

**AN ASSESSMENT OF HOME AND SCHOOL FACTORS ENHANCING MULTIPLE
INTELLIGENCE IN LEARNERS AT PRIMARY SCHOOL: A CASE OF THREE
SCHOOLS IN CHONGWE DISTRICT, ZAMBIA**

BY

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the Requirement for the Award of the Degree of Master of Education in
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DECLARATION

I, **Brian Mackson Mumba**, hereby solemnly declare that, this dissertation represents my own work and that the works of others have been appropriately acknowledged. I further declare that this dissertation has never been submitted for the award of any academic paper at this University or any other University

Signature.....

Date.....

CERTIFICATE OF APPROVAL

This dissertation by **Brian Mackson Mumba** is approved as partial fulfilment of the requirements for the award of the Degree of Master of Education in Educational Psychology of the University of Zambia.

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ABSTRACT

The study aimed at assessing school and home factors enhancing multiple intelligence in learners in three selected primary schools in Chongwe district. The objectives of study were to: determine how teachers' and headteachers' conceptualise multiple intelligence; ascertain the extent to which the Zambian primary curriculum incorporates multiple intelligence; to establish home and school factors that hinder multiple intelligence enhancement for learners at primary school; and to explore home and school factors that enhances multiple intelligence in learners at primary school.

The study employed a case study design. Data was collected using semi-structured interviews and document analysis. The total study sample was 25 respondents consisting of 12 teachers, 3 head teachers and 10 parents from three selected schools in Chongwe District. Data was analysed using thematic analysis.

Findings of the study revealed that: teachers did not understand the concept of multiple intelligence as the term was new to them; the primary school curriculum incorporates multiple intelligence through academic and arts subjects that support multiple intelligence theory; the schools under study lacked appropriate teaching and learning aids, had inadequate infrastructure to support subjects which are practical in nature; and large numbers in classrooms and absenteeism hindered multiple intelligence enhancement. The study further revealed that the use of learner centred methods, availability of appropriate teaching and learning materials and collaboration between parents and teachers were the best strategies to enhance multiple intelligence. In the home environment, multiple intelligence was hindered by inadequate recreational facilities and resources for parents to access books and equipment which can facilitate play and learning. Basing on the research findings, the study recommended that the Ministry of General (MOGE) should ensure that schools are provided with the appropriate teaching and learning resources. Parents and teachers should collaborate in order to enhance multiple intelligence in learners at primary school.

DEDICATION

I dedicate my work to my lovely wife Exiodah Mumba for her understanding and support during my master's studies.

To my dear children my daughter Chawezi Mumba and my son Themba Mumba who missed the love of the father as I was most of the time studying away from home.

Lastly, I dedicate this work to my father Mr. Mackson Mumba and my mother Mrs. Justina Kumwenda Mumba for their love and moral support during my studies.

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LIST OF TABLES

Table 4.1: Learning areas and time allocation Grades 1 to 4	37
Table 4.2 Learning areas and time allocation for grades 5 to 7	38
Table 4.3: Co-curricular learning pattern	39
Table 4.4: Recommended methods in the curriculum for teaching in primary schools	39

ACRONYMNS

ADL	Activities for Daily Living
CAPS	Curriculum and Assessment Policy Statement
CPD	Continuous Professional Development
CTS	Creative Technology Studies
HOD	Head of Department
ICT	Information Communication Technology
IEP	Individualised Education Programme
IQ	Intelligent Quotient
MESVTEE	Ministry of Education, Science, Vocational Training and Early Education
MoGE	Ministry of General Education
MoE	Ministry of Education
SAQMEQ	Southern and Eastern Africa Consortium for monitoring Education Quality
USA	United States of America
WW1	World War One
ZPD	Zonal of Proximal Development

TABLE OF CONTENTS

COPYRIGHT	i
DECLARATION.....	ii
CERTIFICATE OF APPROVAL.....	iii
ABSTRACT.....	iv
DEDICATION.....	v
ACKNOWLEDGEMENTS	vi
LIST OF TABLES	vii
ACRONYMNS	viii
LIST OF APPENDICES	xii
CHAPTER ONE: INTRODUCTION	1
1.1 Overview	1
1.2 Background of study	1
1.3 Statement of the problem	5
1.4 Purpose of Study	6
1.5 Objectives of the study	6
1.6 Research Questions	6
1.7 Significance of Study	6
1.8 Delimitation / Scope of the Study	7
1.9 Limitations of the Study	7
1.10 Definition of terms used in this study	7
1.11 Theoretical Framework	8
1.12 Summary	10
CHAPTER TWO: LITERATURE REVIEW.....	11
2.1 Overview	11
2.2 Gardener’ multiple intelligence theory	11
2.3 Global literature on multiple intelligence.....	15
2.4 Literature on Africa.....	21
2.5 Literature on Zambia.....	25
2.6 Summary	27

CHAPTER THREE: METHODOLOGY	28
3.1 Overview	28
3.2 Research Design.....	28
3.3 Study Site	28
3.5 Sample Size	29
3.6 Sampling Procedure	29
3.7 Research Instruments	30
3.7.1 Interviews.....	30
3.7.2 Document reviews and analysis guide	30
3.8 Procedure for data collection.....	31
3.9 Data Analysis	31
3.10 Ethical Consideration	33
3.11 Validity.....	33
3.12 Summary	33
 CHAPTER FOUR: PRESENTATION OF RESEACH FINDINGS	 34
4.1 Overview	34
4.2 Teachers and Headteachers conceptualization of multiple intelligence.....	34
4.3 Extent to which the primary curriculum incorporates multiple intelligence.....	37
4.3.1 The key competences to be achieved in the primary curriculum in the Education Curriculum Framework 2013 are the following.	37
4.3.2 Learning areas for lower primary, upper primary, Intellectually Impaired learners and co-curricular activities are presented below.....	37
4.3.3 Learning Areas for Learners with Intellectually Impaired Learners;	38
4.3.3 Methods recommended for use by teachers in their teaching in the “Teachers Curriculum Implementation Guide”.	39
4.3.4 Views from Teachers, headteachers and Parents on the extent to which the primary curriculum incorporates multiple intelligence.	41
4.4 School and home factors that enhance multiple intelligence	42
4.4.1 Teachers and Headteachers views.....	42
4.4.2 Parents’ views	47

4.5 School and home factors hindering enhancement of multiple intelligence	49
4.5.1 Views from teachers and headteachers	49
4.5.2 Parents Views.....	51
4.6 Summary	53
CHAPTER FIVE: DISCUSSION OF THE RESEARCH FINDINGS.....	55
5.1 Overview	55
5.2 Teachers understanding of the concept multiple intelligence	55
5.3 The extent to which the Primary Curriculum incorporates multiple intelligence.	57
5.4 Factors enhancing multiple intelligence in learners at primary schools	60
5.5 Hindrances to multiple intelligence enhancement.	64
5.6 Summary	67
CHAPTER SIX: CONCLUSION AND RECOMMENDATION.....	68
6.1 Overview	68
6.2 Conclusion.....	68
6.3 Recommendations	68
6.4 Recommendation for future research	69
REFERENCES.....	70
APPENDICES.....	75

LIST OF APPENDICES

Appendix 1: Interview guide for Headteachers.....	75
Appendix 2: Interview guide for Teachers.....	76
Appendix 3: Interview guide for parents.....	77
Appendix 4: Document Analysis Checklist	78
Appendix 5: Consent Form	79

CHAPTER ONE: INTRODUCTION

1.1 Overview

This chapter presents the background of the study, research problem and purpose of study. The research objectives, research questions, significance of the study, delimitation and operational definitions used in the study. Further, ethical considerations and theoretical framework of the study have also been covered.

1.2 Background of study

“Each classroom in a school is an intelligence garden. While plants look the same from a distance, each grows in a different way and produces fruits” (Temur, 2007: 81).

MoE (1996) recognizes that each child is unique with his own personality fashioned in the family and community backgrounds. Hence, MESVTEE (2013:2)’s policy stipulates that “the aim of education is to promote the full and well-rounded development of the physical, intellectual, social, affective, moral and spiritual qualities of a learner.” This task has been given to each and every school to provide the necessary quality education which will meet learners’ abilities and interests. MoE (2010) states that the Primary Education Sub-sector offers schooling in Grades 1 to 7 and provides for children aged seven (7) to fifteen (13) years. The provision of basic education to children provides an environment that promotes desirable attitudes, values and behavioural change. In this respect the Ministry has for the past decades put emphasis on basic education to enable eligible children to access education at this level and ensured that those who entered the school system were retained in school (Zaken, 2008). This is also on the premise that basic education lays firm ground upon which all other levels are built. There are four management agencies of basic schools in Zambia: Government, Private, Grant-Aided and Community Schools (MoE, 2010).

According to MoE (1996) good quality education brings many personal, social, economic and educational benefits. It enables children to realize full potential as they develop into complete and integral persons and are prepared for adult life. It promotes desirable attitudes in learners, values and ways of behaviour and opens the minds of learners, this is true for primary education as it lays the base on which all further education must build. However, against the several major achievements that have been made in the area of access and participation, there is now a call to

ensure that education provided to all learners is of acceptable quality and relevant to their individual and societal needs (MESVETEE, 2013). Frameworks also need to be put in place where defined parameters are agreed on with a wider spectrum of stakeholder such as what could be defined as acceptable quality of education, relevance and effective schools to new ideas and methods, (MoE, 1996)

The national assessment carried out by Examinations Council of Zambia in 2007, show that 70 percent of the grade 5 pupils do not attain the minimum performance level in English and Mathematics, (MoE, 2010). Similarly, assessment conducted by Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) shows that Zambian learners are performing at levels far lower than their regional counterparts. In 2007, for instance, Zambia's learners scored an average of 434 in reading and 435 in mathematics on the SACMEQ assessment, well below the international mean of 500 (MESVTEE, 2015). The poor performance during the middle stage of primary education indicates that learners are not grasping key foundational skills in the early grades, (MESVTEE, 2015). This performance has remained constant over the years. Zaken (2008) argues that this reflects a weakness in the development of Zambian education sector. Furthermore, MoE (2010) the primary subsector has high repetition, high dropouts and low completion rates. In the period between 2005 and 2009 repetition rates for grades 1 to 9 fluctuated from 6.4 percent in 2005 to 2.4 percent in 2009. There are many factors leading to the scenario such as early marriages, high poverty levels, management issues which affect the quality of education in schools, (MoE, 2010).

MESVTEE (2015) indicates that educational policy in development to follow after the “*1996 Educating Our Future*” will also focus on addressing the needs of those who will not be absorbed in the formal educational system after Grade 9. It is against this background that every learner in grade seven will need to automatically proceed to grade eight without being subjected to examinations as a mode of selection. It is imperative that learner's abilities are enhanced in the primary schools so that even if they drop out of school they will still achieve their potential in their abilities (MESVTEE, 2015). Therefore, teaching needs to be tailored in such a way that it will enhance learners multiple intelligence by recognizing learners' unique abilities, (McFarlane, 2011). Furthermore, Levy (2008) argues that teachers need to embrace the different learning abilities in learners by adapting their teaching practices to better meet the interests, personalities

and learning styles of their student. Petty (2009) has stated that ability can be learned and can be taught up to the very highest level of achievement.

In order for learning to encompass children's individual abilities and intelligences, Gardner (1991) argues that education must go beyond enhancing mathematical and linguistic intelligences. Therefore, teaching in schools must focus on what learners can do best for them to realize their full potential. Plutonic (2002) brings out seven of Gardner's intelligences which include linguistic intelligence, musical intelligence, logical mathematical intelligence, spatial intelligence, body movement intelligence, intelligence to understand oneself (interpersonal) and the intelligence to understand others (intrapersonal). Gardner (1999) lately, two more intelligences have been added, these are naturalistic and existential intelligences. However, existential intelligence is still being investigated. Armstrong (2009) establishes that following the publication of the theory of multiple intelligence in (1983) educators, parents, and administrators have questioned traditional assessments of intelligence in American schools. This is because standardized tests in the public schools have been historically concerned with only two categories of intelligence, that is, aptitude verbal and mathematics (Gardener, 1983).

Spearman (1904) in human intelligence (2007) observes that intelligence based on standardized tests was advanced by Spearman, who believed that intelligence is determined by objective measuring. He proposed that how best an individual executes a given test was a determinant to the level of his or her intelligence. This view, unfortunately has made people who excel in music, sports, leadership and other arts related discipline to receive minor rewards because the education system has labelled them as less achievers compared to those who are outstanding in academic discipline such mathematics (Gardener,1983). Spearman (1904) also argue that intelligence and individual behaviour were generated by a single human and the brain which he called the 'g' factor, hence, believed in measuring intelligence quotient (IQ) to determine an individual's intelligence.

According to Binet and Simon (1916), in Alfred Binet (1908) developed a written test to measure the IQ of elementary school children in France. Later the United States of America (USA) Armed Forces began using the test with recruits in World War one (WW1). The test was used widely in schools and businesses to classify students and select employees, respectively. The Binet IQ Test and other tests which were developed later on basically measured two traditional cognitive ability dimensions that is

verbal/linguistic and mathematical/logical abilities which were thought to determine intelligence. While these two intelligences are important to our ability to learn, they are not all inclusive. However, the multiple intelligence theory proposes that other than verbal and linguistic abilities the human beings possess six other intelligence areas (Bartholomew, 2004).

Zuzne (1957) observes that when most people speak about intelligence, they are generally referring to cognitive ability. The ancient Greek philosophers such as Plato, Aristotle and Augustine who lived in the sixth century B.C. (Before Christ) already made contributions to defining intelligence. Plato said that intelligence is the ability to learn, while Aristotle as ability to receive knowledge using the five senses that an individual possess. Augustine was of the opinion that intelligence is something good people possess that would determine a person's quality or value for his community. Sternberg (2007) is of the view that intelligences comprised of analytical, practical and creative aspects of the mind. He notes that Intelligent Quotient (IQ) measures a component of analytical intelligence while the practical and creative abilities are dependent on one' ability to solve problems or to adapt to certain environments.

Children can improve their intelligence through the skilled intervention of teachers, this belief is shared by psychologists such as Sternberg, Vygotsky and Feuerstein for over 50 years and thereby raising the hope for every child to improve or change his or her intelligence. Intelligence is not a fixed state of the mind but a cognitively modifiable concept (Smith, 2003). In general, however, psychologists agree that the term intelligence describes a person's ability to learn and remember information to recognize concepts and their relations and apply the information to their own behaviour in an adaptive way, (Neisser, Boodoo, Bouchard, Boykin, Brody, Ceci, Halpen, Loehlin, Perloff, Sternberg, Urbana, 1996).

Armstrong (2009) clarifies that virtually everyone has the capacity to develop all eight intelligences to a reasonable high level of performance if given the appropriate encouragement, enrichment and instruction. Armstrong (2000) recommends that the best way to asses multiple intelligence is through a thorough appraisal of an individual's performance in different assignments, activities and experiences with each intelligence. Thus, there is need to expose learners to different subjects, methodologies and materials found in the local setting to enhance multiple intelligence in learners. This will not only help learners to progress in their academic life

but it will also enable children to become skilled athletes, leaders, artisans, musicians and other professions and vocations which children can be gifted and talented at.

