]

1= Strongly disagree, 2= Disagree, 3= Partially agree, 4= Agree, 5 = Strongly agree

- What kind of help are you able to give this time? -----  
-----  
-----

**Homework**

16. What are your views on the frequency of homework given to your child?

1= Not sure, 2= None, 3= Too much, 4= Adequate, 5= Inadequate. [\_\_\_\_\_]

17. Teachers assist me with how I can help my child with homework? [\_\_\_\_\_]

1= Strongly disagree, 2= Disagree, 3= Partially agree, 4= Agree, 5 = Strongly agree

- What kind of help have you received from teachers in the past three months? -----  
-----  
-----

18. How many times in the past three months did you help your child with homework? [\_\_\_\_\_]

1=Not at all, 2= once per week, 3= Above once per week, 4= Above once per month

- Explain the challenges you faced (if any) in helping your child with homework. -----  
-----  
-----

19. How much time did you spend per session on helping your child with homework in Literacy and Numeracy? [\_\_\_\_\_]

1=not at all, 2= 10-20 minutes, 3= 30-40 minutes, 4= 50-60 minutes, 5= more than 60 minutes

- What challenges (if any) did you have in finding time to assist your child with school work? -----  
-----

20. How many times did you listen to your child read in a month? [\_\_\_\_\_]

1=not at all, 2= Once per week, 3= Twice per week, 4= Three times per week, 5= above four times per week.

- If that did not happen, what are some of the challenges you are facing? -----  
-----

21. How many times in a month do you plan work schedules in your home with your child?

1=not at all, 2=weekly, 3= Twice per week, 4= 3-4 times per month [\_\_\_\_\_]

#### **Parent-School Communication**

22. How regular do you communicate with teachers regarding homework of your child?

[\_\_\_\_\_]

1= not at all, 2= Daily, 3= Weekly, 4= Monthly, 5= Termly, 6= Yearly

- If you communicate with teachers, how is that information useful to you? -----  
-----

23. I am satisfied with the communication between me and the school. [\_\_\_\_\_]

1= Strongly disagree, 2= Disagree, 3= Partially agree, 4= Agree, 5 = Strongly agree

- Would you suggest how communication between parents and teachers can be improved? -----  
-----

24. If not satisfied, what could be done to improve the communication?

25. How many times in the past three months have you checked the progress of your child? [\_\_\_\_\_]

1= not at all, 2=Once, 3= twice, 4=more than three times

- How does knowing progress of your child help you with his/her education? -----  
-----  
-----

26. How many times have you attended PTA meetings in the past four years? [\_\_\_\_\_]   
1=not at all, 2= once, 3= twice,4= three times, 5= more than four times

27. In case you did not attend, what are some of the reasons for your failure? Explain.

28. How often have you encouraged your child with school work? [\_\_\_\_\_]   
1= not at all, 2= Once per week, 3= Twice per week,3= Three times per week, 4= above four times per week

- What type of encouragement do you give to your child? -----  
-----  
-----

29. How many times have you consulted with teachers on your child’s school work?   
[\_\_\_\_\_]   
1= Not at all, 2= once per week, 3=three times per week, 4= more than three times per week

- What benefits (if any) have you found? -----  
-----  
-----

30. Are these times sufficient?   
1 = Yes 2 = No [\_\_\_\_\_]

31. How many times have teachers informed you about your child’s performance in the past three months?   
1= not at all, 2= Weekly, 3= Monthly, 4= Termly

32. Through what means do they do this? Explain.

33. How satisfied are you about this? Explain.

**Local Resources**

34. Local resources can be used to help parents in assisting their children with school work. [\_\_\_\_\_]   
1= Strongly disagree, 2= Disagree, 3= Partially agree, 4= Agree, 5 = Strongly agree   
- Explain how the resources have helped in assisting your child with school work in Math and Chitonga. -----  
-----

35. How often have you used local materials in helping your child with homework in Literacy and Numeracy? [\_\_\_\_\_] 1= never, 2= rarely, 3= sometimes, 4= often, 5= very often

36. How often have you used sticks for counting in Numeracy to help your child in home work in the past three months? [\_\_\_\_\_] 1= Daily, 2= weekly, 3= Twice per week, 4= 3-4 times per month

- What new materials have you learnt in helping your child with school work in Math and Numeracy? -----  
-----

37. What other local materials have you used in assisting your child in Literacy and Numeracy?

38. How many times have you told stories to your child in the past three months? [\_\_\_\_\_] 1= not at all, 2=weekly, 3= Twice per week, 4= 3-4 times per month

***Thank you for your co-operation.***

## Appendix B: Translated parents' involvement questionnaire (Tonga version)

Buvwuntauzi kujatikizya kusangana kwabazyali

Buvuntauzi oobu bulede kapati kukusangana kwabazyali mulwiiyo lwabana. Mweelede kwiingula mibuzyo yoonse.

- Anselelo aawa kuli twaambo tujisi bwiinguzi bunji.
- Amubale cakusindinganya akusala bwiinguzi bubotu buzubulula mbomuzumina mukaambo aaka.
- Kuti mwaingula camasimpe inga catugwasya kapati.
- Kwiingula kwenu kuisinkene inga kwagwasya kuti cikolo cibambe zyakucita zinji alimwi amaccililanwa agwasya kuli basicikolo, bamayi, basyaabupampu mulwiiyo kotaluba abamwi beendelezya lusumpuko mubusena oobu.

1. Buzuba bwakubuziyigwa
2. Izyina lyabasikwiingula
3. Bube bwangu  1= Musankwa, 2= Musimbi
4. Lukwato  1=ndlikwete/ndilikwetwe, 2 = tandikwete, 3= ndakalekwa, 4 = ndakafwidwa
5. Zyina lyacikolo camwana
6. Muiide buti? 1=taakwe, 2= pulaimali, 3 = giledi 8 na 9, 4= kusekondali, 5 = kkoleji
7. Myaaka yamuzyali uumulela
8. Mbangaye bana naa balelwa baiya
9. Bube bwaamunzi:

Occupation [_____]	Musyobo wanganda [_____]	Mwiinzo wamumuni [_____]
1=mubelesi wamfwulumende 2= simpindu 3= mulimi	1= yamatina aciluli camasenke 2= yamatina aciluli cabwizu 3= yakasyingululwa abulongo	1= sola(zuba) 2= palafini(mafuta) 3= taakwe pe

### Mbobacilanganya naa mbobacibweza bamazyali kubelekela antoomwe abamayi

10. Musangene buti mukugwasya kuti mwana aiye? [\_\_\_\_\_]

1= ndinyina a lubazu, 2= ndisangene asyoonto, 3= ndisangene caakati-kati,  
4= Ndisangene kapati,

11. Hena muyeeya kuti ndubazu lwanu kusangana mulwiiyo lwamwana ? [\_\_\_\_\_]

1= Hezumini a bunini, 2= Hezumini, 3=Ndzumina asyoonto, 4=  
Ndzumina,

5= Ndzumina cakusinizya

- Amupandulule mbomusangene a lwiiyo lwamwana wanu. -----  
-----  
-----

12. Hena mulazumina kuyiisigwa mbomunga mwagwasya mwana kumilimo njaapegwa kucikolo kuti acite amunzi? [\_\_\_\_\_]

1= Ndakaka cakusinizya, 2 = Sezumini, 3= Ndazumina asyoonto, 4=Ndazumina, 5=Ndazumina cabwini

13. Hena muyeeya kuti ncibotu kuti bamayi abamazyali kababelekela antoomwe mumilimo yalwiiyo lwabana? [\_\_\_\_\_]

1= Ndakaka cakusinizya, 2= Hezumini, 3=Ndazumina asyoonto, 4=Ndazumina, 5=Ndazumina cakusinizya

- Mumilimo ili buti bamazyali abamayi mobakonzya kubelekela antoomwe mu Namba a kwiiya kubala akulemba kwabana? -----  
-----  
-----

14. Musakene buti ambaakani yakugwasya mwana a mulimo wakugwasya mwana amulimo ngwapegwa kucikolo? [\_\_\_\_\_]

1= Kunyina ambwesangene abuniinii, 2= ndisangene asyoonto, 3= ndisangene akati-kati, 4= Ndisangene kapati

15. Muyeeya kuti inga mulakonzya kumugwasya mwana kumulimo ngwapegwa wacikolo? [\_\_\_\_\_]

1= Hezumini abuniini, 2= Hezumini, 3=Ndazumina asyoonto, 4=Ndazumina, 5=Ndazumina cakusinizya

- Ndugwasyo luli buti ndomukonzya kupa kumwana wanu kwacecino ciindi? -----  
-----  
-----

#### **Mulimo wakubelekela anganda**

16. Mulimvwa buti kumakani azyiindi mwana nzyaleta mulimo kuti agwasyigwe? [\_\_\_\_\_]

1= Heli bwini, 2= Kunyina, 3= Takuzulide, 4= Mpansaizi, 5= caindilila,

17. Bamayi balandigwasya mbondeede kugwasya mwana kujatikizya mulimo ngwapegwa kucikolo wakubeleka amunzi? [\_\_\_\_\_]

1= Ndasinizya kukaka, 2= Ndakakak/hezumini, 3= Ndazumina asyoonto, 4= Ndazumina, 5=Ndazumina cakusinizya

- Ndugwasyo luli buti ndomwatambula kuzwa kuli bamayi mumyezi yotatwe yainda? -----  
-----  
-----