Krechevsky (1998) points out that intelligences are not fixed rather they can be enhanced by an environment rich in materials which are stimulating in nature by providing child centered activities. Hence multiple intelligence success requires the use of strategies that will cover all the eight intelligence areas. Bernard and Solchany (2002) shows that parents especially mothers can provide positive interactions with their children to promote positive development in intelligence and attachment. Further, Armstrong (2009) explains that parents are experts in their children multiple intelligences due to the fact that they have the opportunity to see the child learn and grow under a broad spectrum of circumstances encompassing all eight intelligences.

In order for multiple intelligence to be practical there is need for support from parents and the communities, (Armstrong, 2009). Hessel (2005) states that when parents and teachers work together there is more meaningful education. Parents and teacher's beliefs, perceptions and experience are strong determinants in children's learning both in the home and in the school. Therefore, for learners to achieve full potential in their abilities parents and teachers are cardinal in ensuring that they explore strategies that will enhance multiple intelligence in learners. It is against this background that the researcher explored home and school factors enhancing multiple intelligence in learners at primary school.

1.3 Statement of the problem

Studies show that children's exposure to a variety of learning experiences both in the home and in the school tends to be healthier over the long run, and eventually finds their niche among the intelligences (Bowman, 1996). In addition Hine (1998) has shown that multiple intelligence theory as a useful model in coming up with a well-established system of education for nurturing and teaching children in identifying their strengths and weaknesses in a classroom setting. In Zambia, Teachers dwell much on linguistic and mathematical abilities to measure intelligence whilst overlooking other abilities that comprise multiple intelligence. As a result learners who do not perform well in linguistic and mathematical abilities are labelled as being less achievers. This study, therefore, seeks to assess home and school factors that enhances multiple intelligence.

1.4 Purpose of Study

The purpose of the study was to investigate factors which enhances multiple intelligence in learners at primary schools in Chongwe District, with a view to finding factors which can be used in the home and primary schools to enhance multiple intelligence.

1.5 Objectives of the study

This study was guided by the following objectives:

1. To determine teachers' conceptualization of multiple intelligence
2. To ascertain the extent to which the Zambian primary curriculum incorporates multiple intelligence.
3. To explore home and school factors that enhances multiple intelligence to learners at primary school.
4. To establish home and school factors that hinder multiple intelligence enhancement for learners at primary school.

1.6 Research Questions

This study sought to answer the following research questions:

1. How do teachers conceptualise multiple intelligence?
2. To what extent does the Zambian primary school curriculum incorporate multiple intelligence?
3. Which home and school factors enhance multiple intelligence for learners at primary school?
4. What school and home factors hinder multiple intelligence enhancement for learners at primary school?

1.7 Significance of Study

The study provides insights into the multiple intelligence which are important for every learner if they are to receive quality education through holistic learning. If parents and teachers appreciate and value the intelligences learners portray, learners may receive maximum support and encouragement. The findings may also help learners to value their individual differences and abilities which may enable them develop their abilities. The findings may also inform curriculum developers to incorporate multiple intelligence when designing a curriculum and tailor policies

which will value multiple intelligences that exist in the learners. Furthermore, the findings may stimulate further research especially that little research has been done in Zambia on multiple intelligence.

1.8 Delimitation / Scope of the Study

The study was confined to three primary schools in Chongwe district of Lusaka province. The study was restricted to teachers and parents who made the sample. This study was undertaken in Chongwe District in that the area was easily accessible to the researcher, hence, it was easy to meet respondent teachers and parents residing near the school. In addition, there has never been a study done in the area to assess the home and school factors enhancing multiple intelligence in learners at primary school.

1.9 Limitations of the Study

One of the limitation was the fear by respondents to be recorded during oral interview, this was a challenge as the researcher had difficulties to capture adequate information from such respondents. In order to collect data from such respondents, the researcher resorted to taking note of what the respondents were saying through writing the responses. However, writing the responses was a challenge as some words may have been omitted in the process, hence, the researcher may not have captured what was intended. Finally, another limitation is related to the unavailability of and access to adequate and relevant literature for review as little research has so far been done on multiple intelligence in Zambian context. The non-availability of literature on Zambian has an effect in the interpretation of findings, as the literature from other countries or regions may be difficult to be relied upon due to the fact that it is from a different environment which may not be applicable in the Zambian context.

1.10 Definition of terms used in this study

Intelligence: A person's ability to learn and remember information to recognise concepts and their relations and apply the information to their own behaviour in an adaptive way. , (Neisser, Boodoo, Bouchard, Boykin, Brody, Ceci, Halpen, Loehlin, Perloff, Sternberg, Urbana, 1996).

Multiple intelligence: A set of abilities, talents or mental skills that all individuals possess to a greater or lesser extent. (Gardener, 1983).

Primary school: A school for children from grade one to seven who are in the age range of between seven and thirteen years. (MoE, 2010).

Home: A house or an apartment where a person or people live as a family. (Oxford New Advanced Learners' Dictionary, 6th Edition).

Learner: A person who goes to school to acquire knowledge and skills. (Oxford New Advanced Learners' Dictionary, 6th Edition).

1.11 Theoretical Framework

The study utilized the Social Cultural Theory by Lev Vygotsky, Vygotsky (1978) contends that the fundamental role of social interaction in the development of cognition as he believes strongly that that community plays a central role in the process of making meaning. Children's understanding of the community plays an important role in helping them understand the world they are living in. McLeod (2014) argues that immediate environment in which the children grow up will influence their thinking and the decisions they make as they grow. Each immediate environment provides cultural tools to support learning. The psychological tools guide thought and behaviours. For instance, language is important to humans as it allows to establish social contact, influence others and guide their thinking and problem solving. Hence, Vygotsky (1978) believes much learning by children occurs through social interaction with mature peers who are adults involved in the child's life. The tutor must support the child's learning before the child can internalize and master the learning content through model behaviours and provision of verbal instructions to the child. The tutor in this case may be a teacher or a parent whom may seek to guide or regulate the child's performance or behaviour.

Vygotsky stressed the role of the Zonal of Proximal Development (ZPD) in helping children to solve problems independently or in isolation as they collaborate with others who are cognitively competent than them, (Munsaka and Matafwali, 2013). Fetsco and McClure (2005) defined the ZPD as the distance between what a learner can achieve alone in a domain and what same learner can achieve working with a more knowledgeable adults or peers. They contend that in tutorial approach learners interact with the more skilled peers or adults to perform a task that the learners cannot perform independently. Hence, the adults or more skilled peers who guide or support the performance of learners with the goal of helping them internalize important skills or strategies.

The ZPD is the zone in the area of exploration for which the learner requires help from parents or guardians and teachers to acquire knowledge or skill (Subban, 2006). The distance or zone defines an area of immediate potential for the learner, because what a learner can do with assistance will later be done independently without any assistance. The child cognitive growth is maximized if the child's interactions with peers and adults occurs within the ZPD.

According to Munsaka and Matafwali (2013) parents, caregivers and teachers need to provide scaffolding for children to enter ZPD, they go on to say that much scaffolding is provided in African context where learning is mostly through participation and observation. Scaffolding is the guidance rendered by more skilled learners. Research shows that children learn differently and therefore must be provided with opportunities to learn and gather information in variety of ways, (Subban, 2006). Therefore, initially, the assistance is provided by a more knowledgeable person then the learner attempts to work alone. The knowledge or concept becomes automatic through practice until the learner is confident and be able to apply the knowledge independently.

Fetso and McClure (2005) have provided the three steps involved in scaffolding. At first the adults or more skilled learners assume most of the responsibility for completing the task. For instance, they may model and explain what they are doing to the learners. Secondly, the learner and the adult who can be parents or teachers share responsibility for task completion. At this stage the adult usually relinquishes control to the learner so as to improve the skill. Thereafter, the learner takes full responsibility for completing the task. Therefore, the final step represents an achievement from a socially supported performance to independent performance.

According to McLeod (2014) Vygotsky emphasize the role of significant others, which refers to someone who has a better understanding or higher ability than the learner in tasks, process or concept. The knowledgeable others may be teachers, parents, caregivers or gadgets or machines which can help a learner achieve a particular task. Therefore, classrooms and homes can be viewed as communities or cultures which enhance learners skills and knowledge with the help of teachers and parents. Subban (2006) urges educators to vary their instructional strategies in order to provide each student with appropriate amount of support and guidance to suit ability levels of each and every learner in the classroom.

Therefore, the Social Cultural Theory is in conformity with home and school factors enhancing multiple intelligence in learners at primary school. Multiple intelligence theory contends that an

individual has eight intelligence areas but it depend to his or her ability in an area where one can achieve success. The role of teachers and parents is to help the child achieve success in his or her ability areas through ZPD and also by providing the role of significant others (Gupton, 2011). Teachers in schools and parents in homes being significant others have a task of improving learners multiple intelligence through ZPD and scaffolding, hence the relevance of the social cultural theory to the study.

1.12 Summary

The chapter started by presenting the background to the study, which discussed the education policy documents and the curriculum framework in trying to understand the policy of the Ministry of General Education in improving the quality of education and the challenges being faced. The background went on to look out at the justification by Howard Gardener and other psychologists on the need to enhance the intelligence of learners by teachers and parents. In addition, the chapter discussed the research problem under investigation and the purpose of the study. The research objectives, research questions, significance of the study, the theoretical framework, delimitations and operational definitions. The next chapter discusses the literature reviewed in this study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Overview

The previous chapter presented the introductory information to the study, including the background information to the study, statement of the problem, and the theoretical framework. This chapter focuses on the review of literature related to the study. Kombo and Tromp (2006) defines literature review as the written materials that a researcher has consulted to understand and investigate the research problem. Literature reviewed includes books, journals, dissertations, magazines and other sources that have a bearing on the study. Analysis of literature for this study was divided into four main categories, that is, discussion of Gardener's multiple intelligence theory, global, Africa and Zambia. Literature outside Africa is categorized as global literature and studies done in Africa was grouped as literature on Africa and finally literature on Zambia.

2.2 Gardener' multiple intelligence theory

Gardner (1983) defines multiple intelligence as a set of abilities, talents or mental skills that all individuals possess to a greater or lesser extent. In addition intelligence is defined as the ability to solve problems and generate new ideas in relation to one' environment. Hence, the theory is against the idea that intelligence can only be measured through intelligent quotient (IQ). Therefore, an individual's intelligence is the way he or she executes the given task and abilities in the areas he or she can excel.

Gardner developed the theory of multiple intelligence out of his curiosity and interest for arts and felt that the enhancement of artistic skills was in cognitive and developmental psychology, (Gardener, 1983). Hence, he developed interest in neuropsychology and wanted to understand how brain injury could despair one while leaving other functions operating normally. These experiences made him to realise that an individual has more than one intelligence area and came up with eight intelligence areas (Gardener, 1983). Gardener (1999) identifies eight intelligence areas as verbal or linguistic, logical or mathematics, musical, visual spatial and body kinesthetic. Other intelligence areas are interpersonal, intrapersonal and naturalistic intelligence. Hessel (2005) shows that multiple intelligence theory has a proven record of school excellence and many schools were using the theory for developing the curriculum in American schools by encouraging the strengths of students and teachers.

Gardner (1999) establishes that arts education presupposes two conditions, that is, the mind and the brain that is capable of meeting the arts and a supportive environment. All areas of human beings possess a number of intellectual potentials. Schools have for a long time encouraged the teaching of linguistic and verbal abilities, but other institutions and situations encourage the nurturance of six other intelligences. These are spatial, musical, naturalistic, body-kinesthetic, interpersonal and intrapersonal. Most cultures and certainly those that consider themselves to be highly civilized do not need special arguments for including the arts in their education. For instance, Chinese students will learn ink and brushing and the European children will learn the art and music of their country. Gardner (1999) argues that there exist several human intelligences, many educators are of the idea that we should nurture these intelligences in school. Armstrong (2009) postulates that arts education is important in that it helps learners to understand that they can improve other activities and that their heightened skill can give pleasure to themselves and others.

Gardner (1999) recommends to teachers for establishing the use of multiple intelligences in their teaching practice. He emphasizes that interested teachers to first read, study, and learn more about multiple intelligence theory and practices which others have used. Study groups with other teachers can be a good way to explore new ideas, compare results, and articulate questions and concerns. Visiting classrooms which already employ multiple intelligence practices and attending professional development conferences and seminars, and networking with other schools are other sources of ideas and practitioners (Gardner, 1999). He recommended that teachers then plan and launch activities and programs which emerge from their studies, including those developed by others and their own original ideas.

He also identified a set of conditions that are hospitable to MI theory (Gardner, 1999: 199). These include;

1. There is need for readiness, awareness, curiosity, and motivation in the faculty, parents and administrators. Faculty seminars and parent awareness nights are ways to begin to develop a sense of readiness. Teachers can then begin to build beliefs and practices that are aligned with the themes and spirit of multiple intelligences.
2. The second condition was the need to understand the child's culture, recognizing that new practices are most likely to emerge in settings that support diverse learners.

3. Third was a spirit of collaboration among stakeholders such as school administrators, teachers and parents. New approaches will be more successful when there are opportunities for formal and informal exchanges among practitioners. Exchanges are crucial once change has begun, because there are always problems to discuss and decisions to make.
4. Fourth, an atmosphere of choice within the school allows for meaningful options for curriculum and assessment of student learning. Options should make sense to students and larger community. The spirit of multiple intelligence teaching can be undone if the curriculum is too rigid or if assessment is too narrow.
5. Fifth, multiple intelligence should be treated as one of many tools which can be used as a means of fostering high-quality student work. Multiple intelligence approaches should be linked to generally accepted learner outcomes.
6. Finally, Gardner emphasizes the importance of the arts in school which needs a program rich in visual and musical arts, to adequately address the full range of intelligences.

Houston and Toma (2003) observes that many home schooling environments encompass several of the elements that Gardner's multiple intelligence theory considers crucial to the development of a child's full potential. Statistically, parents who tend to have more than one child, from the very beginning of a child's induction into a home-schooling family the environment is richly furnished with visual, auditory, and kinesthetic cues about life. In most home schools where there are older children learning, the exposure of the younger child to a wide variety of learning experiences is ultimately unmatched. It is like returning to the one-room schoolhouse where peer tutoring and cross-age tutoring were highly favoured, (Bowman, 1996).

While there are many approaches to home schooling, most of these approaches seem to view education as an interconnected array of subjects related to daily life, (Seehan, 2002). Rivero (2002) postulates one method in particular, called creative home schooling, tends to align its thinking with that of multiple intelligence enhancing environment. Creative home schooling is based on principles and an understanding of creative learning, divergent thinking, immersion learning, and self-directed learning. Rivero (2002) suggests creative home schooling offers parents a way to integrate the best of several home schooling approaches that meet their individual child's needs. The focus of learning in a creative home school is to allow the child to fulfill his or her human

potential rather than to educate for the next purely academic milestone, (Rivero, 2002). Creative home schooling offers parents opportunity to create a truly individualized education based on a firm theoretical foundation unique to their child's needs. By using the creative home schooling approach, a parent can then develop a curriculum built on the needs of his or her child, and involves an integration of multiple intelligence programme.