18. Zyiindi zyangaye mumwezi nomugwasya mwana kumilimo yakucikolo wakubelekela anganda? [\_\_\_\_\_]

1= taakwe, 2= ciindi comwe amvwiki, 3= kwiinda ciindi comwe amvwiki, 4= kwiinda ciindi comwe amwezi

- Amupandulule buyumu-yumu mbomwajana mukugwasya mwana wanu kumilimo yakubelekela ang'anda. -----  
-----  
-----



19. Ino mutola ciindi cilamfwu buti kugwasya mwana kumulimo wakubelekela anganda? [\_\_\_\_\_]

1=taakwe, 2= tunzunuzumina 10-20 3= tunzunuzumina 30-40, 4= tunzunuzumina 50-60, 5= kwiinda woola lyomwe.

- Mbuyumu-yumu nzi mbomwajana kumakani aciindi cakugwasya mwana kumulimo yakucikolo? -----  
-----

20. Zinji buti zyiindi nomuteelela mwana wanu kabala? [\_\_\_\_\_]

1= taakwe, 2=ciindi comwe amvwiki, 3= zyiindi zyobilo amvwiki, 4= zyindi zytatwe amvwiki, 5= kwiinda zyiindi zyone amvwiki

- Naa tiicakacitika mapenzi nzi ngomwakajana? -----  
-----

21. Zinji buti zyiindi nomubamaba maccililanwa amilimo yaanganda amwana wanu? [\_\_\_\_\_]

1= taakwe, 2= amvwiki, 3= zyiindi zyobilo mumvwiki, 4= zyiindi zytatwe naa zyone amwezi

#### **KUKWABANA KWABAMAZYALI ACIKOLO**

22. Zinji buti zyiindi nzyomwambaula abamayi kukaambo kakupegwa mulimo kubana kuti babelekele amunzi? [\_\_\_\_\_]

1= Kwiina notwambaula, 2= Abuzuba, 3=Amwiki, 4= Amwezi, 5= Ateemu, 6= Amwaka

- Naa mulakwabana cimugwasya buti kulwiiyo lwamwana? -----  
-----

23. Hena mulimvwa kuzulila kweendelana ambomukwabana acikolo? [\_\_\_\_\_]

1= Hezumini kapati, 2=Hezumini, 3= Ndazumina asyoonto, 4= Ndazumina,5= Ndazumina cakusinizya

- Mwalombwa kuti mupe muzeezo kukukwabana kwabamazyali abamayi mbokunga kwasumpulwa? -----  
-----

24. Naa tamuzulide, muyeeya kuti inga kwacitwa buti kutegwa kamukwabana kabotu? Mupandulule.

25. Zinji buti zyiindi nomulanga bubelesi naa lusumpuko lwamwana kucikolo amwezi?

[\_\_\_\_\_]

1= taakwe, 2= comwe, 3= zyobilo, 4= kwiinda zyiindi zgotatwe

- Ino kuzyiba mwana mbacita naa mbapasa kucikolo kumugwasya buti mulwiiyo lwamwana? -----  
-----

26. Nzinji buti zyiindi nomwakajanika mumiswaangano yaba mayi aba mazyali

mumyaka yone yainda? [\_\_\_\_\_]

1= taakwe, 2= comwe, 3= zyobilo, 4= zgotatwe, 5= kwiinda ali zyone

27. Naa tiimwakacikonzya, mujisi bupanduluzi nzi?

28. Zinji buti zyiindi nomukulwaizya mwana kumulimo wakucikolo? [\_\_\_\_\_]

1= taakwe, 2= comwe amvwiki, 3= zyobilo amvwiki, 4= zgotatwe amvwiki, 5=

kwiinda zyiindi zyone amvwiki

- Ino nkuyumya-yumya kuli buti nkomupa kumwana wanu? -----  
-----  
-----

29. Zinji buti zyiindi nomubuzya bamayi kumakani amulimo wamwana kucikolo?

[\_\_\_\_\_]

1= taakwe, 2= comwe, 3= zgotatwe, 4= kwiinda zyiindi zgotatwe amvwiki

- Naa kuli bubotu mbomwajana, mbubotu nzi? -----  
-----  
-----

30. Hena muyeeya kuti kulizulide? [\_\_\_\_\_]

1= ndazumina, 2= peepe

31. Zinji buti zyiindi bamayi nobamwaambila bubelesi bwamwana wanu kucikolo?

[\_\_\_\_\_]

1= taakwe, 2= ciindi comwe amvwiki, 3= amwezi, 4= ateemu

32. Ino oku bakucita buti? Amupandulule.

33. Ino mulimvwa kuzulila buti amakani aaya? Amupandulule.

### ZYILENGWA LEZA NAA ZYINTU ZYIJANIKA AMUNZI

34. Zilengwaleza zilakonzya kugwasyilizya bamazyali kukupa malailile kumulimo

yakwiiya kubala a namba? [\_\_\_\_\_]