Gardner's (2004) strongly believes that all children have strengths. Teaching has mainly focused on the curriculum as planned and taught, to concentrate on helping students respond to the curriculum. However, rather than relying upon a linguistic filter and requiring students to show their grasp of skills and information, teachers using multiple intelligence can allow students to use their strengths to demonstrate what they have learned (Armstrong, 2009).

Gardener (1983) states different types of intelligences that are found in learners as follows:

- **Linguistic Intelligence** (word smart) refers to the ability to use words and language, both written and spoken. Such learners have highly developed auditory skills and are fluent speakers. They think in words rather than pictures. Their skills include listening, speaking, writing, storytelling, explaining and teaching.
- **Logical Intelligence** (logic smart) refers to the ability to reason, apply logic and work with numbers. Such learners think conceptually in logical and numerical patterns, making connections between pieces of information. Their skills include problem solving, classifying and categorising information, thinking logically, questioning, carrying out investigations, performing mathematical calculations and working with geometric shapes
- **Visual-spatial Intelligence** (picture smart) refers to the ability to perceive the visual. Such learners tend to think in pictures and need to create vivid mental images to retain information. Their skills include understanding charts and graphs, sketching, painting, creating visual images and constructing, fixing, and designing practical objects.
- **Musical Intelligence** (music smart) refers to the ability to produce and appreciate music. These musically inclined learners think in sounds, rhythms and patterns. They immediately respond to music either appreciating or criticising what they hear. Their skills include singing, playing musical instruments, recognising sounds and tonal patterns, composing music and remembering melodies.

- **Bodily Kinaesthetic Intelligence** (body smart) refers to the ability to control body movements and handle objects skillfully. Such learners express themselves best through movement. They have a good sense of balance and hand-eye coordination. Through interacting with the space around them, they are able to remember and process information. Their skills include dancing, physical coordination, sports, crafts, acting, miming and using their hands to create or build
- **Interpersonal Intelligence** (people smart) refers to the ability to relate to and understand other people. These learners are able to sense feelings, intentions and motivations and are adept at recognising non-verbal language, for example body language. Their skills include seeing things from other perspectives, listening, using empathy, understanding other people's moods and feelings and communicating both verbally and non-verbally
- **Intrapersonal Intelligence** (self-smart) refers to the ability to understand ourselves, who we are, and what makes us the way that we are. Such learners are able to recognise their own strengths and weaknesses and have a capacity for self-analysis, awareness of their inner feelings, desires and dreams, evaluating their thinking patterns and reasoning with themselves.
- **Naturalist Intelligence** refers to ability to understand natural environment, appreciate plants, animals and nature resources. It alerts learners about human activities that affect the environment and how to interact with the natural environment. They have the ability to categorize and recognize individual examples as belonging to a group, can map and chart relationship. Naturalist Intelligence can be assessed by engaging learners in field trips, outdoor activities, solving environmental problems, planting trees, their interaction with animals, draw or photograph natural objects, describe geographical sites and features, identify and classify birds/trees/insects and write about caring for plants and animals.

2.3 Global literature on multiple intelligence

Friedman (2015)'s study in Toronto, Canada aimed at investigating teachers who make multiple intelligence an individual and consistent priority as they effectively employ instructional strategies and assessment techniques through differentiation of the curriculum. The study used a case study

qualitative design. The researcher used semi-structured interviews to interview teachers. His findings reveal that multiple intelligence increases intrinsic motivation in learners at primary schools. He also adds that multiple intelligence requires variety of materials for it to become a reality in schools. The study established that diagnostic, formative and summative are important tools for understanding individual needs, abilities and strengths of learners in the classroom. Friedman (2015) also notes that the teacher promotes equity, diversity and inclusion by catering learning styles and using assessment to drive instruction. The teacher gets to know each student as a whole as well as class as a community by conducting class profile inventories and individual student inventories. The data collected is used to plan according to developmental, social and academic needs. Friedman found establishes that factors that hinder teachers in employing multiple intelligence in the classroom are superficiality and complexity and relate to staff efficacy and resource.

The study by Friedman (2015) recommends that there is need for collaboration among educators at primary school to enhance children' learning. He further suggests that teachers should be willing to cope with new strategies of teaching in line with new research in the field of educational psychology. The study is relevant to this research in that it provides specific strategies schools can utilize to enhance multiple intelligence for learners in primary schools. The study just like this one was a case study done at a primary school. It also used interviews as a way of collecting data from the participants who were teachers in this case. However, the study did not focus at how the home environment can foster multiple intelligence in learners at primary school.

A study conducted by Naoe (2010) aimed to identify multiple intelligence of grade five learners as the process to integrate the multiple intelligence theory that can recognize the importance of learners awakening their latent intelligence at David Elementary school in Pangasinan, Philippines. The study used a descriptive survey to collect data from respondents. A questionnaire was used to collect data from fifteen teachers and fifteen parents, while a pretest and a post test was administered to fifteen learners. The findings reveal that the fifteen grade five learners in the experiment possessed all the eight intelligence areas although bodily kinesthetic was their number one intelligence. Parents considered their children to be bodily kinesthetic while teachers considered their learners to have musical intelligence. Posttest results in learners preferred area revealed that the performance of learners preferred intelligence improved significantly than in the

pre-test. The strategies implore before posttest included modelling clay, addition of fraction, role playing, song analysis and other activities. The study revealed that every child can be considered to possess eight intelligences in varying degrees, these intelligences can be enhanced through creative strategies, appropriate instructional materials and a stimulating and nurturing environment.

Naoe (2010) recommends orientation seminars must be held for teachers, administrators, parents and other stakeholders to enable them understand different intelligences portrayed as bases for constructing appropriate activities to enhance a particular intelligence. He further recommends that there is need to assist teachers to construct instructional materials which are not only linguistic and mathematical intelligences but to other types of intelligence as well. The study provides strategies for identifying different intelligence areas possess and how they can be enhanced. However, the study was a quantitative study which used a descriptive survey to collect data, unlike the current research which is qualitative and used interviews and document analysis. In addition, the study was restricted to grade 5 only, however, this study looks at the factors enhancing multiple intelligence in the primary school.

A comparative study conducted by Hessel (2005) conducted a study on examining teacher and parental perceptions of first grade children's multiple intelligence in Florida, United States of America (USA). The sample for the study included three classrooms each from a different public school. 40 parents of different races and three teachers were asked to complete the multiple intelligence scale. Hessel found out that parents' choice of mathematical and natural intelligences were higher than teacher perceptions. Gender contributed significantly to teacher and parent perceptions of girls were greater in spatial, interpersonal and intrapersonal intelligences. Race also contributed to teacher and parent perceptions of children' colour and ethnicity were greater in mathematical and linguistic intelligences. He also established that parents and teachers may have similar or different perceptions based on their interactions with the child in different environments, therefore, parents and teachers need to work together to create learning environments which nature each child's multiple intelligence.

Hessel (2005) recommends that there was need for parents and teachers to collaborate in order to foster children' abilities at a tender age and that children must not be judged by their gender but through their capabilities. Similarly, this study provided both parents and teachers an opportunity

in understanding children 'multiple intelligence although it does not look at strategies to enhance multiple intelligence in learners at primary school.

Xie and Lin (2009) carried out a study on multiple teaching and intelligence in Taiwan. The goal of the study was to fuse the multiple intelligence theory with the colour theory in order to observe any influence on learning achievement. The study was a semi- experimental design which included a pre-test and posttest experiment. Results showed that students in the experimental group performed better than those in the control group. This showed that exposure to multiple intelligence teaching and learning improves learners learning abilities. Xie and Lin (2009) have also revealed that it is important for teachers to understand multiple intelligence before incorporating it in their teaching and that teaching in multiple intelligence needs more time to prepare.

Xie and Lin's (2009) study recommends that schools must encourage the integration of multiple intelligence in teaching and learning. The research also recommends that must also seek parental support. The study is important in understanding the necessary steps teachers must consider in implementing multiple intelligence in their classroom results. Xie and Lin's study are cardinal in understanding how different cultures perceive multiple intelligence and factors that can hinder the enhancement of multiple intelligence as it relates to this research

Hanafin (2014) in his action research paper investigated the application of multiple intelligence in the classroom and schools in Ireland. The paper shows how multiple intelligence theory was used in the project as a basis for suggestions to come up with classroom practices. The project was a Continuous Professional Development (CPD) for thirty teachers working in primary, secondary and special needs schools. Participating teachers evaluated the project and how teachers responded to the professional experience. The project comprised of activities such as lectures, seminars, and workshops over five academic terms.

Hanafin (2014) established that teachers reported successful student outcomes including more interest and motivation, better recall and deeper understanding, higher attainment, improved self-esteem, and more fun and enjoyable classroom experiences. For teachers themselves, the project was a challenge in that they needed more planning time, more persistence, more collegiality, and more management support. All the teachers involved in the project found the experiment worthwhile, exciting, and a stimulus for radical change in their pedagogic practice and thinking.

Teachers renamed and extended existing practices to include multiple intelligence approaches and this led to a shift in the methods and, ultimately, to indications of a mind-shift. It was apparent in the Irish multiple intelligence project that the premising of curriculum content and delivery, state certificate assessment, school organizational practices, and attitudes on a narrow, untenable and unfair construct of intelligence can result in educational exclusion and disadvantage for many students.

The study by Hannafin (2014) provides important teacher responsibilities that make multiple achievement a success in the school and the classrooms. It provides strategies for enhancing and some of the hindrances in enhancing multiple intelligence in the school. However, the study did not focus at how the home environment can enhance multiple intelligence in learners at primary schools.

Another study was conducted by Gupton (2011) in United States of America (USA) in Greensburg in the state of Kentucky. The goal of his study was to establish effectiveness of multiple intelligence in the classrooms. The study was a quantitative experimental design. The sample was drawn from learners in an urban and rural setting. The experimental group consisted of 26 fifth grade ranging from ages ten to twelve, the experimental group also consisted of 25 students also in the fifth grade. His findings show that learners in the experimental group had higher scores in designing and assessment results. The researcher concluded that students in the experimental group performed better than those in the control group because the type of assessment they received matched their ability areas in kinesthetic and musical domain. Gupton (2011) research is important in understanding that learners portray different intelligences in the classroom. Even though, it does not look at specific factors that can enhance multiple intelligence in learners in learners at primary schools, the premise/focus of the current study.

The study by Kegan and Kegan (2005) entitled *'Raising Smarter Children: Creating an Enriched Learning Environment'* in USA observes that raising smarter children needs an enriched learning environment. They argue that the enriching environment will enhance the child's multiple intelligence. He states that there is need to allow children to interact through play and also expose them to gadgets such as computers at a tender age both in the home and in the school. Children need to be exposed not only to music but also to musical instruments such as drums, guitars, pianos and other instruments available in the local setting. They concluded that exposure to variety of

activities will enhance multiple intelligence areas according to learner's abilities. The study by Kegan and Kegan (2005) provides specific strategies which can be employed by both the school and home environment to enhance multiple intelligence in learners at primary school. However, the research does not look at hindrances to enhancement of multiple intelligence in learners at primary school.

A study in Kuala Lumpur in Malaysia by Al-Balushi (2006) reviewed studies done for enhancing multiple intelligence in children who are blind. It also presents brain research that supports the theory of multiple intelligence in children who are blind and their implications in the field of teaching and learning. The activities designed to improve different talents in children who are blind include imagination, creativity cooperation, social skills, self-reflection, linguistic abilities, critical thinking and attitudes towards nature. Al-Balushi found out that methods such as cooperation, guided inquiry, brainstorming, questioning scientific inquiry, project based learning cycle enhances multiple intelligence in learners. The study is centered on strategies such as scientific based learning, cooperative and brainstorming to enhance multiple intelligence in learners with visual impairment, which can apply to any other child, hence the important of this study in understanding factors enhancing multiple intelligence in primary schools. However, the study did not look at how the home environment can foster multiple intelligence in learners at primary school.

Kaya and Ebenezer (2006) conducted a study in Turkey, the aim of the study was to investigate factors affecting the implementation of multiple intelligence theory in Turkey primary schools. They first used focus group discussions with 38 teachers in groups of (3 or 4) teachers in one of the schools in Turkey. The goal of the focus group discussions was to determine teachers' knowledge level about multiple intelligence. In the second part of the study teachers were interviewed on the difficulties in the implementation of multiple intelligence in their classrooms. Also classroom discussions were done to particularly understand how these teachers used multiple intelligence theory in the classrooms. Parents were interviewed to identify their ideas towards multiple intelligence.

The findings by, Kaya and Ebenezer (2006) showed that although most teachers and parents had positive attitudes towards multiple intelligences theory, they had difficulties in implementing it.

The invisible obstacles were external pressures imposed upon teachers by Turkish National Curriculum, Central Assessment System, the parents concern about their children's progress through the subjects of the national curriculum, the problem of finding time for multiple intelligences activities and difficulties in managing multiple intelligence activities. The results of this study addresses challenges which parents and teachers can encounter in trying to enhance multiple intelligence to learners in primary schools. However, the study does not look home and school factors enhancing multiple intelligence to learners in primary school.

Another study in turkey was conducted Yalmanci and Gozum (2013), the study aimed at comparing the theory of multiple intelligence with the traditional method of teaching by looking at the science teachers' success, permanence about their information on enzyme subject. The study implored an experimental design of two groups that is control group and experimental group. In experimental group lessons were given according to multiple intelligence theory while in control group lessons were based on traditional methods. The study comprised of 60 third grade learners. The study found out that the experimental group in which the activities were based on the theory of multiple intelligence were higher than in the control group. Learners in the control group were more successful because they used materials by themselves, they also spoke and discussed freely, learnt by seeing and acting and used their undiscovered intelligence.

The study by Yalmanci and Gozum (2013) although quantitative in nature provides important strategies which schools can employ in order to enhance multiple intelligence to learners in primary schools. However, the study did not look at how the home environment can enhance multiple intelligence to learners in the primary schools.

2.4 Literature on Africa

Clench (2010) in his master's dissertation conducted a study titled '*Howard Gardener's multiple intelligence theory, outcome based Education and Curriculum Implementation in Africa*'. The overall aim of the study was to examine the primary curriculum in South Africa with specific reference to the place of music in the curriculum. This study used a qualitative design based on critique of written sources of literature. The study revealed that the role of music in the curriculum emphasise the nurturing of generic values and attitudes towards culture, it does not provide for sufficient development for the subject or specific musical skills and knowledge instead this vital form of learning continues to be provided for in form of extra-curricular. He also observes that

music programmes are provided by those few who have staff expertise and the funding to do so. Music therefore remains accessible only to the privileged few learners in schools.

The study by Clench (2010) recommends that more teachers should be trained to teach music skills and knowledge not only for the preservation of culture. He further recommends that there is need for funding in schools for the procurement of musical instruments and necessary teaching aids for educators. This study brings out pertinent issues which schools need to implement in order to enhance musical intelligence in learners. The study by Clench (2010) is relevant in this study in that it brings out particular issues which schools must consider in order to enhance musical intelligence in learners at primary schools. This is particularly important because musical intelligence is one of the areas overlooked by the school system. Further Clench (2010) research is important in understanding the challenges schools are facing in fostering multiple intelligence in the Zambian schools. However, the study is narrowed to music education and it does not look at factors enhancing multiple intelligence in the home and in the school.

Another study in South Africa was done by Gouws (2007) which provides a discussion on both Gardener 'multiple intelligences theory and outcome based education in South Africa. The study used document analysis approaches to explore the relationship between multiple intelligence and outcome based education in South Africa. His findings revealed that practical implications of multiple intelligence show that learners are free to explore and learn in variety of ways. He suggested that the role of teachers is to help learners to understand and appreciate their strengths and weaknesses by identifying real world activities that will stimulate further learning. He goes on to show that if teachers introduce multiple intelligence techniques, they will have the opportunity to use varied teaching and learning strategies combined with assessment techniques which would be conducive to creative and active learning.

Gouws (2007) argues that teachers should be made aware of the different intelligences of learners that exist as well as their different strengths. The article provides an understanding of the role of both the teacher and the learner in the implementation of multiple intelligence in the classroom and the whole school. The study brings out specific strategies which schools can implore to enhance multiple intelligence in learners at primary school. However, the study does not discuss how home factors can enhance multiple intelligence to learners at primary school. This is one of the gaps that the current study will aim to fill.

The research conducted by Vrries (2014) in South Africa aimed to describe and understand the Heads of Departments (HODs) of their schools in terms of whether teachers facilitate multiple intelligence practices in their classrooms and how this impacts on both teachers and learners. A qualitative case study approach was followed in the study. Data was collected by means of semi-structured interviews with four HODs in an urban environment. It was found that leadership plays an important role in how teachers understand and facilitate multiple intelligence in their schools.

Furthermore, awareness of learning styles are pivotal in catering for different needs in children, therefore, learner performance can be improved by using creative strategies in class. Vrries (2014) also emphasize facilitation and integration of learning areas as important in problem solving for learners and teachers. The study brings out important specific strategies a teacher can demonstrate in the successful implementation of multiple intelligence in learners. These include ability to provide leadership, awareness of the learning needs of learners and integration of learning styles. The study also used semi-structured interview guide to collect data from respondents. However, the study did not look on how the home environment can foster multiple intelligence in learners at primary school.

Piennar (2008) conducted a study in South Africa, the goal was to determine the possible successes and failures in implementing a process to accelerate learning and raise learner performance through multiple intelligence. A case study was conducted amongst learners and teachers of a specific school to determine their ability, willingness to change and their performance in the application of multiple intelligences in the classroom. The challenges associated with implementation of multiple intelligence was also established. It was found that teachers have much more difficulty in adapting to a new teaching approach than the learners. Time constraints, constant monitoring, teacher training, teacher attitude to change, big classes, a lack of resources and teacher resistance added to the reality which policy makers have to consider in implementing a new approach. Piennar also found out that there is a link between outcomes based approach in South Africa and multiple intelligence as both help to develop learner stronger intelligences.

Piennar (2008) argues that teachers should be suitably trained and qualified to apply multiple intelligence in teaching. She also recommends that teachers need to be in constant support and ideas to help them to be more creative in the presentation of learning material. The study brings out challenges in implementing multiple intelligence in schools. These challenges are cardinal in

understanding the factors that hinder multiple intelligence enhancement in schools. However, the study by Piennar (200) did not look at home and school factors that can enhance multiple intelligence in primary schools.

Mapalala and Mpofu (2017) explored possible assessment opportunities in the South African Curriculum and Assessment Policy Statement (CAPS) through Gardner's theory of multiple intelligences. Although the CAPS document does not explicitly align itself to Gardner theory, this paper attempts to explore the possibilities of using the multiple intelligence in assessment at Senior Phase I in South African secondary school. A burgeoning research output has focused on Gardner's theory of multiple intelligence as a framework for designing a curriculum that meets different learning and teaching styles. Multiple intelligence provides useful framework for teachers to consider eight intelligences in their assessment in order to cater for the diverse ways in which learners come to know in the classroom. Mapalala and Mofu (2017) study is written to argue that the traditional ways of assessing through tests and exams do not allow learners to demonstrate multiple intelligences they possessed. The paper followed a document analysis approach where existing literature on multiple intelligence was described and analysed in the light of assessment opportunities offered at Senior Phase curriculum in South Africa.

From an analysis of literature and the Senior Phase curriculum, Mapalala and Mpofu (2017) establish that there is need to show a positive opinion of integrating Gardener's multiple intelligence for holistic learner assessment. They also acknowledge that a classroom is a heterogeneous environment with learners from diverse backgrounds possessing different abilities, therefore, teachers have a huge responsibility of embracing diversity into their classrooms by using various teaching strategies, resources and learning activities that develop most if not all intelligences. The study utilized document analysis and looked at possibilities of embracing multiple intelligence in South African secondary schools the results of the study are vital in enhancing multiple intelligence in learners at primary schools. However, the study did not look at how the home environment can enhance multiple intelligence to learners at primary school.

Gorongu, Dozva, Gasti and Gasva (2014) investigated if the primary teachers in Zimbabwe were aware that the curriculum was organized according to Gardener' multiple intelligence theory. The study employed a qualitative case study design and comprised of 11 teachers who were teaching

in primary rural schools. Data was collected through interview and focus group discussions with respondent teachers. The study also observed that only one of the eleven teachers in the study was aware of the multiple intelligence theory. It was also revealed that teachers did not assess learners in practical subjects such as Physical Education, Music, Art and Design and other practical subjects because they are not examinable. Assessment was done in subjects like English and Mathematics through written exercises and tests were teachers invested much of their time teaching

The study by Goronga et al. (2014) recommends that teachers need to upgrade themselves in terms of educational knowledge, teaching and learning to keep themselves aware about modern trends in education. The study is relevant in that it provides an understanding of how teachers understand the concept of multiple intelligence for learners in primary schools and the challenges teachers are having in integrating multiple intelligence in their teaching. However, it does not look at specific strategies which the home and the school can explore to enhance multiple intelligence.

2.5 Literature on Zambia

The researcher only come across two studies done in Zambia on multiple intelligence, thus providing a gap for this study to be undertaken.

Chipili (2013) conducted a study in Luwingu District of Zambia aimed at investigating teacher's and learner's views on integration of multiple intelligence in instructional styles of teaching and learning. The study was structured to explore if teachers engaged the aspect of multiple intelligence in their instructional styles of teaching and learning. It used descriptive survey, data was collected through semi structured questionnaires to a sample of 40 teachers and 60 learners from six selected schools. Findings in the study reveal that teachers did not fully engage the eight multiple intelligence in their teaching styles. Further, showed that teachers did not address individual learners' intelligence but approach was used without taking the needs of learners into consideration Chipili (2013) recommends that the Ministry of Education incorporate multiple intelligence in the curriculum to equip student teachers in universities and colleges and in-service programme for serving teachers in multiple intelligence teaching styles. He also recommends that teachers must engage eight intelligence areas in their teaching styles. This study is relevant in that it brings out teachers understanding of multiple intelligence and how they implement it in Zambian classrooms. Therefore, the study provides a basis in understanding factors which hinder the enhancement of

multiple intelligence and strategies in enhancing it. However, the study does not look at how the home environment can enhance multiple intelligence in learners at primary school.

A study conducted by Furham and Akande (2004) aimed at establishing African parents estimating of their own and their children's multiple intelligence. A total of 421 parents from four Southern African countries (Namibia, South Africa, Zambia, and Zimbabwe) estimated their own and their children's multiple intelligences. Participants were further given six yes/no questions about intelligence testing. The questions were: (1) Have you ever taken an intelligence test? (2) Do you believe they measure intelligence fairly well? (3) Do you believe males are on average more intelligent than females? (4) Do you believe intelligence is primarily inherited? (5) Do you believe IQ test are useful in educational settings? (6) Do you believe some races are more intelligent than others?

Results showed that there were consistent country and sex differences in self-estimates. Namibians tended to give lowest self-estimates and Zambians highest self-estimates. Contrary to Previous findings from other continents females gave higher self-estimates than males on all seven multiple intelligences. These results were mirrored in the estimation of children, females gave higher scores than males and Zambians gave highest estimates and Namibians lowest. In all there were 421 participants in this study: 54 male and 74 female Namibians; 53 male and 73 female South Africans; 52 male and 39 female Zambians; and 25 male and 53 female Zimbabweans. Their average age was 42.14 (SD = 9.31) years. The results of the study also show fairly dramatic national difference with Zimbabweans and Zambians awarding consistently higher scores than the South Africans and Namibians. This may reflect the length of time that the Black Africans from these different countries have lived in a democratic country where money spent on education was not determined by race. However, the results may just reflect a rating style as it seemed that level caused national differences was consistent across all ratings.

The results of the study are vital in understanding how parents rate and appreciate their children's intelligences in Southern Africa and Zambia in particular, nevertheless, the study does not focus on factors enhancing or hindering enhancement of multiple intelligence in learners at primary school. Although the study was conducted in Southern Africa, the current study is focused on Zambia, hence, the study being included in the section on literature in Zambia.

2.6 Summary

Chapter two has reviewed relevant literature based on global, Africa and Zambia. From the literature reviewed it has shown that there is more literature on global and literature on Africa. The researcher only came across two studies which were done on Zambia. Literature on multiple intelligence has shown that learners portray different intelligence areas, hence, there is need for these intelligence areas to be enhanced. Literature has also provided strategies enhancing multiple intelligence and the hindrances to multiple intelligence enhancement. In addition, the literature that has been reviewed has also discussed the methodology used in each and every study. However, gaps still remain in the identified literature as the studies reviewed did not adequately cover the factors enhancing multiple intelligence and hindrances in learners at primary school.

The chapter that follows discusses the methodological concerns of the study.

CHAPTER THREE: METHODOLOGY

3.1 Overview

The last chapter discussed literature review. This chapter discusses the research design, research study area or site, study population, study sample, sampling techniques, instruments used for data collection, procedure for data collection and data analysis. Research methodology is a systematic way to solve a research problem, it justifies and explains the rationale on the use of the particular methods on a research problem, (Kothari, 2004). This study employed a case study methodology involving three schools in Chongwe district to investigate home and school factors enhancing multiple intelligence in learners at primary school. Cohen, Manion and Morrison (2000) defines a case study as a rich and vivid description of events for a particular individual, group, school, or any organization within a social setting. Ghosh (1992) defines a case study as an intensive study through which one looks at how precisely the factors of a particular phenomenon. He also stresses that case studies are down to earth and they are attention building.

3.2 Research Design

Kombo & Tromp (2006) define a research design as putting together all the elements of research. They further stresses that it describes how the major part of research project will work together to answer the central question. Therefore, it is a plan which guides the researcher on the methods of data collection, analysis and interpretation.

This study utilized a qualitative approach with the aim of eliciting detailed information to answer questions on assessment of home and school factors that enhance multiple intelligence in learners at primary school in three selected schools in Chongwe District, Zambia. Creswell (2007) has explained that qualitative research is best suited to address a problem which the variables are not known. Literature might reveal little information about the study but the researcher collects the information from the participants to learn more. Basing on the above literature, the case study was appropriate for this study as it aimed at exploring home and school factors that enhances multiple intelligence in learners at three primary schools in Chongwe District. The case study allowed the researcher to take an in depth and intensive study

3.3 Study Site

The research was conducted in Chongwe district at three primary Schools. Chongwe is one of the eight districts of Lusaka Province. It is situated 45 kilometers in the Eastern part of Lusaka

Province. Chongwe is a small district, it was therefore easy to meet parents as they normally live near the school area. Chongwe was also chosen because it is the place of residence for the researcher which made it easy for the researcher to have access to the three selected schools.

3.4 Study Population

A population as defined by White (2003) as the universe of units from which a study sample is Selected. Kombo and Tromp (2001) states that a population consist of individuals, elements or objects of specific group with common characteristics to which the researcher plans to generalize the results. The population comprised of the headteachers, teachers and parents of the three selected primary schools in Chongwe District. This population gave adequate information needed for the study because the targeted population has the necessary knowledge and experience.

3.5 Sample Size

A sample by definition is a number of individuals or objects from a population, containing elements representative of the characteristics found in the entire group (Orodho and Kombo, 2002). Bryman (2001) defines a sample as a subset of a population or the segment of population that is selected for investigation. The study comprised of 25 participants out of which 12 were teachers from three primary schools in Chongwe district (4 from each school), 10 parents with children who were in grades 1 to 7 in the target primary schools and 3 Head teachers 1 from each school. The sample was adequate to provide the necessary data for a qualitative study.

3.6 Sampling Procedure

Sampling procedure is a process or criteria that the researcher puts across to gather people, places or things to study (Orodho & Combo, 2002). The researcher used purposive sampling to select teachers, headteachers and parents as the participants in the study. In purposive sampling researchers select the respondents in the sample on the basis of their judgment of their typicality, (Cohen et al, 2000). The researcher targeted the respondents who could give the information basing on their experiences. All the headteachers of the three schools in the sample were respondents. The teachers handling grades from one to seven at the targeted schools were in the sample and the parents who have children in the targeted primary schools were also in the sample.

3.7 Research Instruments

Kasonde- Ngandu (2013) states that research instruments are the necessary tools that a researcher uses to collect data from the respondents. Two research instruments were used namely semi-structured interview guide and document guide (see appendices 1, 2, 3 and 4) to collect data from the respondents and from written sources respectively.

3.7.1 Interviews

The aim of the interview is to have the participant reflect on his/her experiences and then relate those experiences to the interviewer in such a way that the two come to a mutual understanding about the meanings of the experiences or of the account of the experiences (Bryman, 2001). An interview, particularly in-depth interview, is defined as a situation in which the interviewer or researcher questions respondents face-to-face and records their answers, (Cohen et al, 2000). Kombo and Tromp (2006) argue that interviews are well suited for exploring and confirming ideas and provide in-depth information about particular cases of interest. The rationale behind use of interviews was that it had a high response rate and the researcher was placed in a situation where he managed to probe the respondents for clarifications. Similarly, respondents asked for clarifications as sometimes questions were complex or were interpreted differently. This type of data collection technique therefore, allowed the researcher, through the interactions to gain an in-depth understanding of the subject. The researcher was also placed to gain full understating of what the respondent really wanted to say. Interviews focus on the world of the interviewee and seek to reveal their beliefs, values, reality, feelings and experience of a phenomenon (Creswell, 2007).

3.7.2 Document reviews and analysis guide

White (2005) noted that documents are a good place to search for answers as they provide a useful check on information gathered in an interview. He further adds that when other techniques fail to resolve a question, documentary evidence can provide a convincing answer. Apart from providing evidence, White also states that documentary analysis allows the analyst to become thoroughly familiar with the materials and helps to save on time.