1= Ndakaka cakusinizya, 2= Ndakaka/hezumini, 3= Ndazumina asyoonto, 4= Ndazumina, 5= Ndazumina cakusinizya

- Amupandulule zyilengwaleza mbozyamugwasya kumilimo yamwana yakucikolo mu Namba akwiiya kubala akulemba. -----  
-----  
-----

35. Zinji buti zyiindi nomubelesya zyilengwa leza azimwi zintu zijanika amunzi kugwasyilizya bana Kwiiya kubala a namba? [\_\_\_\_\_]

1= Taakwe, 2= Zyiindi zisyooonto, 3= zimwi zyiindi, 4= Bunji bwazyiindi

36. Zinji buti zyiindi nomubelesya tusamu kukubalila mumulimo wa namba? [\_\_\_\_\_]

1= abuzuba, 2= amvwiki, 3= zyiindi zyobilo mumvwiki, 4= zyiindi zyotatwe naa zyone amvwiki, 5= taakwe

- Nzibelesyo nzi zyimbi nzyomwaiya mukugwasya mwana wanu kumilimo yakucikolo mu Namba a kwiiya kubala akulemba? -----  
-----  
-----

37. Akati kazyintu zyijanika mubusena bwana zyintu nzi nzyomubelesya kugwasyilizya bana kumulimo wakucikolo? [\_\_\_\_\_]

38. Zinji buti zyiindi nomwaanina mwana mumwezi? [\_\_\_\_\_]

1=Taakwe, 2= amvwiki, 3= zyiindi zyobilo mumvwiki, 4= zyiindi zyotatwe naa zyone amvwiki

## **Appendix C: Interview questions for parents**

1. Is there any plan made by the school aimed at educating how parents can be involved in the education activities of their children?
  - Could you say more about partnership between parents and teachers at Muchenje Basic School?
2. Is it important for teachers and parents to work together in the educational activities of the learners?
  - If so, explain how important it is.
  - What programmes have been put in place by the school towards the performance of learners?
3. How is communication between parents and the school at Muchenje Primary School?
  - What measures have been put in place to make sure the information concerning the academic performance of the learners' flow regularly?
  - What type/form of communication has been effective at this school?
4. Can you tell me about how you have helped your child with homework?
  - Before the workshop
  - After the workshop
  - What are some of the challenges you are facing in helping your child with homework?
5. Tell me more about how you used local resources in the education of your child?
  - Before the workshop
  - After the workshop
  - Do you have examples of how they have helped you in your child's learning at home especially in Math and Chitonga?
  - Could you list some of the local resources you have learnt in the workshop?
6. What new knowledge have you gained from the workshop?
  - Would you give suggestions on how the workshop could be improved given a chance to have another one?

***Thank you for your cooperation.***

## **Appendix D: Focus group discussion guide for learners**

1. How do you look at the importance of working with parents in your school work?
2. Tell me more about homework.
  - Do you have problems in doing homework?
  - How are your parents involved in homework?
  - Apart from your parents, who helps you in school work/homework?
3. What kind of help would you need from your;
  - Parents?
  - Teachers?
4. How often do your parents check homework?
5. How was the examination?
6. What new knowledge have you gained?

*Thank you for your cooperation.*

## Appendix E: Research budget

Item	Unit cost	Quantity	Amount (ZMK)
Transport			
• researcher	2,000	1	2,000
• research trainees (parents & teachers)	500	2	1,000
Pilot study, interpretation of questionnaires, data collection	2,000	1	2,000
Communication	800	1	800
Photocopying	500	1	500
Research materials			
• Envelopes	5	30	150
• Toner	550	2	1,100
• Reams of paper	50	4	200
Training materials			
• Note books	12	20	140
• Pens	60	1 box	60
• Flip charts	25	5	115
• Manila paper	5	15	65
• Small exercise books	2	30	60
• Bostick	50	3	150
• Markers			
Food for participants	500	1	500
Typing and printing	500	1	500
Binding	80	4	3,200
			12,540
Contingency amount@10%			1,254
TOTAL			13,794

## **Appendix F: Application letter to translate research instruments**

Bwacha Basic School,  
C/O DEBS,  
P.O.Box 620132,  
KALOMO.

28<sup>th</sup> October, 2015

THE CHAIRPERSON,  
Humanities and Social Sciences Research Ethics Committee  
Dear Sir/Madam,

RE: PERMISSION TO TRANSLATE THE QUESTIONNAIRES, INTERVIEWS,  
PARTICIPANT INFORMATION SHEET, CONSENT AND ASSENT FORMS.