3.8 Procedure for data collection

The first step was to make an appointment with the school administrators of the three selected primary schools in Chongwe District. The second step involved carrying out the actual interview firstly with the teachers and then the headteachers. The school administration helped in contacting the parents who stay near the schools and also helping with contact numbers for parents for the purpose of making appointments for the interviews. Interviews were conducted in classrooms after learners had knocked for teachers, as for headteachers interviews were conducted in their offices. Some parents were interviewed from the school premises while others were followed up in their homes. In order to get full credible information from the interview the researcher used both note taking and a recording using a voice recorder to collect data from respondents (see appendix 1, 2 and 3). The recorded data from interviews was transcribed from voice words into print and coded according to the respondents in the study. This data collection method was vital in this study as it allowed the researcher to gain insights from the headteachers and teachers on their experiences regarding the factors that enhances multiple intelligence in learners at primary schools. In addition, interview data collection method enabled the researcher to find out more about the parent's inputs on how they can enhance multiple intelligence in their children.

The usefulness of documents as research tools is that they help corroborate and strengthen the evidence gathered using other tools. Therefore, this method of data collection was important to this study as it provided reliable and quality information from the documents reviewed. In other words, it enabled the researcher to understand the primary school curriculum and how it incorporates multiple intelligence. The researcher's interest was more on the aims of the primary school curriculum, the subjects contained in the curriculum and the recommended methods to use in teaching the identified subjects.

3.9 Data Analysis

Kasonde-Ngandu (2013) define qualitative data analysis as the manipulation of the collected data for the purpose of drawing conclusions that reflect on the interest and theories about ideas that initiated the study. Therefore, the study used thematic analysis with emphasis on objectives and study questions. Kombo and Tromp (2006) have observed that data can be analysed thematically

by using themes which refers topics or subjects that come up in the discussions. The most significant elements in the answers given by the participants formed themes. Patton (1990) seems to suggest that these concepts about data analysis start arising during data collection and that marks the beginning of the analysis and this continues throughout the study. In qualitative studies, like this study, data collection and analysis go hand in hand to build a coherent interpretation of the data (Sarantakos, 2005). During data analysis in qualitative research, the researcher will have to put into consideration the following steps which can be found in interviews (Booth, 1997). Cohen et al. (2000:150) stated that the analysis includes seven steps. These steps to be used in this study are the following:

The first step is familiarisation, which means the researcher becomes familiar to the material by means of reading through the transcripts. This step is important in making corrections in the transcripts. At this stage data from the respondents interviewed was transcribed by listening to the voice recorder each and every participant's responses were written on paper. The second step is compilation of answers from participants to a certain question. The researcher should identify the most significant elements in answers given by participants. All the participants' answers to a particular question were coded and compiled using numbers and letters. The third step is a condensation, or reduction, of the individual answers to find the central parts of a dialogue. At this stage response which seemed not to be in line with the questions were deleted. The fourth step is preliminary grouping or classification of similar answers. The answers which were similar from all the respondents were grouped together so as to identify the themes. In some instances some respondents mixed strategies in enhancing multiple intelligence and the hindrances to multiple intelligence, at this point such data was separated. The fifth step is a preliminary comparison of categories. At this stage data was classified according to the identified themes for a particular question. The sixth step is the naming of categories. At this stage the verbatim to be quoted were identified on a particular theme. The last step is a contrastive comparison of categories, at this stage the study compared variations from different participants and how they relate to a particular question or theme. It includes a description of the character of each category and similarities between categories. Therefore, this study analysed data from the interview guide, and the documents reviews by following the steps (Cohen et al, 2000). The study analysed data from the interview guide and documents reviews by grouping the emerging themes with emphasis on the main variables from the research questions and the objectives of the study. The respondent teachers

were coded with numbers from 1 to 12, respondent parents were coded with numbers from 1 to 10 and headteacher were coded using the names of schools which were coded as schools A, B and C.

3.10 Ethical Consideration

Ethical issues were highly considered in this study. Participants were informed about the nature and purpose of the study. Further, informed consent was sought from the participants before commencement of data collection. In addition, the respondents were informed that the information gathered was purely for academic purposes. Participants were not forced or coerced to give information for this study and participants' views were treated with confidentiality and respect (see appendix 5 sample of a signed Consent form).

3.11 Validity

Kothari (2004) defines validity as the degree to which an instrument measures what it is supposed to measure. In recent years validity of qualitative data is addressed through the honesty, depth, richness, and scope of the data achieved, the participants approached and objectivity of the researcher, (Cohen et al, 2000).. The researcher made sure that all the recorded information was listened to and all the responses from the respondents were cross checked and coded. A pilot study was also conducted as way of testing the validity and reliability of the research instruments which were used in the study.

3.12 Summary

The Chapter presented the methodology used in the study. The study used a case study methodology in assessing home and school factors enhancing multiple intelligence in learners at primary school. The population consisted of teachers, parents and headteachers. A total number of 25 respondents were purposively selected to be in the sample. The study used document analysis and semi-structured interviews to collect data from documents and participants. Data was analysed qualitatively by using thematic analysis with emphasis on objectives and study questions. Ethical issues were also adhered to in the process of collecting data.

CHAPTER FOUR: PRESENTATION OF RESEACH FINDINGS

4.1 Overview

The previous chapter discussed the research methodology used in this study. This chapter presents the findings of the study according to the research questions. The findings of study emerged from themes and subthemes, research questions were: (1) How do teachers and headteachers conceptualise multiple intelligence? (2) To what extent does the primary curriculum incorporate multiple intelligence? (3) What school and home factors hinder multiple intelligence enhancement? (4) What home and school factors enhance multiple intelligence?

4.2 Teachers and Headteachers conceptualization of multiple intelligence

Teachers and headteachers were asked to state how they perceived the concept of multiple intelligence. The findings of this study showed that they understood the concept of multiple intelligence differently. They understood the term basing on their understanding of the term intelligence and also taking into consideration that multiple means many. All teachers reported that they were meeting the concept of multiple intelligence for first time in their teaching career. The findings of this study showed that teachers perceived multiple intelligence as the ability by learners to show abilities in a number of learning areas. Teacher 2 said that:

This basically talking about an individual being able to attain to issues of different fields or areas.

Teacher 6 postulated that:

It is first time to hear about multiple intelligence but from the word multiple it means I can say many, so multiple intelligence can mean a person having many ability areas of learning in all subjects.

Headteacher from school 'A' observed that:

Multiple intelligence are factors intelligence in a learner may have for example environment, heredity, the mode of information of delivery to learners which leads to different abilities in learners.

Headteacher from school 'B' disclosed that:

It is my first time I am hearing this term multiple intelligence. In my opinion it is just an inert ability has to do things at his or her level of learning.

Teachers, headteachers and parents also revealed that multiple intelligence entails that children are gifted differently due to the fact that learners are exposed to different learning areas and different background. Teacher 1 said:

No, they don't have the same abilities, the factor is to do with cognitive development which normally vary from one child to another even identical twins do not possess exactly the same intelligence.

Teacher 11 observed that:

They also portray skills in CTS, it is where the children express themselves freely through sports, drawing, singing, dancing and other practical subjects. In my class it is the reason why some of my learners come to School.

Headteacher from school 'A' said that:

It is normal that they cannot possess the same abilities. As teachers we have to find different potentials in the children, other kids are not academically inclined but very good at sports and other activities. There is a boy at this school is not operating well in academics but give him tools in the kitchen he can cook and bake. In other words people do things they can perform.

Headteacher from school 'B' postulated that:

Pupils at this school portray different intelligence; some in practical subjects such as science, CTS even social studies.

Headteacher from school C noted that:

In co-curricular learner's express intelligence, these are the co-curricular activities others are good at dancing for example football volleyball, netball others are good at all of them including academic subjects.

Parents explained that their children portray different intelligences. They revealed that performance of their children vary from one child to the other. Most of the parents interviewed revealed that their children were not performing well in academic subjects especially in the area of reading.

Parent 1 stated the following:

My son is able to write and draw properly but the problem is reading in grade 5 my son cannot read fluently and so am worried because he has only two years before he writes his grade seven examinations

Parent 8 noted that:

I have three children one is performing well in all the subjects at school and is always passing number one but my first born and my last born are not doing well in reading and mathematics but they like playing ballgames.

4.3 Extent to which the primary curriculum incorporates multiple intelligence.

In order to understand the extent to which primary curriculum incorporates multiple intelligence, the researcher used secondary data from the two main curriculum guiding frameworks; Zambia: Education Curriculum Framework 2013, published by Ministry of Education Science Vocational Training and Early Education (MESVTEE) and Teachers Curriculum Implementation Guide, published by Ministry of General Education (MOGE).

Interviews were also used on 3 Headteachers, 12 Teachers and 10 parents to find out their views on whether the primary curriculum incorporates multiple intelligence.

Document review was based on whether the subjects and recommended methodology contained in the primary curriculum relate to the eight intelligence areas found under multiple intelligence.

4.3.1 The key competences to be achieved in the primary curriculum in the Education Curriculum Framework 2013 are the following.

- Literacy skills in English and Zambian Language or sign language
- Numeracy Skills
- Information and Communication Technology skills
- Life skills

4.3.2 Learning areas for lower primary, upper primary, Intellectually Impaired learners and co-curricular activities are presented below.

Table 4.1: Learning areas and time allocation Grades 1 to 4

Frequency	Learning areas	Time Allocation Per week	Periods
1	Literacy and languages	6 ½ hours	13
2	Mathematics	5hours	10
3	Social Studies	2 ½ hours	5
4	Integrated Science	4 ½ hours	5
5	Creative and Technology Studies	4 ½ hours	9
	Total	21 hours	42

As depicted in the Table 4.1 above, the lower primary school offers 5 learning areas giving them 21 hours of learning and 42 periods per week. The learning areas or subjects are literacy or

languages, with more focus on the seven official Zambian languages which are languages of instruction at lower primary in their areas of influence. These languages are Cinyanja, Bemba, Tonga, Lozi, Kaonde, Lubale and Lunda. The other subjects are mathematics, social studies, integrated science and creative technology studies (CTS).

Table 4:2 Learning areas and time allocation for grades 5 to 7

Frequency	Learning areas	Time allocation Per week	Periods
1	English language	4hours	6
2	Mathematics	4 hours 40 mins	7
3	Integrated Science	4 hours	6
4	Zambian Languages	4 hours	6
5	Expressive Arts	2 hours 40 mins	4
6	Social Studies	3 hours 20 mins	5
7	Technology Studies	2 hours 40 mins	4
8	Home Economics	2 hours 40 mins	4
	Total	28 hours	42

As depicted in the Table 4.2, the upper primary offers 7 learning areas. At this level the English is introduced not only as a core subject but as a medium of instruction. Creative and Technology Studies comprise key content for Technology Studies, Home Economics for and Expressive Arts. This gives upper primary with a total of 28 hours of learning and 42 periods per week.

4.3.3 Learning Areas for Learners with Intellectually Impaired Learners;

A carefully adapted set of outcomes shall be used from the syllabuses of these learning areas to form guidelines for the following:

- Mathematics
- Literacy and Languages or Sign Language or braille
- Technology Studies
- Activities for Daily Living
- Expressive Arts

There are also two options to serve learners of Special Education Needs and these are:

- Sign Language
- Braille

Table 4.3: Co-curricular learning pattern

Monday	Tuesday	Wednesday	Thursday	Friday
Library	Clubs	Sports	Preventive Maintenance	Out of School Assignments

As shown in Table 4.3, the co-curricular activities are normally done after normal classes although some activities in co-curricular are taught in the core curriculum. The library activity which appears on a Monday means learners in the school should be in the library reading the books of the choice. On a Tuesday it is club's day, on this day the learners are all expected to attend meetings for clubs of their choice. In the three the research was undertaken, learners were encouraged to join clubs such as Junior Engineers Technicians and Scientists (JETS) club, Anti-Aids club, Scripture Union, Debate, Drama and culture and other clubs depending on the locality of the school and the interest of the teachers who are the club patrons.

4.3.3 Methods recommended for use by teachers in their teaching in the “Teachers Curriculum Implementation Guide”.

Table 4.4: Recommended methods for use by teachers in their teaching

Frequency	STRATEGY	CHARACTERISTICS
1	Discovery	Learners are given opportunities to find their own solutions real problems or challenges. Problem solving leads to learners generating their own knowledge, often through research The teachers 'role is to provide support to assist learners in the discovery.
2	Learning by doing	This occurs when learners are involved in any form of active learning The strategy can be applied in all learning areas.
3	Debate	Groups are assigned a topic to discuss or a motion to debate

		The interaction develops skills communicative skills.
4	Role play	Learners are given practical situations and asked to act it out, playing the role of characters involved. Learners understand points of view and develop arguments accordingly
5	Whole class	This familiar approach involves a teacher presenting a whole class task or a question which learners contribute their thoughts. The teacher makes it learner centred by involving everyone in class.
5	Pair work	A question might be posed to set learners thinking before they are put in pairs to discuss. Pairs can then share ideas with the rest of the class. This sometimes described as “think, pair, and share”.
6	Individuals and individual education plans(IEPs)	All learners are unique and individual learning needs should be taken into consideration when planning for all learner centred activities. Learners with Special Education Needs (SEN) are required to have IEPs.
7	Group work	Learners are placed in groups so as to promote participation, cooperation, sharing of ideas, self-confidence, and to freely express themselves.

As illustrated in the Table 4.4, the curriculum recommends the above stated learner centred methodologies thereby helping learners to show their potential in different learning areas.

The subjects both at lower primary, upper primary, the co-curricular activities and the recommended methods for use by teachers in schools make up the primary curriculum. The subjects in the curriculum covers both the academic subjects and the arts subjects. The subjects

such as English and Zambian languages, sign language and braille, integrated science, Social studies and Mathematics are more inclined on the academic. While subjects such as CTS, Home Economics, Technology Studies, Expressive Arts and Activities for Daily Living(ADLs) are more on the arts.

4.3.4 Views from Teachers, headteachers and Parents on the extent to which the primary curriculum incorporates multiple intelligence.

Teachers' headteachers and parents were also asked to state their views on the extent to which the primary curriculum incorporates multiple intelligence. They revealed that the new curriculum encompasses multiple intelligences because of its emphasis on the arts unlike the old curriculum which only emphasized academic subjects. They stated that subjects such as Physical Education, Home Economics. Agriculture Science and Creative Arts through subjects such as Creative Technology Studies help learners in acquisition of diverse abilities. The teachers observed that the introduction of CTS as early as grade 2 enables learners to show their potential in different intelligence areas. They also stated that the co-curricular activities also expose learners to different learning experiences which enhance different intelligences in learners. Teacher 4 said that:

Yes, the new curriculum caters for all learners because there is a career pathway for example from grade two they are saying we should be teaching Home Economics, Art, through these subjects' children will be able to create some of the things they are able to create such as models through clay. Most of the pupils do not remain dormant they can even help parents in day to day activities for example making scones, doormats and other things.

Teacher 6 indicated that:

Yes, because the learners are exposed to CTS as early as grade 2. In this it enables learners to show their potential in different subjects.

Teacher 12 observed that:

It does at a certain point because those are not academically gifted have practical subjects to prove their intelligence.

Headteachers from the three schools echoed similar views with the teachers.

Headteachers from school 'A' commented that:

The current curriculum, yes it caters for learners with different abilities it all depends on delivery if we deliver in a particular way it can cater for learner's abilities.

Headteacher from school 'B' observed that:

Yes, especially the new curriculum because it includes both practical and academic subjects.

Headteacher from school 'C' noted that:

Yes, in the sense that the arts coming from as early as grade two which unfortunately, is taught and expecting one teacher to know everything. Homs of wever, if the system still insists that for learners to progress to grade 10 should pass six subjects then they are defeating the whole purpose.

Parents just like teachers and headteachers hold a similar view that the primary school curriculum incorporates multiple intelligence. Parent 5 stated that:

My son brings homework in different subjects therefore I feel children learn different subjects which makes me feel the curriculum caters for all learners with different abilities.

4.4 School and home factors that enhance multiple intelligence

The findings on home and school factors were as presented below.

4.4.1 Teachers and Headteachers views

Teachers and headteachers were asked the strategies to enhance multiple intelligence. They disclosed a number of factors that enhance multiple intelligence in learners at primary school. Seven themes emerged; use different methods in teaching; all subjects be taught as time tabled; school community partnerships;

need for teaching and learning aids; provision of incentives to learners and enhancing co-curricular activities.

Use of different learner centred methods in teaching and learning

All the twelve (12) teachers and one (1) headteacher disclosed that the use of different methods of teaching and learning does not only motivates learners but enables teachers to identify learners' strengths and weakness.

Teacher 9 noted that:

...like children learn by seeing things as a teacher I am supposed to have different teaching and learning materials so that pupils learn the concept and to involve all the learners in my teaching, also the use of learner centered methods such as group work, role play, field trip to build their confidence and exposure.

Teacher 5 disclosed that:

By using learner centred methods such as group work because learners are gifted differently, therefore, they need to help each other. Learners learn easily when they are helped by their peers.

All subjects be taught as they appear on the timetable

Seven (7) teachers revealed that all subjects need to be taught to learners so that learners multiple intelligences are enhanced.

Teacher 5 noted that:

I make sure I teach all the subjects on the time table but, however as a teacher you discover that some children who are good in other subjects, therefore, I spent more time in the area were a child is excelling by involving that particular child for example there is a boy in my class who is good at drawing, I make sure I involve the boy in the making of charts this is all to enhance his talent.

Teacher 12 said that:

All the subjects should be taught but however as a teacher you discover that some children who are good in other subjects Therefore they need more time in the area they are excelling.

Enhancing school community partnership

Ten (10) Teachers and three (3) headteachers revealed that there is need for parents' engagements through call ups, parental visitation, Parents Teachers Association (PTA) meetings and open days as way of establishing learners' strengths and weaknesses.

Teacher 2 disclosed that:

We sometimes call their parents and engage in their children's academic strength and weakness. If the performance is below, with Parent's consent such children are made to repeat. We also request Parents to help their children with homework.

Similarly, headteachers indicated that involving parents has proved to be an effective way of enhancing learners' abilities.

Headteacher from school 'A' stated that:

We involve parents if we see that the children are not performing well and provide advice. Provision of homework is one key area in which we engage parents. Also during open days were parents and teachers come together and parents are shown how the children are progressing.

Need for teaching and learning materials

All the twelve (12) teachers and three (3) headteachers disclosed that teaching and learning materials enables learners to directly get involved in the lesson, hence learners' intelligences are enhanced in the process.

Teacher 11 stated that:

Learners need real objects so if I don't have that I think that is a challenge for grade ones they need to see an orange if that it is an orange.

Teacher 2 disclosed that:

Children learn by seeing things me as a teacher I am supposed to use different teaching and learning materials so that pupils learn the Concepts and to involve them in my teaching.

Headteachers also disclosed that there is need for provision of teaching and learning aids if multiple intelligences are to be enhanced in learners at primary schools.

Headteacher from school 'A' noted that:

CTS as a subject needs a lot of teaching and learning materials. However, monetary aspect is a challenge. Manpower is available but teaching materials are not adequate. Teachers make use of available materials to enhance different abilities.

Headteacher from school 'B' indicated that:

As you know resources are scarce the cheapest is to give book education. If your mission is to produce business people or leaders as an example if you want to raise children who are high achievers, you must provide education which suits them by providing relevant teaching and learning resources.

Provision of incentives to learners

It was revealed by eight (8) teachers and three (3) headteachers that the use of rewards for learners' who show abilities in different areas enhances multiple intelligence and learning.

Teacher 5 indicated that:

The school need to praise the learners who do well in class. Also as a teacher I need to encourage my learners and give them something were possible.

Teacher 10 said that:

Learners are also appreciated for their efforts during open days by giving them books, pencils, mathematical sets and other incentives.

Headteachers disclosed that the schools reward learners for their efforts. Headteacher from school 'A' stated that:

Parents can emulate schools in motivating learners just as schools are doing so that so that such behaviour are repeated because behaviour that is rewarded is likely to reoccur. Government should also fund schools to enhance skills development in the vocational career path ways we need teaching and learning materials for us to achieve all these goals.

Headteacher from school 'A' said that:

As a private school we could do more motivate these learners but we just praise them that they have done well. Those graduating we normally buy them small presents as a way of motivating them.

Enhancing co-curricular activities

Seven (7) teachers and (3) headteachers stated that co-curricular activities enhance multiple intelligence as they enable learners to be exposed to different outdoor activities which are more practical than classroom activities. Teacher 7 said that:

The best strategy to enhance multiple intelligence areas are that those who are patrons in clubs like Jets must be giving pupils different activities in science and mathematics and in the classrooms teachers must source for materials.

Teacher 12 disclosed that:

The need to identify the abilities of the learners and their interest. Some have abilities in co-curricular activities such as drama and Sports. Such learners must be encouraged and natured by the coaches of such clubs.

Headteachers noted similar answers to the teacher respondents. Headteacher from school 'C' noted that:

The school provides education holistic education to all learners using of methods. Apart from academic we have vocational pathways on how they can show their potential in the arts. Those that are good at sports they are given chance through co-curricular activities. Those who perform better are identified and represent the school and the district at sports festivals.

4.4.2 Parents' views

Parents were asked the strategies to enhance multiple intelligence. Parents revealed a number of factors that enhance multiple intelligence in children at primary school. Three themes emerged; involving learners in play activities; enhancing school community partnerships and provision of incentives to children at primary school.

Involving children in play activities

Six (6) Parents reported that they allow their children to play with friends in different activities as way of enhancing different abilities. They revealed that other than physical play, children also watch television and read books as way of improving their vocabulary and literacy skills. All the activities are meant to enhance children's multiple intelligence. Parent 3 noted that:

As a parent I encourage my child to play and encourage her to watch television and listen to music as way of helping her find the best talent and career for herself because at the end of the day I don't need to choose a career for her.

Parent 5 indicated that:

I expose my children to a lot of play both at home and outside the home. I also make sure that when it is playing time I let them play and when it is time to watch television I let them watch television and when it is time to read I make sure they read and write homework. I believe that when Children grow like this they easily adapt to any environment.

Similarly, Parent 7 postulated that:

I think for me, I feel children should have the freedom to play different games with their siblings and peers in the community. The bible says “an idle mind is the devil’ worship.” Play makes children know a lot of things.

Enhancing school community partnerships

Seven (7) parents revealed that children’s multiple intelligence can be enhanced by involving teachers and school administrators through open days, school visitation, PTA meetings and through homework policy. It is during these meetings with teachers when children’ strengths and weaknesses can be discussed as way of helping learners achieve their potential in their ability areas. Parent 3 noted that:

I make sure that I encourage and motivate my children so that they continue to do the right thing in this way they will achieve their potential. I also help my children with homework and make sure they do the right thing.

Parent 6 said that:

As parents we need to work closely with teachers in schools by going to collect report forms and by attending PTA meetings. This will help me to know the problems my child is having at school that is if it is mathematics, English or science in this way we shall find a solution together.

In addition parent 10 indicated that:

I also involve teachers whenever I feel my son’s performance has gone down in a particular subject. This has really helped my boy to balance his performance in all subjects.

Provision of incentives to children

Five (5) parents disclosed that children need to be motivated whenever they do well at school or at home in any task which has been given to them through praises or

buying something for them as a way of enhancing their intelligences.. Parent 9 stated that:

I appreciate my children in way by taking them out whenever I am Impressed with the results. I also buy for them toys and other school needs so that they continue to perform well.

4.5 School and home factors hindering enhancement of multiple intelligence

As regards to the school and home hindering enhancement of multiple intelligences the following emerged as presented in the preceding subheadings.

4.5.1 Views from teachers and headteachers

Teachers and Headteachers were asked the hindrances to the enhancement of multiple intelligence in learners at primary school. They revealed a number of factors that hinder enhancement of multiple intelligence. Six themes emerged; lack of funds in schools; lack of necessary sporting facilities; learner absenteeism; large classrooms; lack of incentives for learners and rigid curriculum

Lack of funds in schools

All the three (3) Headteachers disclosed that schools lack financial resources to procure enough teaching and learning aids for the learners. They revealed that practical subjects such as science, physical education, music and other practical subjects require a lot of resources for both the teacher and the learner. Headteacher from school 'A' observed that:

“One of them is financial, for example vocational career path and creative career path they demand a lot of money to buy materials, therefore, monetary aspect is a challenge, manpower is available but money is not adequate. However, my teachers are able to use the locally available resources to make to ensure that all subjects are taught in the school.

Headteacher from school 'C' commented that:

Very little in the sense that resources are not permitting things like P E, Art they need specifically trained teachers. The curriculum is also congested

with a lot of subjects for example music is not taught because of resources also many teachers have not been trained, they are few.

Lack of necessary sporting facilities

Six (6) Teachers, two (2) headteachers revealed that schools lack the necessary sporting facilities such as pitches for football, netball, volley ball and other sporting activities which are important in enhancing multiple intelligence. Parents also disclosed that the communities in which they live lack the necessary recreational facilities to enhance different abilities in learners. Teacher 7 said that:

The challenge like in the private schools, they take co-curricular activities as time wasters and therefore they rarely provide facilities to help learners in the arts”.

Learner absenteeism

Six (6) teachers revealed that learner absenteeism was a hindrance in the enhancement of multiple intelligence in learners at primary school because it makes it difficult for learners’ weaknesses and strengths to be identified. Teacher 3 noted that:

One of the major challenge is absenteeism of learners in my class Most of the time they are absent, hence I am unable to nature abilities for some of my learners.

Large classrooms

Five (5) teachers disclosed that large classrooms have made it difficult for them to enhance multiple intelligence to teach all subjects of the time table as much of the time is goes to marking and managing the learners in class.

As one teacher stated that:

The number of pupils in class they are too many because you are talking of a class of 70 pupils. It is, therefore not easy to know the strengths and weaknesses of each and every child. This makes it difficult for me as a teacher to teach all subjects on the time table.

Lack of incentives for learners

Five (5) teachers and two (2) headteachers stated that inability to reward learners who excel in the arts and sporting activities is a hindrance in enhancing intelligences which are more inclined in the arts. Teacher 2 stated that:

So far I think outdoor activities I have never seen pupils being rewarded in outdoor activities but they are rewarded in academic subjects for those who pass number one, two and three. This also hinders enhancement of all abilities that learners portray in classrooms.

Headteacher from school 'A' observed that:

Learners are rewarded for performing well as a form of motivation through provision of books, pencils so that they get motivated for achieving academic excellence as behaviour which is rewarded is repeated next time. But high achievers in the arts are not rewarded but we will consider doing that as a when financial resources allow in the future.

Rigid curriculum

Four (4) teachers and three (3) headteachers noted that the curriculum is rigid and biased to certain subjects in the curriculum as learners are required to take all the subjects stipulated in the curriculum despite learners having different abilities. Headteacher from school 'B' said that:

The unfortunate part is that the ministry of education still insists that a child should pass in at least six subjects, then we are defeating the whole purpose of having curriculum pathways.

4.5.2 Parents Views

Parents were asked the factors that hinder enhancement of multiple intelligence in their children. Four themes emerged from their responses; parents' lack of funds; lack recreational facilities for children in communities; children absenteeism and lack of incentives for children.

Parent's lack of funds

Five (5) Parents revealed that lack of funds to procure reading books and other necessary materials such as toys which can support learning of their children's multiple intelligence is a hindrance to the enhancement of multiple intelligence. Parent 1 disclosed that:

One major challenge is poverty, I would want the best for my children. But look I need books, crayons, pencils and other toys to help these children achieve their potential. So I rely on what these children are taught at school but it is not enough to help them improve their performance.

Parent 8 observed that:

If I had the money my child was going to be at a private school where all skills are taught. Now these government schools children don't learn computers and don't go for field trips. Some of these schools children are not exposed in all the subjects.

Lack of recreational facilities for children in communities

Five (5) parents disclosed that the communities which they live in lack the necessary recreational facilities such as play packs, pitches, open areas of play and library to support multiple intelligence in their children. Parent 9 observed that:

The problem is that our communities lack things such as play parks where children can play different games freely and interact to each other this makes it difficult for children to master the skills in areas where they have strength.

Children absenteeism from school

Four (4) parents reported that for some of their children absenteeism is a hindrance in enhancing multiple intelligence as it affects consistency and monitoring of learners progress in all the learning areas. Parent 2 said:

I think absenteeism has an effect, my son who is in grade 7 is usually absent from school, I have tried to engage teachers sometimes he pretends as though

he gone to school but he doesn't reach the school. This attitude will make him fail.

Parent 7 postulated that:

My daughter doesn't attend school regularly, being the only child and as a widow she has to nurse me whenever I am unwell.

Lack of incentives for children

Five (5) parents disclosed that children lack the necessary motivation and incentives to enhance their intelligences from parents. Parent 3 said that:

We don't appreciate our children for showing excellence in activities such as drama, football, music and other talents. All we want is for our children to pass number one but not everyone can be number one, some of these children have talents which all they need is encouragement and parental support.

Similarly, parent 10 indicated that:

I feel the problem is that as parents we just want our children to do well in academic subjects so that they can become lawyers, teachers, doctors, engineers and other professionals. We feel like becoming an artist, a sportsman is inferior. In most cases children who are talented are not supported by their parents, this makes it difficult for them to excel in their talents.

4.6 Summary

The Chapter has presented the findings in line with the research questions. The study found that all the respondent teachers and headteachers were meeting the term multiple intelligence for the first time in their teaching career. The teachers acknowledged the fact that learners possess different abilities which can be enhanced by both the school and the home environment.

The study established that the curriculum incorporates multiple intelligence in that the subjects contained in the curriculum are well linked to eight multiple intelligence areas. The suggested teaching strategies by MOE (2016) enhances multiple intelligences because the learner is put at a centre stage of teaching and learning.

There are number of factors that can enhance multiple intelligence in learners at primary schools. Teachers, headteachers and parents reported that there is need for teachers to use learner centred methods, provision of the necessary teaching and learning aids to support learning. Other factors include need for collaboration between the school and the home environment, teaching all the subjects in the curriculum, enhancing co-curricular activities and provision of incentives to learners.

The study has established that a number of factors hinder multiple intelligence enhancement these include non-availability of teaching and learning aids in schools, lack of funds, lack of appropriate infrastructure for practical subjects and large classes. Other challenges are learners' absenteeism and lack of incentives and rigid curriculum to help learners enhance their intelligences especially in the arts.