I Simweleba, H. Never a graduate student under MA in Child and Adolescent Psychology intend to conduct a research in Kalomo district, Southern Province. The title of my research is **“The Influence of Parental Involvement on Grade four Primary School Learners’ Academic Performance in Math and Literacy in Kalomo district”**.

In order to build a good relationship between me and the participants, i am asking for permission to translate the above mentioned forms from English to Chitonga. This will enable the participants to get all the information clearly in order for me to proceed with this research.

Your consideration would be greatly appreciated.

Yours sincerely

Simweleba H. Never.

**Appendix G: Translated Assent Form (Tonga version)**

**CIZUMINANO CABAKUBUSYI BATAINDILILI MYAKA KKUMI YOSANWE AKOMWE**

MUTWE WABUVWUNTAUZI: Bukwelelezi Bwabazyali Mukwiiya Kubala Akulemba alimwi a Namba: Kuzwa Muzikolo Zyisiyene-siyene Mucilikiti ca Kalomo.

Basikwiingula babone kuti baingula pepa lyaonse lwabo beni. Amutondeeze bwiinguzi kwenu kwiinda mukweenga keengo akabala nkomwasala.

1. Hena mwabala akuteelela twaambo mupepa eeli? Inzya/peepe
2. Hena mulateelela buvwuntauzi oobu alimwi sena mulayanda kutola lubazu? Inzya/peepe
3. Hena mulaamubuzyo kujatikizya buvwuntauzi? Inzya/peepe
4. Hena muvwuntauzi waingula mibuzyo yako yoonse? Inzya/peepe
5. Hena ulateelela kuti inga waleka kuba wabamwi bavwuntauzigwa kufumbwa ciindi? Inzya/peepe

Naa ulazumina kutola lubazu mubuvwuntauzi oobu, amulembe ansi aawa:

Kusimba/kusaina -----

Izina (mumabala mapati) -----

Buzuba -----

(sikubuzigwa)

Ndapandulula kabotu-kabotu kuli sikubuzigwa mpoona walitondeezya kuyandisisya kuti atole lubazu awalo.

Kusimba -----

Izina (mumabala mapati) -----

Buzuba -----

(sikuvwuntauzya)



## **Appendix H: Written assent form**

Young People (<16 years)

### **Title of Research: The Influence of Parental Involvement on Primary School Learners' Academic Performance in Math and Literacy in Kalomo district.**

The participant should complete the whole of the sheet himself/herself, please circle your answer.

1. Have you read and understood the information sheet? YES/ NO
2. Do you understand this research study and are you willing to take part in it? YES/NO
3. Do you have any questions about the research? YES/NO
4. Did the researcher answer all your questions? YES/NO
5. Do you understand that you can stop being a part of the study at any time? YES/ NO

If you agree to take part in the study, please sign below:

**Signature:** \_\_\_\_\_

**Name (In Block Letters):** \_\_\_\_\_

**Date:** \_\_\_\_\_

**(Participant)**

I have explained the study to the above participant and he/she has indicated his/her willingness to participate.

**Signature:** \_\_\_\_\_

**Name (In Block Letters):** \_\_\_\_\_

**Date:** \_\_\_\_\_

**(Researcher)**

## Appendix I: Grade four Chitonga test



### MINISTRY OF GENERAL EDUCATION GRADE FOUR TEST - 2016 CHITONGA

CIINDI : WOOLA LYOMWE

ZYINA : .....

CIKOLO: .....

Malailile:

- 1 Kuli zyibeela zyotatwe mupepa oomu.
- 2 Ingula mibuzyo yoonse kwiinda mukusala bwiinguzi bomwe.

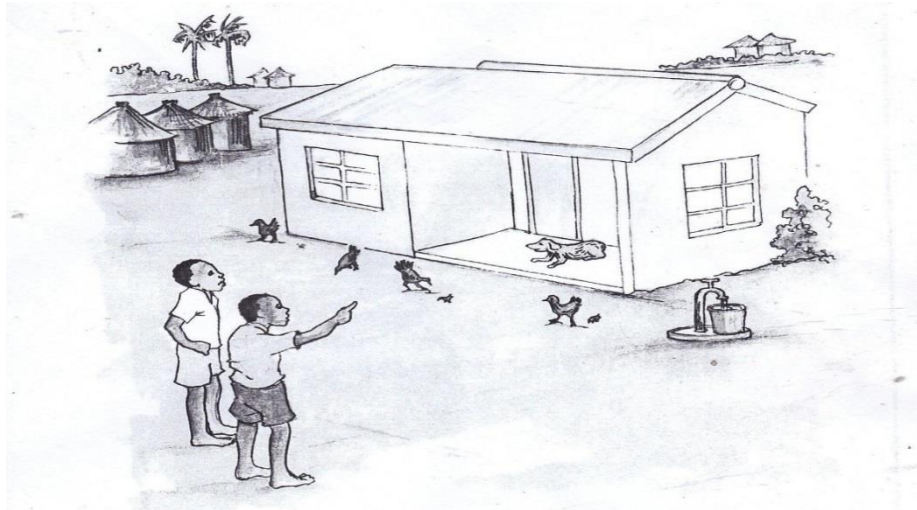
CIBALO CAKUTAANGUNA  
KWAANA

#### **Bala kaano wamana wiingule mibuzyo iccilila.**

Kwakali basankwa bobilo bakali kwiiya ku Lubanze Pulaimali. Umwi wakali Matimba mpoona umwi wakali Bongo.