CHAPTER FIVE: DISCUSSION OF THE RESEARCH FINDINGS

5.1 Overview

The previous chapter presented the findings of study. It was found all the teachers and headteachers were meeting the term multiple intelligence for the first time in their teaching career; teachers acknowledged the fact that learners possess different abilities which can be enhanced by both the school and the home environment; the curriculum incorporates multiple intelligence in that the subjects contained in the curriculum are well linked to eight multiple intelligence areas; and that the suggested teaching strategies by MOE enhances multiple intelligences because the learner is put at the centre stage of teaching and learning.

Teachers, headteachers and Parents disclosed a number of factors that in enhance multiple intelligence in learners at primary school. These are use different methods in teaching; all subjects be taught as time tabled; school community partnerships; need for teaching and learning aids; provision of incentives to learners and enhancing co-curricular activities. The study has established that a number of factors hinder multiple intelligence enhancement include lack of teaching and learning aids in schools; lack of necessary sporting facilities; learner absenteeism; large classrooms; lack of incentives for learners and rigid curriculum; non-availability of teaching and learning aids in schools; lack of appropriate infrastructure for practical subjects and large classes.

This chapter discusses the findings of study in the light of the main purpose of the study and the specific research objectives. The main purpose was to assess home and school factors enhancing multiple intelligence in learners at primary school. The specific objectives were to: determine how teachers conceptualise multiple intelligence; Ascertain the extent to which the Zambian primary school curriculum incorporates multiple intelligence; explore home and school factors that enhance multiple intelligence in learners at primary school; and establish home and school factors that hinder enhancement of multiple intelligence in learners at primary school.

5.2 Teachers understanding of the concept multiple intelligence

The concept of multiple intelligence was understood differently by teachers and headteachers. Teachers and Headteachers understand the concept of multiple intelligence on the basis of their understanding of the term intelligence and also having an understanding that multiple means many. Therefore, the concept multiple was explained on the basis of how an individual teacher

understands the concept of intelligence and not in terms of explaining it on the basis of the theory as propounded by Howard Gardener (see section 2. 1). All the teachers and headteachers were meeting the term multiple intelligence for the first time in their teaching career. Therefore, teachers did not fully understand the concept of multiple intelligence, however, the teachers acknowledged the fact that learners possess different abilities which can be enhanced by both the school and the home environment.

The above finding is in line with the findings by Goronga et al. (2014) who observes that only one of the eleven teachers in the study was aware of the multiple intelligence theory. The ten teachers claimed that it was the first time to hear about the word multiple intelligence and they never came across it either at college or in their years of teaching as teachers.

Headteachers and Teachers need to understand the theory of multiple intelligence as established by Gardener (1983). Thus, the finding is in contrast with the Social Cultural Theory by Vygotsky (1978) who believes that much learning by children occurs through social interaction with mature peers who are adults involved in the child's life. The adult must support the child's learning before the child can internalize and master the learning content through model behaviours and provision of verbal instructions to the child. Teachers must therefore be aware of multiple intelligence theory for them to effectively enhance multiple intelligence in learners at primary schools. Gardener (1999) emphasizes that interested teachers' need to first read, study, and learn more about multiple intelligence theory and practices which others have used. Study groups with other teachers can be a good way to explore new ideas, compare results, and articulate questions and concerns. Teachers need appreciate learner's abilities in different learning areas hence assist learners in enhancing the particular intelligence learners are portraying in class. Teachers must therefore be aware of multiple intelligence theory for them to effectively enhance multiple intelligence in learners at primary schools.

Both head teachers and teachers indicated that learners in the school possess different abilities (see section 4.1) ranging from academic subjects and the arts. They explained that other than the academic subjects such as Mathematics, Science, and Social Studies and Languages the learners also possess skills and abilities in CTS. CTS is a combination of different practical subjects such as Home Economics, Physical Education, Art and Design, Music and Design and technology. They indicated that some learners are good in all the subjects while some learners are just good in the

arts or practical subjects, while others are just good in academic subjects. In addition, parents indicated that their children show potential in different abilities ranging from academic subjects to arts. The parents revealed that children's abilities are noticed through performance in academic subjects at school and their participation in co-curricular activities. Children's abilities are also noticed through play activities at home and with their friends.

This is in line with Gardener (1983), the proponent of the multiple intelligence theory, who argues that an individual possess eight intelligence areas but it all depends on which areas one is gifted in. The eight intelligence areas are logical and mathematical intelligence, linguistic and verbal intelligence, musical intelligence and interpersonal intelligence. Other types of intelligence include body kinesthetic intelligence, intrapersonal intelligence, naturalistic intelligence and spatial intelligence. In addition, finding by Naoe (2010) reveal that the fifteen grade five learners in the experiment possessed all the eight intelligence areas although bodily kinesthetic was their number one intelligence. Similarly the finding by Furham and Akande (2004) show that Zambian parents gave higher estimates on their children's multiple intelligences than their counterparts in Zimbabwe, Namibia and South Africa.

In addition, parents' observations are in contrast with the observation made by Hessel (2005) who found that parents' choice of mathematical and natural intelligences were higher than teacher perceptions (See section 2.2). He also established that parents and teachers may have similar or different perceptions based on their interactions with the child in different environments, therefore, parents and teachers need to work together to create learning environments which nature each child's multiple intelligence. Therefore, it is clear that both teachers and parents are aware that learners at primary schools possess different intelligences.

Parents and teachers understand the abilities of the learners, however, they need to go beyond just understanding learners needs but help the learners achieve their potential. This will enable learners be skilled and knowledgeable in their abilities at a tender age.

5.3 The extent to which the Primary Curriculum incorporates multiple intelligence.

From objective two the study established that the curriculum incorporates multiple intelligence in that the subjects contained and the methodologies outlined in the curriculum are well linked to eight intelligence areas as established by Gardener (1983), (See tables 4.1,4.2,). The suggested teaching strategies by MoE (2016) and the emphasis in the teaching of the arts subjects as early as

grade two enhances multiple intelligences because the learner is put at a centre stage of teaching and learning. In addition, parents, teachers and headteachers all agree that the 2013 curriculum incorporates multiple intelligence.

In line with Gardener (1983) multiple intelligence theory which establishes that an individual has eight intelligence areas (see section 2.1). The subjects (refer to tables 4.1, 4.2, and 4.3) can be categorised in specific intelligences to establish the extent to which the curriculum incorporates multiple intelligences. The intelligences are Linguistic and verbal intelligence, Mathematical and logical intelligence, spatial intelligence, Musical intelligence and Body kinesthetic intelligence. Other intelligences are intrapersonal, Interpersonal and Naturalistic Intelligences.

All languages which are in the school curriculum fall under Linguistic and verbal intelligence (Gardener, 1983). Children can be taught poems, writing stories, public speaking using English or any of the seven official Zambian languages which include Cinyanja, Lozi, Bemba, Tonga, Kaonde, Lunda and Lubale. Strong abilities in languages would enable children become lawyers, teachers, poets, politicians, and sales spokespersons because their success in life is dependent on spoken words.

Mathematics and Integrated Science can be linked to Logical and Mathematical intelligence, Mathematics and Integrated Science demand a lot of reasoning and analysis of facts through formulas and experiments. Strong abilities enable individuals become scientists, engineers, medical doctors, accountants, economists and other careers demanding logical and mathematical reasoning.

Expressive arts is a subject which enables learners to show their abilities in music, art and design and physical education. Therefore, this study area is linked to Musical intelligence which is the ability to sing, compose, writing of songs and dancing. This type of intelligence enables people to become singers and players of musical instruments such as pianos, guitars, key boards, drums to mention but a few. Furthermore, the Expressive arts promotes spatial intelligence in that through Art and Design and Technical drawing individuals are exposed to different drawings about nature and Engineering and architectural designs which are cardinal in spatial intelligence. In addition, physical education and dancing activities enhances Body-kinesthetic intelligence which makes people become footballers, netballers, athletes, dancers and other careers associated with body movements.

Intrapersonal and interpersonal intelligence are imbedded in subjects which are social in nature and allows individuals in interact and socialize, hence, learners develop skills of knowing core values and beliefs which are important for societal well-being. Therefore, it is important that learners are exposed to different child centered methodologies such as group work, role play, debate and other methodologies of cooperative in nature which are important in enhancing learners receptive and expressive language abilities.

Naturalist intelligence is also embedded in subjects such as Integrated Science and Social studies. These subjects contain content on environment, wildlife, farming and other aspects which are cardinal in environmental sustainability. Individuals with abilities in Naturalistic intelligence may become zoologists, botanists, veterinary doctors, agricultural scientists, farmers and other careers involving nature and environment.

The finding above is in consistent with Goronga et al. (2014) who establishes that while the Zimbabwean primary school curriculum reflects what Gardner (1999) advocates in terms of curriculum organisation, it remains to be seen when and how this can be implemented in pedagogy. Thus, the Zambian primary curriculum has all the features to show that it encompasses multiple intelligence, however, various schools to implement that basing on the methodologies being used to teach the learners.

Similarly, the finding is in resonance with Piennar (2008) who found out that there is a close link between outcomes-based curriculum in education South Africa and multiple intelligence approach to teaching. As such multiple intelligence approach to teaching is a valuable approach to follow when teaching in an outcomes-based way, because both approaches are learner-centered and take the individuality of each learner into consideration. Both approaches believe that all learners can achieve success if they are taught in innovative ways and according to their unique preferences and needs. In addition, Gardener (1999) emphasises the need for schools to have a program rich in visual and musical arts, to adequately address the full range of intelligences that learners portray from elementary grades up to secondary schools.

It is, therefore, the task of schools to ensure that they teach learners in their classes using methods that will enhance learner's abilities, it has been noted that the curriculum encompasses all the intelligences as established by Gardener (1983).

Most parents were not sure if the curriculum caters for different abilities that learners portray both at home and at school. However, they acknowledged the fact that the children are involved in a lot of activities at school such as clubs, sports, making of models, reading, writing and drawing. They stated that they are able to tell that these activities are taking place in the school through homework, open days and by going through their children's books.

It has been established that parents, teachers and head teachers all feel the curriculum encompasses multiple intelligence because of the different subjects and learner centred methodologies recommended in the curriculum. However, the task is for schools to teach all the subjects stipulated in the curriculum and to make sure that all the subjects are taught accordingly as they appear on the timetable using variety of methods. This resonates with Chipili (2013) who reveals that teachers did not fully engage the eight multiple intelligence in their teaching styles, therefore, teachers did not aim at addressing individual learners' intelligence but the approach was used unknowingly or misplaced.

5.4 Factors enhancing multiple intelligence in learners at primary schools

From objective four the study has shown that there are number of factors that enhances multiple intelligence in learners at primary schools, (refer to section 4.3). Teachers and head teachers reported that there is need for teachers to use learner centred methods which enhances creativity, curiosity and as way of identifying learners' strengths and weaknesses. They also observed that there is need to provide the necessary teaching and learning aids to support learning, need for collaboration between the school and the home environment in order to help a child achieve his or her potential, all subjects be taught as they appear on the time table and enhancing co-curricular activities.

Teachers indicated a number of factors that enhance multiple intelligence in learners at primary school such as the use of different methods when teaching and involving learners in the areas where they show strength as way of encouraging them so that they achieve their potential in their ability areas. The teachers feel the best strategies to enhance different intelligence areas is the use of learner centred methodologies such as group work, demonstration performance, pair work, field trip, debate, discovery method and Individualised Education Plan (IEP) for learners with Special Education Needs.

The above finding is consistent with Gouws (2007) who reveals that practical implications of multiple intelligence show that learners are free to explore and learn in variety of ways whereas, teachers help learners to understand and appreciate learner's strengths and weaknesses and also to help identify real world activities that will stimulate further learning. Similarly, Al-Balushi (2006) establishes that methods such as cooperation, guided inquiry, brainstorming, questioning scientific inquiry, and project based learning cycle enhances multiple intelligence in learners. This finding is also supported by Bowman (1996) who observes that if children are exposed to a variety of learning experiences, which tends to be healthier over the long run they eventually find their own niche among the intelligences. Furthermore, Vrries (2014) found out that awareness of learning styles are pivotal in catering for different needs in children, therefore, learner performance can be improved by using creative strategies such as songs, debate, role play and other learner centred activities in class. Mapalala and Mpofo (2017) have established that other than using variety of teaching strategies and resources in class teachers implementing multiple intelligence also need to show positive opinion of integrating Gardener's multiple intelligence theory for holistic learner assessment in all subjects.

The use of learner centred methods enhances multiple intelligence in that learner are at the centre of learning and they are able to show their skills whenever they are given chance to do so. Having a learner at the centre of the teaching and learning process, builds confidence and leadership skills which are cardinal in enhancing intrapersonal and interpersonal intelligence. This finding is consistent with the Social Cultural theory by Vygotsky, who according to Subban (2006) urges educators to vary their instructional strategies in order to provide each student with appropriate amount of support and guidance to suit ability levels of each and every learner in the classroom. Therefore, teachers need to involve learners in their teaching and learning process this will enhance multiple intelligence in learners. Learning by doing exposes learners to show what they are capable of doing this enables teachers to identify the learners' strengths and weaknesses.

Therefore, teachers need to involve learners in their teaching and learning process this will enhance multiple intelligence in learners. Learning by doing exposes learners to show what they are capable of doing this enables teachers to identify the learners' strengths and weaknesses.

Both parents and teachers noted that engaging each other has proved to be an effective tool in enhancing different intelligences which learners portray. Parents' engagement through call ups,

open days and homework enhances the learning needs of a child. This finding resonates with Hessel (2005) who found that parents and teachers may have similar or different perceptions based on their interactions with the child in different environments, therefore, parents and teachers need to work together to create learning environments which nurture each child's multiple intelligence. Furthermore, Xie and Lin (2009) recommends that schools must encourage the integration of multiple intelligence in their teaching and learning must also seek parental support. Similarly, Gardner (1999) stresses the need for collaboration for multiple intelligence approaches to be more successful for this will create opportunities for formal and informal exchanges among practitioners. Exchanges are crucial once change has begun, because there are always problems to discuss and decisions to make.

If parents and teachers work together learner's needs will be met because there will be feedback in the teaching and learning process. For instance, if the school has an open day and a parent attends the open day they will share ideas about how best the child can be helped to achieve his or her potential.

The study found out that teachers emphasised the importance of teaching all the subjects in the curriculum as time tabled. It is assumed that some teachers in schools just teach their favourite subjects or subjects they consider to be important than other subjects. In line with this finding, Naoe (2010) recommends that there is need to assist teachers to construct instructional materials which are not only linguistic and mathematical intelligences but to other types of intelligence as well.

Teaching of all subjects in class, teachers should also strive to provide locally available resources in their communities to enhance teaching and learning in all subject areas so that learner's intelligences are enhanced. A similar finding was done by Friedman (2015) who reveals that multiple intelligence increases intrinsic motivation in learners at primary schools. He also adds that multiple intelligence requires variety of materials for it to become a reality in schools.