Basankwa aba boonse bakazyalilwa mucisi cakali kutegwa Bulaya mobakakomenena pele bazyaliba ba Bongo bakali kukkala kucisi cakali kwitwa kuti Moongole alimwi nkobakazyalilwa. Bakamusiya Bongo abazyali ba Matimba kutegwa amanizye lwiiyo lwakwe lwamatalikilo. Bakajokela kucisi cokwabo nibakaleka milimo. Kuciindi eci Bongo wakali kwiiya mubbuku lya Giledi 3 antoomwe a Matimba. Aaba bana bakali kukkala kabotu kakunyin akutongaukana, alimwi bakalijisi bulemu kubantu boonse.

Muzyiindi zyakulyookezya Bongo wakali kunga cimwi ciindi waunka kuyoobona bazyali bakwe. Matimba wakali kumupya moyo kuti awalo bumwi buzuba akabone kucisi kukkala Bongo. Nibakamanizya kulemba musunko wa Giledi 7, Bongo wakayeeya kuti aukile limwi kubazyali bakwe. Matimba awalo wakaunka a Bongo kuya kweendeenda ku Moongole.



Nibakasika kwabo Bongo, Matimba wakagambwa kubona kuti amunzi kwali maanda amalaiti mbuli mudolopo. Alimwi meenda bakali kuteka mupompi. Matimba wakati, “Bongo wakali kundicenga kuti bazyali bako ayebo bakkala muminzi. Bongo wakati, peepe omuno muminzi mbubonya mbuli kwanu”. Matimba wakajokela kwabo kumwi kayeeya kutegwa akwalo kwabo kubote mbuli kwabo Bongo.

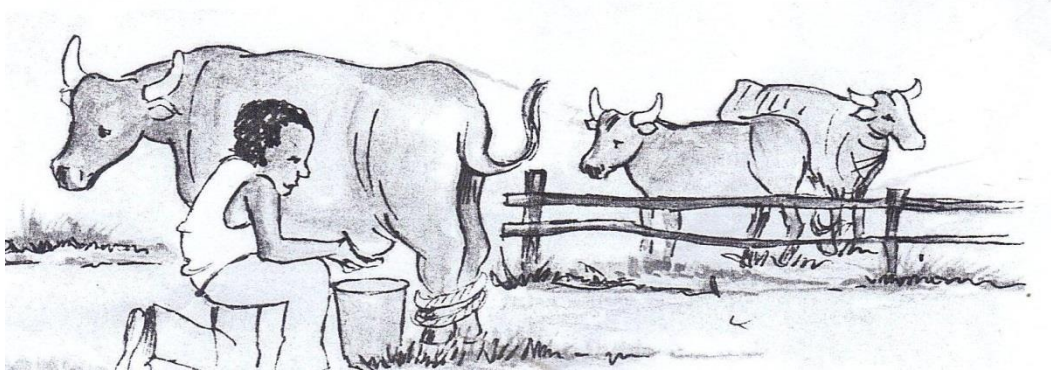
- 1 Bongo a Matimba bakali kwiiya ku Lubanze ...
- 2 Wakali kwiitwa buti munzi ngobakali kukkala bazyali ba Bongo?
  - A Mongol
  - B Mongoli
  - C Moongole
  - D Moongola
- 3 Matimba wakajokela kwabo kumwi ... mbwakonzya kusumpula kwabo.
  - A kayoya
  - B kayita
  - C kayusa
  - D kayeeya
- 4 Ino **kutatongaukana** caamba nzi mucibalo omu?
  - A kulya kabotu
  - B kusama kabotu
  - C Kukkala kabotu
  - D Kusama kabotu
- 5 Nkuli nkobateka meenda bunji bwabantu muminzi ...
  - A ?
  - B .
  - C ;
  - D !
- 6 Ciindi cakulyookezya Bongo wakali kwiinka ku ... bakwe.
- 7 Cilayandika kukukula lubuwa ...
  - A amwaka.
  - B amwezi.
  - C abuzuba.
  - D ansondo.

### **CIBALO CABILI**

Bamwi bantu bayeeya kuti banyama tabeelede kubambwa. Bayeeya kuti banyama beelede biyo kuumwa akujaigwa.

Banyama balatugwasya munzila zyaandeene. Umwi munyama utugwasya kapati ningombe, tulaibelesya kulimya. Kaindi kwakali kulima biyo basune, pele sunu ampwizyi zyilalima. Bunji bwa ngombe zyakamana kufwa abulwazi bwadeenkete. Aboobo bantu sunu balalimya ampwizyi.

Kunze kwakulima ngombe tulaikama mukupa. Mpwizyi ilatupa mukupa ngotujika ceele naa kacese naa ngotusasika kuti abe mabisi. Mabisi tulabikka muceele amusozya.



Alimwi ng'ombe ilatupa nyama njotulya. Acalo cikutu cang'ombe cilabeleka kupanga mabbusu ngotusama amabeeke ngotunyamwida zyintu mulweendo.

- 8 ..... ngo munyama ngobabelesya maningi kulimya muminzi.
- 9 Ncibeela nzi ca ngombe ncotubelesya kupanga mabeeke?
  - A meja
  - B mucila
  - C cikutu
  - D nsumba
- 10 Mabisi tulabikka ... a mumusozya.
  - A mucele
  - B mucila
  - C mucelo
  - D muceele
- 11 ... ngotubelesya kujika ceele na akacese
- 12 Ino notukama ngombe tubelesya nzi kwaanga?
  - A cisani
  - B mukwilo
  - C lukole
  - D mucila
- 13 Banyama ... munzila zyaandeene.
  - A balalwanisya
  - B balatugwasya
  - C balatuguma
  - D balatubusya
- 14 Mbulwazi nzi bujaya kapati ngombe?
  - A denkete
  - B ntutumaanzi
  - C sikalileke
  - D kcolela
- 15 Kaindi bakali kulimya biyo basune, ino ncinzi cimbi ncobalimya mazuba asunu?
  - A mbelele
  - B mpongo
  - C ngulube
  - D mpwizi

CIBALO CATATU

**Mazuba aansondo**

<b>BUZUBA</b>	<b>MILIMO</b>
Muvwulo	Kutilila cisyu
Bwabili	Kusobana zysisobano
Bwatatu	Kubala mabbuku aandeene
Bwane	Kubeza
Bwasanu	Kubeleka mumuunda
Mujibelo	Kubumba
Nsondo	Kuuma bbola lyamaanza



- 16 Kuli mazuba ongaye munsondo?  
 A osanwe  
 B lusele  
 C ciloba  
 D fwuka
- 17 Mbuzuba nzi buli akati ka Bwatatu?  
 A Muvwulo  
 B Nsondo  
 C Bwane  
 D Mujibelo
- 18 Ncinzi ncotubelesya kubumba?  
 A mabwe  
 B bulongo  
 C bufwumba  
 D museenga
- 19 Ncinzi ncobacita muli Bwasanu?  
 A kubumba  
 B kubalamabbuku  
 C Kubeza  
 D kubeleka mumuunda
- 20 Mbuzuba nzi nobabala tubbuku twaandeene?  
 A mu Nsondo  
 B mu Mujibelo  
 C muli Bwabili

- 21 D muli Bwatatu  
 Mu Nsondo basicikolo bauma bbola lyamaanza ...  
 A .  
 B ?  
 C !  
 D ,
- 22 Mbuzuba nzi nobabeza?  
 A muli Bwabili  
 B mu Nsondo  
 C muli Bwane  
 D muli Bwasanu
- 23 Mu Mujibelo bakabeleka ...
- 24 Ino tubelesya nzi kulima kumuunda?  
 A Sumo  
 B mbezo  
 C jamba  
 D keembe
- 25 Mu Muvwulo baama bakali ... cisyu.  
 A kutilila  
 B kutila  
 C Kulila  
 D kulula

## Appendix J: Grade four Mathematics test



### MINISTRY OF GENERAL EDUCATION GRADE FOUR TEST - 2016

**TIME:** 1 HOUR

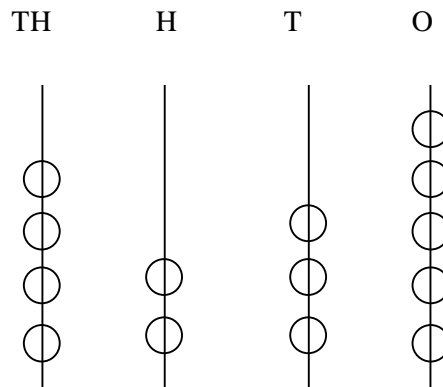
**NAME:** .....

**SCHOOL:** .....

#### INSTRUCTIONS

- 1 There are 30 questions in this paper.
- 2 Answer **all** the questions.

- 1 Write the number shown below



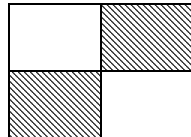
- (a) 4 253
  - (b) 5 324
  - (c) 4 235
  - (d) 2 435
- 2 Take away 200m from 900m
- (a) 1 100m
  - (b) 700m
  - (c) 500m
  - (d) 400m

- 3  $10 + 9 \square 19$
- (a)  $>$   
 (b)  $=$   
 (c)  $<$   
 (d)  $\in$
- 4 Mr. Moono collected 52 litres and 36 litres of milk in one day. How much milk does he have altogether?
- $\frac{2}{5} + \frac{1}{5} = \square$
- (a)  $\frac{4}{5}$   
 (b)  $\frac{1}{5}$   
 (c)  $\frac{3}{5}$   
 (d)  $\frac{5}{5}$
- 6 Muuka walked 15km to school and walked 10km further to Sianjina farm. How many km did he walk altogether?
- (a) 5km  
 (b) 20km  
 (c) 35km  
 (d) 25km
- 7 Write the following number in numeral Ten thousand
- (a) 10 000  
 (b) 1 000  
 (c) 100 000  
 (d) 100
- 8 There are 50 learners in a classroom. Each pupil had 6 balls. How many balls were in the classroom?
- (a) 506  
 (b) 300  
 (c) 306  
 (d) 30
- 9 How many 5litres of water are there in a 20litre container?
- (a) 5  
 (b) 10  
 (c) 4  
 (d) 8
- 10 Take away 130 tomatoes from 930 tomatoes.
- (a) 700  
 (b) 1 060  
 (c) 800  
 (d) 860



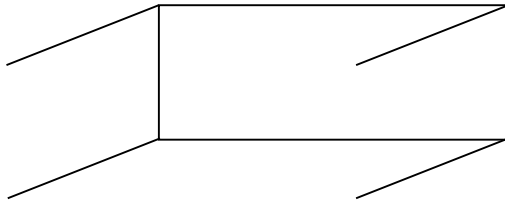
- 11 Complete the following number. 9 782 = 9 thousands + 7 hundreds + ... tens + 2 ones.
- 12 Fill in the missing number 800, 700, 600, ..., 400
- 13 There were 5 678kg of maize harvested in a field. 3 214kg was sold. How much maize remained?
- (a) 2 446kg  
 (b) 6 424kg  
 (c) 2 464kg  
 (d) 4 642kg
- 14 Which of the following shapes has three sides?
- (a) triangle  
 (b) circle  
 (c) square  
 (d) rectangle
- 15 5kg, 2kg and  $\frac{1}{2}$ kg of sugar on the balance is ...
- (a)  $7\frac{1}{2}$ kg.  
 (b) 7kg.  
 (c) 10kg.  
 (d)  $3\frac{1}{2}$  kg.

- 16 What part is shaded?



- (a)  $\frac{1}{3}$   
 (b)  $\frac{3}{1}$   
 (c)  $\frac{1}{4}$   
 (d)  $\frac{3}{4}$
- 17  $\frac{4}{7} - \frac{2}{7} = \square$
- (a)  $\frac{6}{7}$   
 (b)  $\frac{2}{7}$   
 (c)  $\frac{7}{2}$   
 (d)  $\frac{3}{7}$
- 18 How many quarters make one whole?
- (a) 3  
 (b) 2  
 (c) 4  
 (d) 1

19 What is the shape of this table?



- (a) square
- (b) circle
- (c) triangle
- (d) rectangle

20 Describe the set given below

$$\{13, 3\} \square \{3, 13, 23\}$$

- (a) <
- (b) >
- (c) =
- (d)  $\in$

21 The set of days in the week which start with letter B is a ...

- (a) sub set
- (b) equal set
- (c) empty set
- (d) equivalent set

22 A bag of fertilizer weighs 50kg. How many bags of fertilizer weigh 300kg?

- (a) 6
- (b) 350
- (c) 8
- (d) 5

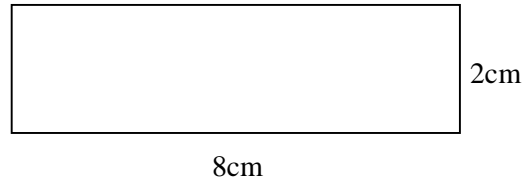
23 The mass of a bag of sweet potatoes is 60kg. Two people shared the sweet potatoes. How much did each one get?

- (a) 40kg
- (b) 25kg
- (c) 80kg
- (d) 30kg

24. The length of one stick is 8cm. What is the length of 4 sticks?

- (a) 12 cm
- (b) 2 cm
- (c) 32 cm
- (d) 36 cm

25



Find the area of this shape.

- (a) 10cm<sup>2</sup>
- (b) 4 cm<sup>2</sup>
- (c) 8 cm<sup>2</sup>
- (d) 16 cm<sup>2</sup>