Teachers and parents disclosed that the use of different teaching and learning materials in teaching enhances multiple intelligence in learners at primary school. The above finding also corroborate with Kegan & Kegan (2005) who observes that raising smarter children needs an enriched learning environment with variety recreational facilities and toys balls, pianos, guitars cars and other toys which can enhance multiple intelligence (see section 2. 1). The finding also resonates with that of

Houston and Toma (2003) who considers home environments to encompass several of the elements that Gardner (1983) considers crucial to the development of a child's full potential. Statistically, parents whose homes tend to have more than one child from the very beginning of a child's induction into a home-schooling family the environment is richly furnished with visual, auditory, and kinesthetic cues about life. Parents need to establish an environment that will enable learners feel learning does not only take place in school but in the home and the community as well. Therefore, homes and communities must provide an environment that does not hinder learners' abilities. Parents must guide their children to master the skills in the children preferred intelligences

The finding is also in agreement with Naoe (2010) who observes that every child can be considered to possess eight intelligences in varying degrees, these intelligences can be enhanced through creative strategies, appropriate instructional materials and a stimulating and nurturing environment. Therefore, Naoe (2010) suggests orientation seminars for teachers, administrators, parents and other stakeholders to enable them understand different intelligences portrayed as bases for constructing appropriate activities to enhance a particular intelligence.

Parents like teachers have a responsibility to help their children achieve their academic potential by creating an environment which enhances learners' potential in his or her ability or intelligence areas. Thus, if a child likes drawing, such a child should be provided with a lot of pictures, pencils and other materials which can in enhance the skill.

The home environment must be stimulating enough to allow the child to explore and get exposed to a lot of activities such as games, storytelling, singing and dancing, playing, drawing and other activities which a child can practice which will not be affect his physical, emotional and spiritual wellbeing. These activities will enable parents, guardians or caregivers to identify the child's strengths and weaknesses through the child's likes and dislikes, thereby appreciating the child's strengths which can be enhanced.

Teaching and learning materials are cardinal in enhancing multiple intelligences as they enable learners to have hands on experience with realities. Teaching and learning materials does not only stimulate learning but also makes teaching and learning easy. It must be clarified that not all teaching and learning aids requires the school to buy but some of it can easily be sourced in the communities by involving learners and their parents. For instance, in a village set up when the

teacher wants to teach a lesson on dancing and singing, and if the school does not have drums, the teacher can find out through the learners where the drums can be found and make a request in this way the lesson will be taught with less difficulties, hence multiple intelligence will be enhanced

Headteachers and parents reveal that there is need for learners join clubs and sports discipline of their choices as way of enhancing multiple intelligence in learners. It must be noted that co-curricular activities are meant to supplement what is taught in class, co-curricular activities are not an independent subject. Clench (2010) found out that the role of music in the curriculum is on the emphasis of nurturing of generic values and attitudes towards culture, it does not provide for sufficient development for the subject or specific musical skills and knowledge instead this vital form of learning continues to be provided for in form of extra-curricular. Co-curricular activities are way of enhancing classroom lessons in a practical way. It is therefore imperative that clubs, games, production unit, and preventive maintenance programmes are aligned in line with the subjects and content in the curriculum.

5.5 Hindrances to multiple intelligence enhancement.

From objective three on the hindrances to multiple intelligence enhancement, the study has established that a number of factors hinder multiple intelligence enhancement these include non-availability teaching and learning aids in schools, lack of appropriate infrastructure for practical subjects and large classes. Other challenges are learners' absenteeism, large classrooms, rigid curriculum and lack of incentives for learners.

Headteachers and teachers who stated that the enhancement multiple intelligence is hindered by non-availability of teaching and learning materials in almost all the subjects being taught to the learners. Further, it was also revealed that facilities schools such as sporting arenas are small and not of standard measurement for co-curricular activities such as sports. In addition, headteachers and teachers revealed that teaching becomes a challenge if teaching and learning aids are not available to learners especially for subjects which are practical in nature such as Integrated Science, Physical Education, Home Economics, Art and Design and Music. Furthermore, teachers observed that large classes make it difficult for a teacher to know the strengths and weaknesses of each and every learner in class.

The finding above is consistent with Piennar (2010) who found that teachers have much more difficulty in enhancing multiple intelligence due to time constraints, teacher attitude to change, big

classes and a lack of resources added to the reality which policy makers have to consider in implementing this new approach. Furthermore, Clench (2010) found that infrastructure is also a challenge in enhancing musical intelligence, therefore, music remains accessible only to the privileged few. In addition, Friedman (2015) establishes that the factors that hinder or challenge teachers in employing multiple intelligence in the classroom are staff efficacy and lack of teaching and learning resources.

Teaching and learning enables learners grasp the concepts with easy because the teacher can use aids for learners to relate what they learn in class with the real world. . Thus, Vygotsky (1962) in his Social cultural Theory in Fetso and McClure (2005) stresses the three processes required in scaffolding require a model in which an adult can help a learner understand a concept. At first the adults or more skilled learners assume most of the responsibility for completing the task. For instance they may model and explain what they are doing to the learners by using teaching and learning aids. Thus, without appropriate teaching and learning aids it becomes a challenge for teachers to enhance multiple intelligence for learners especially in skills which are practical in nature. In addition, lack of appropriate infrastructure is a hindrance to learners' enhancement of intelligences such as, musical, body-kinesthetic, logical and spatial intelligences. These intelligences are practical in nature and require the use of various materials and infrastructure as laboratories, pitches for different ball games and other necessary materials.

The headteachers are of the view that lack of funds have made it difficult for schools to procure necessary teaching and materials and build appropriate infrastructure in schools to enhance multiple intelligence in learners. Teaching and learning aids and appropriate infrastructure will allow learners' practice what they learn during classes in during co-curricular activities. This will also enhance creativity and curiosity among learners in the primary schools. This finding is consistent with Clench (2010) who recommends that there is need for funding in schools for the procurement of musical instruments and necessary teaching aids for teachers to use in enhancing music education. Therefore, public schools needs to be funded by government in order for them to procure the necessary teaching and learning aids to enhance learning in primary schools. As for private schools more resources should apportioned for the procurement of pupils requisites to enhance teaching and learning of all subjects, thereby enhancing multiple intelligences.

Headteachers also observed that the curriculum is rigid as it requires a child to pass in six subjects as criteria for selection to grade 8 and 10, which makes some learners not to progress to higher grades, thus, the intelligences are shuttered. The finding resonates with that of Hanafin (2014) who established that it was apparent in the Irish multiple intelligence Project that the premising of curriculum content and delivery, state certificate assessment, school organizational practices, and attitudes on a narrow, unattainable and unfair construct of intelligence can result in educational exclusion and disadvantage for many students. In addition, the finding is also consistent with finding by Kaya and Ebenezer (2006) who establishes that invisible obstacles were the external pressures imposed upon teachers by Turkish National Curriculum, Central Assessment System which act as an obstacle to learners' progression into school. Nevertheless, the finding is in contrast with Gardener (1999) who emphasise the need for the atmosphere of choice within the school allows for meaningful options for curriculum and assessment of student learning. The spirit of multiple intelligence teaching can be undone if the curriculum is too rigid or if assessment is too narrow.

It is, therefore, important that the curriculum needs to be flexible to allow learners with abilities in the arts to progress in school. Although, the Zambian curriculum incorporates multiple intelligence, there is need for learners who show abilities in less number of subjects and cannot manage to progress to a higher grade to progress by enabling them to pursue subjects which they are able to excel. Therefore, the selection criteria must help learners enhance their individual intelligences and not having them drop out of the school system as is the case in the Zambian situation.

It was established by teachers and parents that rampant absenteeism among most learners make it difficult for consistence and in understanding the progress of each and every learner in class. Teachers and headteachers also explained that failure by the school administration to consider awarding learners who excel in the arts demotivates pupils who are intelligent in the arts. However, these findings are not in consistent with any of the literature that has been reviewed. It therefore, demonstrates that the research has established new knowledge on the hindrances in enhancing multiple intelligence in learners at primary schools. The findings are not in line or in contrast with any literature perhaps due to the fact that the respondents in this study feel you can only provide an incentive by buying something for someone but words such as well done, congratulations, you

are a genius are cardinal in making someone feel rewarded for the efforts. As for absenteeism, appropriate literature may not be found in that most studies on multiple intelligence were conducted in urban setting were people value the importance of education, however, this study was conducted in a rural setting where the value of education is less emphasised, hence this finding.

5.6 Summary

The Chapter has discussed findings of the study based on the objectives. It started by discussing teachers understanding of the concept multiple intelligence. The discussion showed that most teachers do not understand the concept of multiple intelligence as propounded by Howard Gardener.

The study showed that the curriculum incorporates multiple intelligence basing on the subjects and methods outlined in the curriculum which encompass all of Gardener (2008) multiple intelligence areas.

It was also found that lack of teaching and learning aids and appropriate infrastructure were some of the hindrances to multiple intelligence enhancement. Other hindrances include lack of a stimulating environment in the home, absenteeism and large classes.

CHAPTER SIX: CONCLUSION AND RECOMMENDATION

6.1 Overview

The study overall objective was to establish home and school factors enhancing multiple intelligence in primary schools, so as to recommend strategies enhancing multiple intelligence to learners in primary schools. This chapter provides the conclusion and recommendations of the study, from the research findings.

6.2 Conclusion

The study findings provide evidence that multiple intelligence is an important aspect of school. The findings in many ways resonate with the literature reviewed in chapter 2. The factors that enable and constrain multiple intelligence both at school and home were clearly identified by the teachers, head teachers and parents. This is despite the fact that the teachers and headteachers were meeting the term multiple intelligence for the first time. Teachers' explanation of how multiple affects learners was based on their own understanding of the concept which was not far from what the literature for this study postulated. From the findings of this study, it has been established that the curriculum incorporates multiple intelligence in that the subjects contained in the curriculum and the methodology are well linked to eight intelligence areas as established by Gardener (1983). The parents, teachers and headteachers all agree that the 2013 curriculum incorporates multiple intelligence in that the teaching of the arts through subjects such as CTS starts as early as grade two as outlined in the curriculum! The study also revealed there is need to provide teaching and learning support materials as well as equipment for practical subjects if MI is to be enhanced. According to the findings of this study, other area needing investment and support is the provision of recreation and sporting facilities in schools.

6.3 Recommendations

Basing on the results of the study and the conclusions drawn, the following recommendations are made:

1. MoGE should ensure that through Continuous Professional Development (CPD) teachers in primary schools are oriented on multiple intelligences so that teachers can share the experiences on the ways to enhance learners' abilities.

2. MoGE should fund schools in order to improve learning infrastructure and procure the necessary teaching and learning aids to support the enhancement of multiple intelligence in learners at primary schools.
3. Schools must ensure that the funding they receive from MoGE and other sources should be directed towards the procurement of teaching and learning, and putting up or improving learning infrastructure to support practical subjects and co-curricular activities in schools which can enhance multiple intelligences.
4. Parents and schools should collaborate in order for them to implement the best ways in which the learner's multiple intelligences can be enhanced in primary schools basing on learner's strengths and weaknesses.

6.4 Recommendation for future research

Having looked at the home and the school factors enhancing multiple intelligence in Chongwe District of Lusaka Province of Zambia, the researcher would recommend that a similar study be done in in another District of urban setting so that the findings could be compared and inferred for the whole country.

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APPENDICES

Appendix 1: Interview guide for Headteachers

Date:

Time:

School:

Please note that this is purely an academic research which seeks to investigate strategies enhancing multiple intelligence in learners at primary school. The information you will give will not interfere in anyway with your job.

1. What is your understanding of the term multiple intelligence?
2. Do learners in your class have same abilities in all subject areas?
3. Do you think the curriculum caters for learners with different abilities in the school?
4. Other than abilities in academic subjects such as mathematics, science, languages and social studies, in which other areas do your learners show intelligence?
5. In relation to question 4, what strategies are do you employ as a school to help learners achieve their potential in different subject areas?
6. What are some of the hindrances that you face in trying to enhance multiple intelligence in the school among your learners?
7. Do you engage parents about their children's performance in different subject areas?
8. What would you recommend as the best strategies to enhance multiple intelligence in the school?

Thank you very much for participating in the study.

Appendix 2: Interview guide for Teachers

Date:

Time:

School:

Please note that this is purely an academic research which seeks to investigate strategies enhancing multiple intelligence in learners at primary school. The information you will give will not interfere in anyway with your job.

1. What is your understanding of the term multiple intelligence?
2. Do learners in your class have same abilities in all subject areas?
3. Do you think the curriculum caters for learners with different abilities in your class?
4. Other than abilities in academic subjects such as mathematics, science, languages and social studies, in which other areas do your learners show intelligence?
5. In relation to question 4, what strategies are doing you employ as a school to help learners achieve their potential in different subject areas?
6. What are some of the hindrances that you face in trying to enhance multiple intelligence in the school among your learners?
7. Do you engage parents about their children's performance in different subject areas?
8. What would you recommend as the best strategies to enhance multiple intelligence in your class?

Thank you very much for participating in the study.

Appendix 3: Interview guide for parents

School:

Date:

Time:

Please note that this is purely an academic research which seeks to investigate strategies enhancing multiple intelligence in the home and in the school. The information you will give will not interfere in anyway with your job or family.

1. How is the performance of your child/ children in the school?
2. Are you happy with the performance of your child/children at school?
3. In which subject areas is your child/children performing well at school?
4. Other than academic work which other activities is your child/children involved in at school?
5. What play activities do you encourage your child/children to be involved in at home which can enhance his/her multiple intelligence?
6. Would you appreciate if your child/ children are gifted in other areas other than mathematical and linguistic abilities?
7. What strategies would you employ or do you employ for such a child to achieve his or her potential?
8. What factors make it difficult or would make it different for your child/children to achieve his potential in his or her area of interest?

Thank you for your participation in the study.

Appendix 4: Document Analysis Checklist

DOCUMENT	LEARNING AREAS	SUGGESTED METHODS	INTELLIGENCES ACHIEVED
Zambia: Education Curriculum Framework 2013.			
Teachers Implementation Curriculum Guide, 2015.			

Appendix 5: Consent Form

**THE UNIVERSITY OF ZAMBIA
DIRECTORATE OF RESEARCH AND GRADUATE STUDIES
SCHOOL OF EDUCATION
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY, SOCIOLOGY AND SPECIAL
EDUCATION**

CONSENT FORM

Dear Sir/Madam,

REF: REQUEST FOR CONSENT TO BE A RESEARCH RESPONDENT

I am a student at the University of Zambia doing a Master of Education degree in Educational Psychology. I am here to request for your consent to be one of my respondents to my research on “An assessment of home and school factors enhancing multiple intelligence in learners at three selected primary schools in Chongwe District”. This will help me come up with views from Headteachers, Teachers, and Parents on factors both School and Home enhancing multiple intelligence in learners at primary school.

Be assured that the information you will share with me will be confidential and will only be used for academic purposes.

Your consent to this request will greatly be appreciated.

Yours Faithfully,

..... (Sign)

Brian Mumba – Researcher/Student

Consent by respondent

Having read or heard the information concerning this research, I hereby voluntarily consent to be one of the respondents. In this regard, I reserve the right to end the interview at any time and choose not to answer particular questions if necessary.

Name: Signature/date: