IMPLEMENTATION OF LEARNER CENTRED METHODS WITHIN THE CONSTRAINTS OF SHORTAGE OF INSTRUCTIONAL RESOURCES AND FACILITIES

A CASE OF ITIGI DISTRICT COUNCIL

IMPLEMENTATION OF LEARNER CENTRED METHODS WITHIN THE CONSTRAINTS OF SHORTAGE OF INSTRUCTIONAL RESOURCES AND FACILITIES

A CASE OF ITIGI DISTRICT COUNCIL

By

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CERTIFICATION

We, undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation titled ***Implementation of Learner Centred Methods within the Constraints of Shortage of Instructional Resources and Facilities; A Case of Itigi District Council:*** in partial fulfillment of the requirements for award of the **Master of Arts in Education** at Mzumbe University.

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Supervisor's signature

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DECLARATION AND COPYRIGHT

I **Titus Kibarabara Kawishe** hereby declare that this dissertation is my own original work and that it has not been presented and will not be presented to Mzumbe University or any other university for a similar or any other degree award.

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Date ……..

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This study has been made successful by different number of people through their valuable assistance, good advice and friendly support which helped me to complete this work.

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DEDICATION

This dissertation is dedicated to my beloved parents Yukunda Kawishe, and Kibarabara Kawishe.

ABBREVIATIONS

CA	-	Continuous Assessments
DED	-	District Executive Director
DSEO	-	District Secondary Education Officer
ED-SDP	-	Education Sector Development Programme
ESR	-	Education for Self-Reliance
LCA	-	Learner-Centred Approach
LCMs	-	Learner Centred Methods
LCP	-	Learner Centred Pedagogy
LCT	-	Learner Centred Teaching
MoEC	-	Ministry of Education and Culture
MoEVT	-	Ministry of Education and Vocational Training
NECTA	-	The National Examinations Council of Tanzania
OFSTED	-	Office for Standards in Education
PEDP	-	Primary Education Development Plan
TEN/MET	-	Tanzania Education Network/Mtandao wa Elimu Tanzania
URT	-	United Republic of Tanzania
ZPD	-	Zone of Proximal Development

ABSTRACT

The main purpose of this study was to find out implementation of LCMs within the constraints of shortage of instructional resources and facilities. Specific areas covered were; First to identify reasons for shortage of instructional resources and facilities in implementing LCMs. Second to identify strategies for implementing LCMs in the context of shortage of instructional resources and facilities. Third to examine whether strategies of implementing LCMs help to promote performance despite of shortage of resources and facilities. Fourth to find out views of teachers towards challenges of implementing LCMs within shortage of instructional resources and facilities. This study used multiple case study research design, qualitative in nature and aimed to comprise of 103 respondents selected randomly and purposely. Data were collected through interviews, documentary review, focus group discussions and observations. Data from interviews and documentary review were analysed by content analysis and that from observations were analysed through drawing meaning by inference. This study reveals that strategies teachers used to implement LCMs within the shortage of instructional resources and facilities are functioning to improve students' performance. The findings shows students increase the morale of studying and confidence hence raises their ability to grasp the intended knowledge. The findings also disclose that, the major cause of shortage of instructional resources and facilities is lack of funds for buying gears for LCMs like books, computers, projectors, and printers. Moreover, it was revealed that teachers view LCMs as the best methods, however, close supervision of curriculum is advised. Also teachers should be trained to enable them to apply LCMs in an effective way and increase of funds for the schools was advised. It is recommended that it is worthwhile to ensure that all key educational stakeholders play their roles, without which good teaching methods will always remain on papers. Teaching using LCMs should be achieved in its implementation. The study concludes that the application of LCMs in secondary schools is apparent and important, but there should be a serious improvements for better results from these methods.

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CHAPTER ONE

PROBLEM SETTING

1.1 Introduction

This chapter outlines the evolution of the problem, the magnitude of the problem, the prevailing situation, the affected group and the objectives of the study. Briefly, it explains about the background, statement of the problem and the study objectives.

1.2 Background to the study

In recent years, many African countries have been reforming the historically common teacher centered curriculum, which employs a lecture style, 'learning by rote' method of teaching. Botswana, Kenya, Senegal, and others seek to promote creativity, critical thinking, and problem solving skills in their students (Vavrus, Thomas & Bartlett 2011).

In case of Tanzania immediate after independence of Tanganyika, the colonial education system had to be reviewed and transformed in order to reflect and respond to the educational settings and needs of the majority Africans. The aim was to provide all children with opportunities and access to education regardless their difference in cultural and socio-economic backgrounds (Mushi, 2012 cited in Mtitu 2014). Education provision in the early years after Tanganyika's independence was still rooted on the colonial education system. Mushi characterises the nature of post-colonial education immediate after independence to include more theory than practical and provision of education based on racial and socio-economic stratification. The curriculum immediate after independence presented many features of colonial influence. Mushi further explains that the education immediate after independence was still provided based on segregation and socio-economic status. The curriculum was theoretical to prepare children effectively to participate in production activities.

Because of this curriculum challenge, school leavers at both primary and secondary levels preferred office jobs to field works (Mushi, 2012 cited in Mtitu 2014).

Due to the challenges of the post-colonial education immediate after independence, the former president of Tanganyika then Tanzania, the late Julius Nyerere founded the Education for Self-Reliance [ESR] in 1967 as a policy and philosophy that would guide the provision of education in the country. The ESR was one of the initiatives of the Arusha Declaration, the declaration that formed the foundation and country's philosophy guiding the socio-economic, cultural, and political development initiatives (Nyerere, 1967). In terms of education, the ESR focused on the development of an egalitarian society characterised by high-minded individuals who are creative, problem solvers, and who can adapt to different environmental and socio-economic contexts. He proposed the provision of education that promoted students' critical and independent thinking, as well as one that would develop in student a sense of love and respect to one another and effective participation in productive activities (Nyerere, 1967).

> *"Tanzania educational system has to prepare the young people, among others; to play a dynamic and constructive part in the development of a society…it must inculcate a sense of commitment to the total community, and help the pupils to accept the values appropriate to our kind of future, not those appropriate to our colonial past" (Nyerere, 1967, p. 239).*

Therefore, according to Nyerere, realisation of the ESR underpinned by the Arusha Declaration presented the need for curriculum transformation in both content and pedagogical approaches. Meaning that, there was a need for a curriculum to be modified on the teachers and students' daily life. Moreover, classroom practices needed to connect students' real life what Nyerere called "praxis".

In order to achieve this, teachers needed to actively engage learners in their teaching and learning processes by using Learner Centred Methods [LCMs]. Thus, the change

of the curriculum and the instructional approaches were meant to transform the long-lived theoretical-based education and teacher-students relation with the aim of enhancing students' critical, creative, and independent thinking in the knowledge construction and life in general (Ishumi, 1976; Ministry of Education and Culture [MoEC], 1995 cited in Mtitu, 2012).

However, a 2004 report by the MoEC noted that "teaching and learning in secondary schools has remained traditional for a long time," and "most teachers have not been exposed to modern teaching and learning practices consistent with current theoretical developments in teaching and learning" (MoEC, 2004). In addition, the school inspector's report (2002/2003) show that, lecture prevails in classroom instruction by an average of 68% at all levels. Other scholars have confirmed that teaching in Tanzania has generally been characterized by didactic and teacher-centered approaches that use rote memorization as the primary approach (Barrett, 2007; Stambach, 1994; Vavrus, 2009).

In response, the government has implemented new approaches to encouraging and institutionalizing Learner Centered Pedagogy [LCP]. For example, a set of revised curricula for secondary schools was produced in 2005 that contains many references to the use and promotion of LCP (Vavrus, Thomas & Bartlett, 2011).

This explicit support for LCP is not only evident in national curricula; it is also included in documents to support the development of student teachers. For example, the physics diploma syllabus used in pre-service teacher education programs notes that teachers must, by the end of the two-year program, be competent in their ability to "apply participatory approaches in teaching and learning physics" (Ministry of Education and Vocational Training [MoEVT], 2009b, p. 3). The syllabus for English teaching methods similarly states that it "focuses on developing the student teachers' pedagogical knowledge and skills to cope up with competence based teaching and learning, including cross-cutting issues" (MoEVT, 2009a, p. v). The stated goal of teachers using participatory and competence-based approaches in the national

curriculum for teacher education highlights one of the primary means by which the Tanzanian MoEVT intends to institute this pedagogical reform. A radical shift in the skills and competences of Tanzanian students is supposed to result from these changes to national curriculum, pre-service course syllabi, and policy. It falls to primary and secondary school teachers to meet the challenging task of cultivating a complex set of knowledge and skills in their students to prepare them for the twenty first century. For instance, the government asserts that quality education is the "pillar of national development" and creates a "strong and competitive economy which can affectively adapt to the changing market and technological conditions in the region and global economy" (United Republic of Tanzania [URT] (1995).

1.3 Statement of the problem

The shift from teaching to learning is a crucial agenda in teacher professional development in the world. The influence of globalization has caused the world nations to harmonize their ways of doing things for the sake of opening up opportunities for better interactions between nations. This has meant, for education, addressing issues such as teaching approaches whereby emphasis was directed to the learner rather than the teacher. As Ginsburg (2006) argued, researchers and policy makers around the world advocate for active learning and student centred pedagogies.

Various studies in Tanzania have shown that while teacher acknowledge that LCA innovation is important, they rarely use it in their teaching (Maro, 2004; Meena, 2004). A number of studies in Tanzania primary and secondary schools have shown that although teachers have been trained using the new teacher education curriculum which emphasises the use of LCA, many still use teacher centred approaches in teaching (HakiElimu, 2005; Maro, 2004; Mdima, 2005; Meena, 2004; Msonde, 2006; Osaki, 2001). Failure to implement LCA was largely due to several constraints in teaching and learning. These constraints, according to studies by Chediel (2004), Msonde (2006, 2009) and Mtahabwa (2007), include inadequate teachers' to implement LCA innovation knowledge and skills because of limitations of in-service and pre-service

training programmes for teachers. Other limitations include large class sizes, insufficient teaching and learning resources available to teachers and students, as well as cultural values.

In the current time, the world is moving towards more democratic, responsive and cooperative ways of instruction, which are far better than teacher centred methods. However, developing world including Tanzania has a record of shortage of materials that could facilitate the application of more democratic methods. Despite the shortage, that hinders the implementation of LCMs, no statement from the government that directs teachers to continue using the traditional teacher centred methods. School inspectors are insisting on the use of LCMs as per syllabi guidelines. This means that teachers are required to employ LCMs even with all the challenges. This raises a question, how instructors apply LCMs within the constraints of instructional resources and facilities. This research is going to reveal the mystery of how teachers apply LCMs with the presence of shortage of gears for its effective implementation.

1.4 Research objectives

This study was aimed at finding out the implementation of LCMs, within the constraints of instructional resources and facilities.

1.4.1 Specific objectives

i. To identify reasons for shortage of instructional resources and facilities in implementing LCMs.
ii. To identify strategies for implementing LCMs in the context of shortage of instructional resources and facilities.
iii. Examining whether strategies of implementing LCMs help to promote performance despite of shortage of resources and facilities.
iv. To find out views of teachers towards challenges of implementing LCMs within shortage of instructional resources and facilities.

1.4.2 Research questions

i. What are the reasons for shortage of instructional resources and facilities in implementing LCMs?
ii. What are the strategies for implementing LCMs in the context of shortage of instructional resources and facilities?
iii. How strategies of implementing LCMs help to promote performance despite of shortage of resources and facilities?
iv. What are the views of teachers towards challenges of implementing LCMs within shortage of instructional resources and facilities?

1.5 Organization of the study

This study is organized in six chapters; chapter one outlines the introduction of the study, background to the study, statement of the problem, research objectives, research questions, organization of the study, significance of the study and delimitation of the study. The presentation of review of literature regarding the study is in chapter two. This chapter has both theoretical literature review and empirical literature review. The chapter is about findings from other literatures that relates to the topic of the study. Moreover, the chapter presents the conceptual framework of the study. Chapter three is about research methodology where issues of study design, research approach, study area, target population, sample size, sampling procedures, data collection methods and instruments, data analysis methods and procedures, reliability and validity, data analysis plan and ethical issues are addressed. Chapter four is about presentation of the findings of the study. This chapter has five main sections, which are 4.1 about introduction of the chapter, sections 4.2, 4.3, 4.4 and 4.5 presents about the findings of the study in relation to each research objective. This has included each category of the respondents i.e. students, teachers, academic teachers, heads of schools, DSEO and school inspectors. Chapter five presents data analysis and discussion of findings.

The chapter has five sections. Section 5.1 is about general introduction of the chapter. Sections 5.2, 5.3, 5.4 and 5.6 are about the analysis and discussion of the findings in line with the research objectives. Chapter six is the last chapter in this research. It is about the summary, conclusions and recommendations of the study. This chapter has five main sections, which are introduction, summary of the findings, conclusions, general recommendations and recommendations for further research.

1.6 Significance of the Study

The study has a variety of significance to policy makers, planners, students and community in general.

The findings of the study will increase understanding on the real situation of teaching approaches that are used in secondary schools. This will help various decision makers and planners in realizing the problems and their solutions regarding the use of student centred approach. As a result, education policy can be reformed to allow some important changes, not only to the study area but also nationwide.

In addition, the study significantly enriches different studies that have been undertaken on student centred approach. It is expected to influence efficiency and effectiveness of student centred approach, which is very important in improving the quality of our education.

1.7 Delimitation of the study

This study finds out the implementation of LCMs within the constraints of shortage of instructional resources and facilities. The findings may help in improving LCMs hence improve the quality of education. Four secondary schools were included in this study; these are Itigi, Kimadoi, Sanjaranda and Mitundu. Results that have been collected, analyzed, presented and discussed in this study are specific for the study area.

Generalization of the same results to other areas will depend on nature and set up of the other study, respondents, methodology used and status of the problem in the area of the study.

1.8 Chapter summary

The aim of this chapter was to introduce the study focusing on its main theme-LCMs teaching based on active involvement of students in the classroom processes with emphasis on students' learning. The chapter has sequentially discussed the historical development LCMs in Tanzania after independence. The chapter has thus shown how this period had contributed to the current debates regarding the theoretical and practical instructional approaches from the context of developing economies such as Tanzania. Therefore, from the onset, the chapter has presented the context and nature of the study and historical overview of education. The chapter has also presented background of the study, research objectives and research questions that guides the study. Lastly, the chapter presents the research significance, statement of researcher's position, and chapter summary. Chapter two presents a critical perspective approach as the conceptual framework to depict among others, the LCMs and its implementation complexities with respect to Tanzania's education system.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter provides information on what has already been done and what has not been done about the implementation of LCMs within the constraints of shortage of instructional resources and facilities. Both theoretical and empirical literatures were reviewed. Theoretical literature reviews provide definitions of key terms used in this research according to different authors. Moreover it provides theories upon which the study stands. Empirical review includes what has been done by other researches globally regionally and locally in relation to the topic of the study.

2.2 Overview of the chapter

This chapter consists of several sections; however, there are three main sections. Section 2.1 is an introduction of the chapter. Section 2.2 is an overview of the chapter. Section 2.3 deals with theoretical literature review. Section 2.4 deals with policies related to LCMs in Tanzania. Section 2.5 identifies different theories of teaching. Section 2.5 is about empirical literature review. Section 2.7 is about conceptual framework of the study. Section 2.8 identifies knowledge gap found from the reviewed literature and section 2.9 provides chapter summary. Some of the main sections have subsections not mentioned here.

2.3 Theoretical literature review

This part is divided into two major parts: the first part is on definitions and explanations of key concepts and the second part is about related theories.

2.3.1 Definition of terms

This section provides discussion about LCMs worldwide, in Africa and then in Tanzania. Moreover, how the government has participated to ensure LCMs are smoothly implemented.

2.3.1.1 Learner Centred Methods

Scholars have defined learner centeredness in a number of ways. For example, McCombs and Whisler (1997), define it as a perspective that couples a focus on individual learners with a focus on learning. Focusing on individual learners implies looking at their heredity, experiences, perspectives, backgrounds, talents, interest, capacity and needs.

Dupin-Bryant (2004) defines learner centred method as a style of instruction that is responsive, collaborative, problem-centred and democratic in which both learners and the instructor decide how, what and when learning occurs. Therefore, in learner centred learning, learners are considered first that is contrast to teacher centred approach.

The United Republic of Tanzania, (1995) policy documents and curriculum vision, defines LCT methods, as the implementation of a competency-based curriculum where methods of teaching and assessment focus on students' learning. LCMs emphasize knowledge and skills that are constructed by students, rather than directed by instructors.

In summary, LCMs could be conceptualised as an instructional approach that focuses on helping students to construct understanding of concepts and principles using their prior knowledge and experiences from their day-to-day life. Teaching strategies are tailored to students' lives and teachers encourage students to analyse, interpret, and predict information. Effective dialogue and students' active participation in the classroom processes becomes the defining feature of LCMs. This means that effective

LCMs should result in the students' knowledge construction. Students should be involved in activities that stimulate creativity, critical thinking, and problem solving skills.

2.3.1.2 Types of Learner Centred Methods

Various LCMs can be applied during learning process. Alexander et al, (1987) and Dubey (1985) outline types of LCMs, which are drama, pair work, role-play, debate and dialogue. According to Dubey and Alexander et al, drama is a kind of LCMs that one can perform as a play. Under such play, learners act out of a play or story knowing that would be the results. Pair or is a kind of group work that used for doing oral or written exercises. Under such method, the pair asks each other question in turn. Role-play is the act of behaving in a way typical to someone else or of imaginary person, either unconscious or for the purpose of learning process. Debate is a forum for exchanging ideas and opinions especially between two groups/people that take on opposite views.

Foy and Cyper (1961), outline LCMs as demonstration and experiment, trip, storytelling, dramatization and discussion, as well as demonstration and experience. According to them demonstration is an active learning situation in which a person or persons show how to do things. Experiment frequently used in conjunction with demonstration, for many instances a demonstration is an experiment carried out to show steps or process by which a result is achieved. Trips usually employed to indicate a journey or visits to a specific place. Storytelling used where there is little or no response as technique of presenting information. Dramatization and discussion used in order to make learners not only hear about subject matter, but they should also inter into and be a part of the study.

Keith and Morrow (1981) consider LCMs as procedures and techniques of teaching such as role-play and simulation, drama, game, and problem solving. Role-play and simulation according to Keith and Marrow are suitable drivers to the communicative

approach to teaching. These methods enhance creativity and stimulate hidden talents to the students.

Wehrli & Nyquist (2003) mention kinds of LCMs as brainstorming case based small discussion, self-awareness exercise test. According to them, brainstorming used to stimulate thinking, creativity, inquiry and consensus. Case-based small group discussion addresses case based tasks, exchanging points of view while working through a problem-solving process. Self-awareness exercise provides insight into how the learner thinks, acts, reacts or scores regarding on a particular topic.

These methods help the students to draw attention and interest in learning and encourage active interaction among teachers and students (Foy and Cyper 1961). Moreover, they provide personal relevance to the learner and provide a change of pace that creates a high degree of interest and they can facilitate individual insights into the need to make person improvements (Wehrli & Nyquist 2003).

2.3.1.3 Requirements of Learner Centred Methods

Effective and efficient application of LCMs of teaching and learning in Tanzania requires a number of factors, which includes training of teachers, resources should be enough for both teachers and the students, competent teachers and enough infrastructure.

2.3.1.4 Availability of resources and facilities

Teaching and learning resources commonly referred to as instructional materials are things that make teaching and learning easier and more meaningful. They are tools used for teaching and learning or those that supports the teacher in the delivery of knowledge. Thungu (2010) adds that teaching and learning resources promote active participation of learners especially resources that can be handled and manipulated by learners. Instructional resources include textbooks, reference books, chalk, charts, computers and many more. Allocation of resources to schools should be timely, should

be enough in accordance with the number of students, up to date and relevant to learning environment.

The availability of teaching and learning resources facilitates smooth application of LCMs in the classroom since learners can involve different sense organs during learning. This makes easy for teachers to handle their classes because of availability of enough instructional materials and resources such as computers, books and models. However, when school learning materials are not allocated timely or not enough, LCMs cannot function effectively. This situation triggers researcher to undertake research to determine how teachers can use LCMs within such situations.

2.3.1.5 Instructional resources and facilities

Instructional resources are visual, audio and audio-visual category that helps to make concepts abstracts and ideas concrete in the teaching and learning process. They are also materials that the teacher uses in supplementing his teachings. Instructional resources include materials used to facilitate learning for better results. Similarly, it is the use of the chalkboard, charts, models, overhead, films, television and computers in teaching process. It is not just the use of tools of technology alone but it is a systematic integrated and organization of machines both hardware and software and man (teachers), to solve educational problems (Olawale, 2013). Pictures (motion and still) graphics, maps, radio recording and play back and the equipments used to get some of these utilized, can be regarded as the components of audio-visual aids, or instructional aide (Olawale, 2013). Examples of instructional materials are charts, maps, diagrams, comics, models, globes, slides, film strips, television, radio cassettes, video, recorders, cinema, public address system, laboratories and museums, flash cards, flannel boards, card boards, calendar and computers (Olawale, 2013).

2.4 Policies related to Learner Centred Methods in Tanzania

The following are policies that were formulated in Tanzania to facilitate the implementation of LCMs since the independence (1961).

2.4.1 Education and Training Policy of 1995

Education and Training Policy of 1995 delineates a vision of education that enable learners to develop self confidence, an probing mind and the skills necessary for improving their quality of life and which promotes ethical behaviour, national unity, international co-operation, peace and justice (Tanzania Education Network/Mtandao wa Elimu Tanzania [TEN/MET], 2009).

The policy was aimed at ensuring that qualified children had equitable access to quality education (Machange, 2004). Education and Training Policy that was established in 1995 is one such improvement in the education sector. The policy led to the development of the Education Sector Development Programme [ED-SDP] that was aimed at improving the system's structure, management, administration, quality, access, participation, equity and effective financing of education. ED-SDP led to development of the Primary Education Development Plan [PEDP] that began being implemented in 2002 (URT, 2001).

The Education and Training Policy of 1995 is the one, which come out with the recommendation that teachers should teach using LCMs, however, form the onset of this policy and even before there were many challenges in our schools that hinder implementation of the methods. For example, the problem of overcrowding classes, which has even worsened in current years and acute shortage of instructional resources and facilities such as, books, laboratories and libraries.

2.4.2 The Education for Self Reliance of 1967

Due to the challenges of the postcolonial education immediate after independence, the former president of Tanganyika then Tanzania, the late Julius Nyerere founded Education for Self Reliance [ESR] in 1967 as a policy and philosophy that would guide the provision of education in the country. The ESR was one of the instrumentation instruments of the Arusha Declaration, the declaration that formed the foundation and country's philosophy guiding the socioeconomic, cultural, and political

development initiatives (Nyerere, 1967). In terms of education, the ESR focused on the development of an egalitarian society characterised by high-minded individuals who are creative, problem solvers, and who can adapt to different environmental and socio-economic contexts. It could be seen that Nyerere's philosophy on Tanzania's education focused on the need to provide a kind of education that was complete by itself. He proposed the provision of education that promoted students' critical and independent thinking, as well as one that would develop in student a sense of love and respect to one another and effective participation in productive activities (Nyerere, 1967).

Therefore, according to Nyerere, realisation of the ESR underpinned by the Arusha Declaration presented the need for curriculum transformation in both content and pedagogical approaches. This means that, there was a need for a curriculum modification on the teachers' and students' daily life and that classroom practices needed to connect students' real life what Nyerere called "praxis" (Nyerere, 1967). In order to achieve this, teachers needed to involve learners in their teaching and learning processes using LCT approaches. Thus, the change of the curriculum and the instructional approaches meant to transform the long-lived theoretical based education and teacher-students relation with the aim of enhancing students' critical, creative, and independent thinking in the knowledge construction and life in general (Ishumi, 1976; MoEC, 1995).

2.5 Theories of teaching

The modern societies need the school, which can provide desired education to the people (Chediel 2004). Schools therefore need to have expert teachers who are well equipped with knowledge, skills and good attitude to help them in transforming the learners (Chediel 2004). Teachers should have capacity of teaching effectively to produce positive results to learners. Various models and theories govern the choice of certain teaching method during teaching and learning process. This part presents some of teaching learning theories that relates to the topic of the study.

2.5.1 Factory model of schooling and an objectivist perspective of knowledge and learning

The proponent of this model look at a school as a factory, that is a place in which instructions and tasks are standardized, and knowledge is constant and unchanging. To them a teacher is so special and vital one who has acquired a lot of knowledge from a particular discipline.

Therefore, to them a teacher is a main source of knowledge. Nothing can be done in the classroom without a teacher. A teacher transmits this knowledge and passes the information to their learners. Arends (1998) adds that teachers are individuals who have acquired a "chunk" of important knowledge. Their role is to transmit that knowledge in a form of facts, concepts and principles to students. The success demonstrated through students' master of curriculum measured by standardized achievement tests. The performance of students under this model is poor since teachers frequently use lecture method in teaching. Learners become passive and copy notes from the chalkboard. Since learners learn theoretically, they lose interest of learning and gain little memory of what they learn.

2.5.2 Constructivism Theory

In 1978, constructivism theory emerges as an alternative model to factory model. It was a theory that gained respectability in some education circles. Constructivist perspective holds that knowledge is somewhat meaning is constructed by learners through experience. Supporters of this theory contend that learning is a sound process in which learners construct meaning that is influenced by the interaction of prior knowledge and new learning events.

Constructivist theorists argue that the school curriculum is a set of learning events and activities through which students and teachers jointly negotiate content and meaning.

The performance under this theory is measured through student's ability to demonstrate competence, confidence of speaking in front of the mass, and solve problem.

Arends (1998) said that teaching from a constructivist perspective is not viewed as transmitting fixed truth to students but rather as providing students with relevant experiences and subsequent opportunities for dialogue, thus meaning can be constructed and evolve.

It was from this constructivist theory were the idea of LCMs of teaching emerged as a way of putting learner centred learning in whole process and activities of teaching and learning in the classroom.

2.5.3 Vygotsky's Theory of Cognitive Development

Vygotsky proposed that adults promote children's cognitive development both by passing along the meanings that their culture assigns to objects and events and by assisting children with challenging tasks (Vygotsky Learning theory, 2012). Children initially use new skills in the course of interacting with adults or peers and slowly internalize these skills for their own, independent use (Vygotsky, 1978; Cole, 1996; Vygotsky Learning theory, 2012). Van Oers (1996); Reys et al., (1998), Skemp, (1989) supports the Vygotskian approach to teaching and learning process by stressing the importance of social interaction and discussion in learning. In line with this, Pound (1999) argued that social interactions help children to make connections between the separate bits of information they acquire through their own actions, observations and reflection. Often, children first experiment with adult tasks and ways of thinking within the context of their early play activities (Vygotsky, 1978; Cole, 1996). Actual developmental level represents an already completed developmental cycle that contains what the child is able to do alone. In other words, we can say that it is the independent level of mastery or what s/he has already mastered and achieved alone.

Vygotsky introduced the notion of Zone of Proximal Development [ZPD] in the process of child learning and development of higher mental psychological function (ibid). Vygotsky emphasizes the relationship between humans and the social cultural context in which they act and interact in shared experiences (Crawford, 1996; The cognitive theories of Piaget and Vygotsky, 2009). According to Vygotsky (1978), ZPD represents the distance or gap between the actual and potential level, between what an individual child is able to do alone and what she/he can achieve through problem solving under adult guidance or in collaboration with more experienced or capable peers or adult (Vygotsky, 1978; Rogoff, 2003).

Vygotsky's theory of cognitive development asserts that learning is a result of interaction between pupils and capable peers (Vygotsky, 1978). With some guidance either directly or indirectly from an adult or peer, a child can master the knowledge, skills or strategy very easy (Westwood, 2004).

Therefore, learning development is the result of interaction between the child and his/her environment (Vygotsky, 1978; Vygotskian perspective on cognitive development, 2002). Learning activities that fall within a child's ZPD have a high probability of success, whereas activities beyond the zone may result in a failure and frustration (Reys et al., 1998).

2.6 Empirical literature review

This part includes what has been done by other researches at a global level, in Africa and lastly at local level, in relation to the research topic.

2.6.1 Learner Centred Methods World Wide

In Western societies, teachers and students have been exposed to both the teacher/expert and student centred approaches from public debates and real life experiences in classrooms. For example, the United States, Canada and the European Union spend considerable resources to promote a student centred approach at all levels

of education. A variety of different approaches has been developed under the umbrella of the student centred approach. These include cooperative learning, student centred instruction and hands-on learning. In contrast to Western countries, the controversy surrounding the teacher versus the student centred in Central Asia is radically different. This difference is because people in Central Asia were suddenly exposed to new way of conceptualising education (de la Sablonnière, et al, 2009).

Specifically, it is only recently that teachers and students have been exposed to this debate between the two approaches. This is not surprising given that the background for the debate is the context of dramatic and rapid changes that have affected Central Asia, including education. Consequently, the debate between these two approaches becomes especially pronounced in societies experiencing fast-paced political, economic and social changes, because the question of what should be taught and how it should be taught becomes a matter for the future survival of the society (de la Sablonnière, et al, 2009).

Barbara McCombs has also published extensively on the topic of learner centered teaching (McCombs, 2000). Her work emphasizes the role of positive feedback between student and instructor and the importance of an encouraging climate of learning both in and outside the classroom. Her work also found significant value in our better understanding the individual student's perspective on the learning experience and having diverse approaches that allow all students to be better invested in their learning experience. The lesson from McCombs has the idea that there must be a positive feedback between learners and their teachers. This is possible when a teacher uses LCMs and when there are enough instructional resources. This is not the case in the study area and the country in general. This situation trigger this research in order to reveal what is happening with the learner centred in such challenges.

Various studies carried out on the attitudes of teachers and students on the application of LCP. Ebert et al (2011) conducted a research on LCP. A workshop designed to help faculty shift from teacher to LCP in science courses was initiated.

The survey indicated that, 89% of the respondents stated that they apply learner centred approaches**.** In contrast, observational data showed the majority of faculty, 75% uses lecture, which is teacher centred pedagogy, showing a clear disconnect between faculty's understanding of their teaching and their actual practices. The study revealed that there are a situation that teachers may think that they are using learner centred approaches but in reality, they are still using teacher centred pedagogies.

Weimer (2002) present a similar assessment but also one perhaps built for small college and university classes where student is challenged to have rights in the learning experience. Her research shows those students in favour of passive learning and who at the end finds the learning far superior of their ownership of the learning experience do not always initially like the changes.

Such situation does involve a reallocation of power in the classroom although it is clear that classroom control remains with the faculty instructor. Her research end up with the fact that student learning becomes more effective when students are teaching fellow students and involved in subsequent evaluation. The researcher is going to study if the teachers do apply LCMs in the circumstances that there are many challenges facing it.

Howell (2006) conducted a research on students' attitude on learner-centred education in Midwestern a USA university. Howell concludes that the process of becoming educated, self directed, autonomous members of society requires that students to develop active learning which is a primary purpose of the learner centred paradigm. This clearly shows that when students are well prepared for LCMs the benefit and their attitude towards the methods become positive. However, there are many challenges in the case of Tanzania. One may ask if it is possible to have learner centred classes with the problems such as big class sizes and lack of instructional resources and facilities to extract the benefits of the methods.

The study carried by (Yeung 2009) in Hong Kong on student centred approach to teaching since the 1980 found that students in the country tend to be traditional learners who rarely experience real student centred learning. Teachers continued to focus on teacher centred pedagogies to their students. Constructivist learning models such as inquiry remain little used by students in most Hong Kong classrooms.

Manal et al (2008) carried a research that assesses teachers' perception on LCP. He found that 56% of teachers acknowledge that LCP improve ability of students to learn materials. Moreover, 51% agree that students have to be prepared differently for the class. The researchers finalize that teachers are willing to apply LCP in teaching their students. They argue that teachers should be given continuing training for the benefits of LCP and students must be guided trough an orientation programmes that can be held at the beginning of their courses.

A research by Kalughula (2004) finds out that LCMs can be possible even with overcrowded classes in Bangladesh if the teachers are prepared to cope and manage the situation efficiently and effectively. This is one of the objectives which this study is about to speculate. If this is possible in Bangladesh, therefore it can also be possible in our country. However, it is clear that little has been done in Tanzania by academics, teacher educators, curriculum developers, school inspectors and researchers to collaborate with classroom teachers to work out pedagogical solutions for the overcrowded classes. Kalugula finds out that classroom teachers left alone to find a way on how to face the challenges. It is, therefore, time to involve teachers in finding the most appropriate pedagogical practices that took into account the realities in Tanzania schools. The problem of overcrowded classes has been presented as the hindrance to LCMs by many researchers. This research aimed to find if LCMs could be applied in the presence of overcrowded classes, which is one of the most common problems in education sphere.

2.6.2 Learner Centred Methods in Sub-Saharan Africa

Throughout sub-Saharan Africa, there has been a continuing shift in the policy, away from existing pedagogical traditions toward learner-centered pedagogy because of economic, educational and political factors. A number of countries implemented curriculum reform efforts that incorporated some elements of LCP, such as active learning and critical thinking, but the widespread embrace of this change that warrants further attention. The pedagogical paradigm shift from more teacher-centered to more learner-centered approaches is evident. Although it is clearly that each nation has a unique educational system and its own cultural, economic and political contexts affecting learner-centered pedagogy, similarities in policy formation and implementation definitely exist. Since each nation has its unique education system, each one finds benefits from the experience of other nation that attempt to institute LCP in its schools as well as teachers education (Vavrus, Thomas & Bartlett, 2011).

Findings by Tabulawa (2004), shows that teachers' predominance use of teacher centred practice was not motivated by teachers themselves but rather it was influenced by students' classroom practice. Students demonstrated some expectations from their teachers' pedagogical practices that affected their teaching practices. As a result of these findings, Tabulawa outlined two assumptions that are rooted within teacher centred practices. The first one is the way learners are viewed as passive receivers of the readymade knowledge from their teachers and second assumption is attached in the teacher centred instructional approach.

Thus study by Tabulawa (2004) reveals that students have great contribution towards the use of teacher centred practices. This resulted from students' expectations of their teachers. Students characterise their teachers as good or poor depending on their pedagogical knowledge, and their ability to prepare good notes and present to the students. This implies that students have influence on the classroom reality which is teacher centred practice.

2.6.3 Learner Centred Methods in Tanzania

Education system in Tanzania is highly centralized. Teachers in the country are trained, hired, and paid by the government except those teaching in private schools.

The government also administer development of national curricula and the National Examinations Council, an organizing body that supervises the compulsory national exams taken by all primary and secondary school students at the end of school years. The high degree of centralization has profound effect and influence on the educational practices of teachers which include pedagogies they use in the classroom. Second, like other African countries, Tanzania sought to achieve universal primary education and improve adult literacy rates during the 1960s and 1970s. The country was very successful in these efforts to the extent that she earn the honour of the highest rates in the two areas in Sub Saharan Africa by the early 1980s (Woods, 2007).

The research by Salema, (2005) on the attitude of teachers and students towards LCP in secondary schools in Kilimanjaro region revealed the following findings. First, both teachers and students have positive attitude towards the implementation of LCP. The general attitude means scores for teachers was 3.38 and for students were 3.72 to indicate that both students and teachers have a positive attitude towards the implementation of LCP.

First both teachers and students have positive attitude towards LCP. It was found that the general attitude means scores for teachers was 3.38 and that of students were 3.72. This supports the positive attitude towards implementation of LCMs. Second, it was found that students in public and private secondary schools had positive attitudes towards the implementation of LCP.

The findings by Salema (2005) have a reputation that in private schools it is easy to implement LCMs since many of these schools are well equipped with instructional resources and facilities. In government schools however, many of them lack instructional resources and facilities. Despite of this problem still learner centred is

insisted. This situation has trigged the researcher to conduct this research to find out how LCMs is conducted in schools with inadequate instructional resources and facilities. In his study on the altitude of teachers and learners towards LCMs, Salema (2005) also founds that the preferred LCMs by teachers were role-play, drama, class discussion and brainstorming. One of the respondents stated that, "*I prefer brainstorming because it encourages pupils to come up with wonderful ideas*." Teachers could have chosen the LCMs above because of the value they add in the teaching and learning process.

In real sense, most teachers prefer teaching using LCMs, but they underperform it or they give up because many challenges facing the implementation of the methods such as lack of teaching materials and overcrowded classes. Many teachers however, try to their best level to manage these huge classes and lack of teaching and learning materials in using LCMs. However, the question is how teachers cope with all the challenges while applying the methods. This study is going to find out strategies teachers use for LCMs in such situation.

McGregor et al. (2000)'s findings indicate that teachers who were interviewed in the research point out that LCMs enhance students in their classes to demonstrate one or more of these indicators of improved learning, much greater conceptual understanding, more complex critical thinking skills, better class attendance and greater confidence. Moreover, the study revealed that the challenges faced by teachers in implementing LCMs were of learning materials and financial constraints that made it difficult to use some of the LCMs like field trips. Some teachers confirmed that classroom management become a problem when students were allowed to learn on their own (McGregor et al. 2000). If all these challenges exists, one may ask that how LCMs can be applied? This question was answered by this research.

McGregor et al. (2000), found that teachers confirmed that paradigm shift from teacher centred to learner centred was justified. One respondent indicated that: *"It is always easy for pupils to remember what they had done and it is easier for them to*

recall it in exams." Another teacher stated that, *"when LCMs are used in class, most of the pupils seem to participate and enjoy the lesson."* Many teachers accepted the paradigm shift because of the benefits associated with LCMs like good retentions of the taught materials, motivation and activeness in classes.

The result from the study showed that most students prefer LCMs. For example, 65% of the students said that group discussion was very interesting. This implies that students found group work interesting in learning subjects like History.

Despite of these findings which support for LCMs, still there are some critical issues not yet discussed. Most of schools have shortage of instructional resources and facilities. It is obviously that some of LCMs becomes difficult to practice by both teachers and students due to lack of funds and the large class sizes. For example in order to have a field trip, one should have funds for the trip. On this ground, a researcher recognizes that there is a necessity to conduct a study to reveal how LCMs are used in such situation.

The study by Austin (1997), reveal that group experiences contribute to student learning, retention and general academic performance. Tinto (1998) supports this finding as he stated that, if properly structured, group work can reinforce skills that are relevant to both group and individual work including the ability to break complex tasks into parts and steps, plan and manage time, refine understanding through discussions and explanations, give and receive feedback on performance and develop stronger communication skills. The study by Larson (1997) indicate that classroom discussion is an effective way of promoting higher level of thinking, develop students attitudes and improve students ability for moral questioning. Newman (1998) on other hand added that class discussion provides opportunities for the student attention about information received in class.

These findings generally showed that most of the pupils found class discussion very interesting to learn with. The critique to these findings is that it does not show to what extent group discussion was used in classrooms, it just indicate what percent of students do prefer group discussion and its effectiveness. Are these findings giving the impression of what happens in our secondary schools? How group discussions can be implemented in a class of 200 students for example? Yet the findings by Astin, Larson and Newman have no answers to such questions.

This research is aimed at finding what teachers are doing with LCMs in such huge number of students and lack of instructional resources and facilities.

The report presented by Office for Standards in Education [OFSTED] indicated that (46%) pupils would find field trips very interesting to learn history if given an opportunity. The results generally imply that the majority of pupils are interested in learning using field despite that teachers rarely use them as a teaching method. According to OFSTED (2008), schools should recognise the value of field trips for improving standards and achievement in schools. OFSTED (2008) further states that field trips gives learners direct experience, opportunities to develop their knowledge and skills, are vital for forming relationships that are cardinal for forming relationships in class, gives them confidence through shared experiences and gives an opportunity for learners to be creative.

One of LCMs, which is said to be very effective in learning, is field trips. The findings by the OFSTET shows that school do recognise the values of this type of methods in learning due to its advantages like students having direct experience, opportunities to develop their knowledge and skills (OFSTED 2008). However, it has been shown that schools and the foremost reason being lack of funds for the trips rarely use this type of learning. This research is going to find the strategies that teachers use to enable this kind of fruitful learning method to take place even under lack of funds.

Davis (2001) and Maloch (1999) conducted studies about what methods of teaching learners prefer. This study indicated that more pupils (47%) said that learning using projects are interesting. These findings generally showed that more pupils find learning History using projects interesting. Maloch in particular found that students find project based learning more enjoyable and satisfying and that it facilitates greater understanding and develops life skills. Maloch further states that project based learning improves research skills in learners by helping them not only to use print and electronic resources, but also field work, surveys, interviews, consultations with experts and first hand observations and experiences.

Davis (1993) asserts that the project approach promote both academic knowledge and provides learners with opportunities to apply the skills they acquire through systematic instruction by building on the individual needs, interests, and strengths of all learners. Furthermore, the methods allow learners to work on their own, where it is appropriate hence promoting self confidence.

Although the survey findings indicate that teachers were positive about the implementation of LCMs, still there is contradicting circumstances. Most of the teachers still apply teacher centred approaches while majority of the students remain passive recipients of knowledge. Most of these LCMs are not applied by teachers despite their positive attitude towards the implementation of LCMs. Lack of instruction resources and facilities are supposed to be major hindrance of teachers applying the methods. Despite the fact that, teachers are still encouraged to use LCMs, the problem is how they apply LCMs within the constraints of shortage of instructional resources and facilities. This gap of knowledge contributes the researcher to find out how.

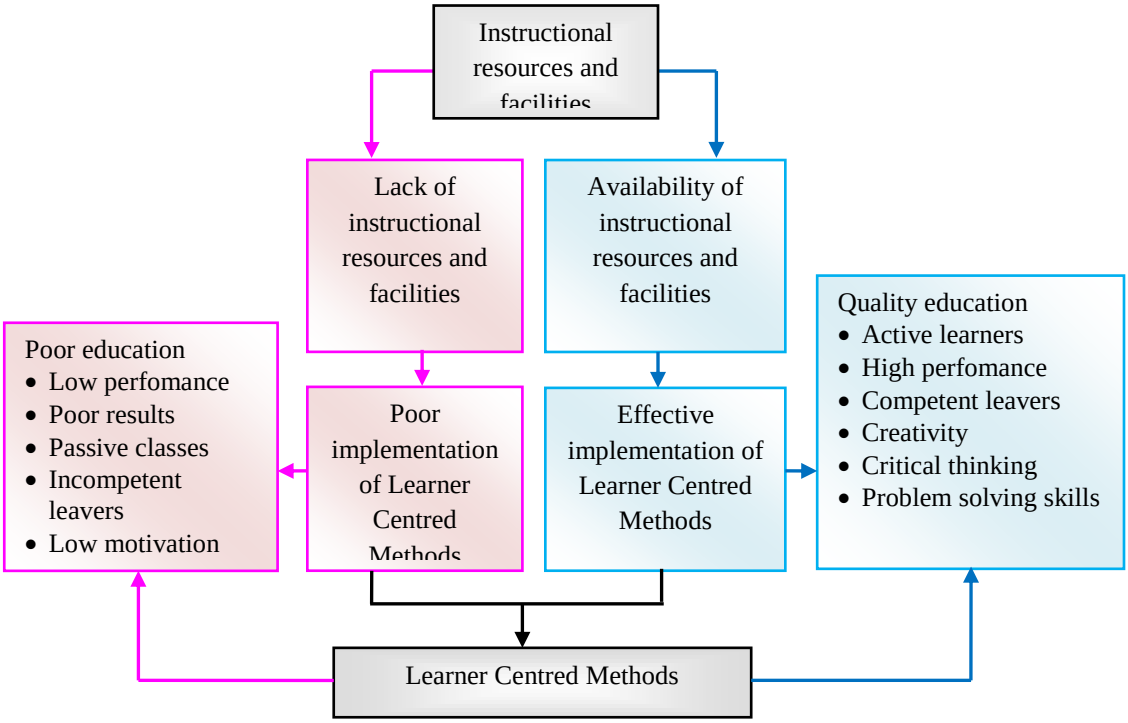
2.7 Conceptual framework

Conceptual framework illustrates variables that contribute knowledge to the study. The framework shows relationship between independent and dependent variables used in

this study. Independent variables are resources and facilities used in schools that include infrastructures like classes, laboratories and libraries; others are computers, books, charts, maps, diagrams and models. These are the inputs to LCMs, which are the dependent variable of the study. These inputs are expected to generate good outputs such as high performance of the students, competent students, quality education, motivation to students and active students when available in a required number.

The framework gives insight how instructional resources and facilities affect LCMs which in turn affects improvement of education because of low student performance, incompetent school leavers, passive classes and low motivation to learners. When instructional resources are available in a required number, LCMs can have positive results like producing active, creative and critical thinking learners, problem solving skills, high performing and competent leavers.

Figure 2.1 Conceptual framework



Source: Researcher own creation, 2015.

Figure 1.1 explains the conceptual framework about the implementation of LCMs within the constraints of shortage of instructional resources and facilities. The conceptual framework assumes that availability of instructional resources and facilities affects implementation of LCMs.

Resources constraints is one of the complexities that seemed adversely to affect the implementation of LCMs in Tanzania. According to the research findings, teachers taught in large classes of up to 100 students. Those classes had limited instructional resources including text and reference books, computer-assisted facilities, and those resources made from the school surroundings.

Teachers felt it difficult to involve students actively in a meaningful construction of knowledge given the resource constrained classroom contexts (Mtitu, 2014).

Tabulawa (1998) recommends the need for adequate supply of instructional resources to influence learner centred teaching. According to Tabulawa, meaningful construction of knowledge occurs when learners actively interact with resources. Tabulawa argues that when instructional resources are well organized and utilized, they promote learners' creativity, critical thinking, problem solving skills and active participation in the classroom activities.

2.8 Knowledge gap from the reviewed literature

This study was about implementation of LCMs within the constraints of shortage of instructional resources and facilities in secondary schools in Tanzania.

The study was expected to answer unanswered questions by previous studies, which included how LCMs can be implemented within the constraints of shortage of instructional resources and facilities. Many studies like (Salema, 2015, Mtitu 2014, Cheldie, 2004 and Felder, 2003), reported on the benefits of LCMs and challenges that are facing LCMs and how to eliminate the challenge but in fact these challenges have been common for long period.

From 1995, when LCMs was initiated by educational policy of that year, many researchers have been undertaken to explain challenges facing LCT methods (Mushi, 2012 cited in Mtitu 2014). For example, studies have reported that there is shortage of teaching materials because of poor funding, despite of these findings the problem still exists. This study is intended to cover this gap by showing what teachers are doing with LCMs in the presence of such challenges. In addition, the study suggests possible strategies to implement LCT methods. No study has been conducted to suggest how teachers implement LCMs within the constraints of instructional resources and facilities. This study covers this gap.

2.9 Chapter summary

This chapter has made a significant related literature review. It has evidently shown what has already been done in the field, to what extent and what has not been done, and, if done, how was the work done. Most importantly, the chapter shows the questions that were not answered by the reviewed studies, which was answered in this research. Chapter three is about the research methodology of the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter has covered about the theoretical and research related literature. This chapter provides information on the methodology of the study. It contains twelve main sections. Section 3.1 is concerned with the introduction of the topic. Section 3.2 is about design of the study. Section 3.3 describes study approach. Section 3.4 describes the study area. Section 3.5 describes the population of the study. Section 3.6 is about sample size and sampling procedures. Section 3.7 describes data collection methods and instruments used. Section 3.8 describes data analysis methods and procedures. Section 3.9 is about reliability and validity of the study. Section 3.10 describes the data analysis plan, and shows how data were analysed. Section 3.11 is about ethical considerations of the study. Finally, section 3.12 is about the summary of the chapter. Sections 3.5 and 3.6 have sub sections not mentioned here.

3.2 Research approach

The researcher used qualitative research approach for the aim of getting in-depth understanding about the issue under study (Saunders et al., 2009). The approach uses a triangulation of data collection methods.

3.3 Design of the study

Design of the study is an advanced plan showing how data was collected and how data was analysed, including the techniques that were used for data analysis (Kothari, 2008). Case study is a design that the researcher considered appropriate for understanding in detail the issue under study (Saunders, et al., 2009). This study uses a multiple case study research design. The design is selected in order to compare the pattern of interpretation and implementation of LCMs in constraints of instructional resources and facilities. In addition, the design was used because the study sought to

draw an in-depth understanding of the phenomenon under study. The study includes four secondary schools from Itigi District Council. Moreover, it involves focus group discussions with students and interviews with teachers, academic teachers, and heads of schools, secondary schools inspectors and District Secondary Education Officer [DSEO]. It also involves observation and documentary review.

3.4 Study area

This study was conducted in Itigi District Council in Singida region, a region located in central part of Tanzania mainland. It is one of the seven districts in Singida region of Tanzania. Itigi is situated between latitudes 5°42'25.4" South and longitudes 34°29'32.5" E East (Google maps 2016). The district headquarter is Itigi. The district bordered to the north by Ikungi district, to the east by Manyoni district, to the south by Iringa region, to the southwest by Mbeya region and to the west by Tabora region.

It has a population of 120,345 in which 60,168 are male and 60,177 are female (URT, 2013). The district headquarter is 741.6 kilometers from Dar es Salaam (Google map data 2016) Itigi has been selected conveniently because studies of similar nature have not previously conducted in the area. Thus, a researcher took this opportunity to address the study problem in this area.

3.5 Target population

Borg and Gall (1996), define target population as all the members of a real or hypothetical set of people events and objects to which a researcher wishes to generalize the results of study. The aim of this study was to obtain data that would enable to understand how LCMs is achieved despite the constraints of instructional resources and facilities. The study was conducted by carrying out focus group discussion with students and interviewing teachers and academic teachers in selected schools. In addition, in order to collecting more reliable information there was interviewing of the heads of schools, secondary schools inspectors and DSEO.

3.6 Sample size and sampling techniques

3.6.1 Sample size

The sample is a part of units of universe to be studied (Ndunguru, 2007). Sample size is a number of items drawn from the universe or population to form a sample (Kothari, 2008). This study consisted of 103 respondents. Since the research is qualitative, it needs respondents, which a researcher can manage. In addition, the time limit allocated for research activities cannot allow many respondents to be selected to the sample. Kothari (2004:102). One DSEO was interviewed, he is included in the study because is responsible with educational matters in the district and therefore he has rich information on the situation of LCMs. Two secondary school inspectors were interviewed, they were included in the sample because they inspect schools thus, they are assumed to have rich information and knowledge about the state of LCMs. This study also included 80 students from forms I–IV who were included in the sample because they are the consumer of education. The researcher chooses 80 students which is 78**%** (see table 3.1) of the total sample, because they are the affected group and they can well stand for the population of students in the study cases. The researcher believed that students have rich information of what and how they are taught. Only students from forms I-IV are included in the sample because it is assumed that they could well meet the researcher's aim by expressing themselves in as the focus groups questions (see appendix 1). Also at ordinary level, it is thought that the challenges of LCMs are of high magnitude compared to other levels. Twelve secondary teachers teaching ordinary level were interviewed as it is thought that they can well represent category of teachers in the case schools. It is expected that data coming from the teachers are alike hence including many teachers in a sample may cause data redundant (repetition). The sample of 12 teachers is thought to be reasonable for this study. Teachers are included in the sample because they are interpreters and implementers of the curriculum; therefore, they have rich information on the problems, challenges and prospects of the implementation of LCMs. Four academic teachers

were interviewed, these were included in the sample because they are in charge of academic matters in schools; therefore, they have rich information on LCMs. Three heads of schools were contacted; they were included in the study because they are in charge of the entire school so they have rich information about schools and their critical problems in running them.

Table 3.1 Sample population

Type of respondents	Number	Percentage (%)
Heads of school	**4**	**4%**
Student	**80**	**78%**
Teacher	12	12%
Academic teacher	4	4%
Inspectors	2	2%
DSEO	1	1%
Total	**103**	**100**

Source: Research Field Data, 2016

3.6.2 Sampling techniques

Sampling is a way of selecting things, people or places to study (Kombo & Trompo, 2006). Sampling can be determined either probabilistically or non-probability (Saunders, Lewis & Thornhill 2007). Probability sampling was used to obtain sample of students. In the first place, the researcher divides the total number of students in a class into five equal groups, i.e. $N \div 5 = X$. Letter X presents the number of students to be included in each group. From each group one student was selected to be included into the sample. For the case of teachers, three teachers were needed from each school. At first, the researcher obtains the total number of the teachers and their names in a school. Then the total number was divided by three in order to get three equal groups. Thus, three groups were obtained and then one teacher from each group was selected randomly and included in the sample. The purpose of probability sampling is to avoid biased sample. Non-probability sampling involves selecting a unit of the universe deliberately with a view that it represents the entire universe. The choice of an element to be included in the sample guided by experience, judgment and other personality views (Ndunguru, 2007).

Non-probability sampling, specifically purposive sampling was used to get a sample from academic teachers, heads of schools, inspectors and DSEO.

3.7 Data collection methods and instruments

In the first place, the instruments were designed and validated, validation involves letting the supervisor go through them and gave some comments. Second, pre-testing was conducted in one of the school in the study area before carrying out the actual study. Third, after pre-testing, the instruments were modified accordingly. Any changes considered appropriate were made. Fourth, focus group discussions were administered to students; then, interviews were administered to teachers, academic teachers and heads of schools, secondary school inspectors, and DSEO. Fifth, general observations were conducted and finally, various documents were reviewed. These includes lesson plans schemes of work, log books and inspectors reports. Data collected during pre-testing ware analysed and report for pre testing was prepared.

3.7.1 Data collection instruments

It is about providing reliable and valid answers to investigative questions (Ndunguru, 2007:92). Two types of data were collected, primary and secondary data. Primary data i.e. data from eyewitness was collected through interviews, and observation whereas secondary data i.e. indirect evidence was collected through reading relevant documents from schools to supplement the primary data (Saunders et al., 2009). In addition, triangulation, specifically methodological triangulation of data collection methods influenced the research design chosen for this study, a multiple case study design. Triangulation is the combination of methodologies in the study of the same phenomenon (Denzin 1978:291). This study employed interview (structured interview), observation, and documentary review methods for collection of data.

3.7.2 Interviews

Structured interviews were used in this study to collect data from the sample population. It involves the use of a set of predetermined questions and highly standardized techniques of recording. Thus, the interviewer in a structured interview follows a rigid procedure laid down, asking questions in a form and order prescribed, so the questions are not flexible (Kothari, 2004). The researcher develops themes and questions to be asked though the flow of question may differ from one interview to another (Saunders, et al., 2009). This technique is selected to be used because it is useful to obtain detailed information about personal feelings, perceptions and opinions. Moreover, it allows more detailed questions to be asked usually achieve a high response rate. Interviews were employed to collect data from; teachers, academic teachers, school inspectors, heads of schools, and DSEO (see appendices II to V). On the other hand, focus group discussions was used to students to get information on 'what', 'how' and 'why' about the implementation of LCMs within the constraints of instructional resources and facilities see appendices I).

3.7.3 Focus group discussions

A focus group discussion is the qualitative instrument for collecting data, which involves group of more than five respondents but not exceed twelve respondents. Focus group discussions had a maximum of five respondents to ensure similarity and avoid shyness (each group had students from same class), also to avoid groups running out of control (see appendix I).

3.7.4 Observation

This study employed observation technique to collect data, which is recording information from the field without asking from the respondents (Kothari, 2008). Participatory and non-participatory observation was used to see how teachers teach in class, topic taught, methods used in teaching, nature of activities taking place, materials used in teaching, possible competence developed. School environment;

classes, laboratories and libraries, students' works, and resources books, models, charts, maps, globes, and computers. Apart from teachers, observation was used to other respondents as well, to gain understanding of their views through paralinguistic features such as facial expressions and other actions which carry meaning was part of observation. This method was used to complement data collected through interview technique.

3.7.5 Documentary reviews

It involves collection of data from secondary sources (Ndunguru, 2007). This study used documents available with relevant information, such as lesson plans, schemes of work, subject logbooks and inspectors' reports. As suggested documentary, data can be collected in conjunction with interviews and observations (Punch, 2009:159).

3.8 Data analysis methods and procedures

Data were collected and then analysed. Data from interviews, focus group discussions and documentary reviews were analysed by content analysis. The data were grouped into common themes and coded, then, were analysed by breaking down its content into meaningful portions. Data from observations were analysed through drawing meaning by inference.

3.9 Data analysis plan

Data collected were summarized i.e. writing key ideas, categorized (grouping data into meaningful portion). This was done through coding of data and structure (written in narrative form). The coded data was analysed through drawing meaning by inference and by content analysis. The analysed data is presented in narrative (description) form.

3.10 Reliability and validity

Reliability is a condition whereby different researchers can get same results when they use same measuring instrument. That is the measuring instrument gives consistent results when used in similar situations (Ndunguru, 2007). It also refers to consistency of results and the extent to which a study can be replicated (Wiersma & Jurs, 2005).

Validity in research is about what a researcher wants or intends to measure (Ndunguru, 2007). Also, refers to something based on facts or evidence, that is, it can be justified (Wiersma & Jurs, 2005). Given the importance of reliability and validity in controlling the quality of data collected, the researcher tested the suitability of research instruments before using them in actual data collection by conducting a pilot study in the area. This was conducted in Handu secondary school. In addition, the researcher consulted the supervisor to check suitability of research instruments before using them in actual data collection. The researcher would make necessary adjustments of instruments whenever required. The researcher select Itigi district because studies of similar nature have not previously conducted in the area since this is a newly established district in the year 2015. Thus, researcher took opportunity to address the study problem in the area.

3.11 Ethical issues

Ethics are principles of conduct about what is right and wrong (Thomas, 2009:147). In this study, the researcher respected the respondents' freedom; the respondents who were interviewed were only those who agree to be interviewed. In addition, the researcher assured the respondents of confidentiality on the information they provided. That is the information they gave were to be used for the purpose of the study. The intention is to make the respondents feel free to provide the required information without fear of being held accountable for information they provided. The researcher also requested permits to conduct a study from the Mzumbe University and District Executive Director [DED] in the study area.

3.12 Chapter summary

The chapter has described the study area, population of the study, sample and sampling procedures, design of the study, data collection methods and instruments (interview, observation and documentary review), data analysis methods and procedures, issues of reliability and validity, data analysis plan and ethical issues.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents findings of the study. The findings are presented in four main sections. The sections answer the research questions that are in the previous chapters of this dissertation. The findings are presented through descriptions. The purpose is to explain the findings for easier understating of the readers. Quotations from the field have been used for supporting the presented findings and to create a natural state of the data.

Data collection began on 19th February 2016 it continued up to 21st of March 2016. This study had the purpose of finding out the implementation of LCMs within the constraints of shortage of instructional resources and facilities. Four schools were involved in this study. All four schools were government schools and were mixed day schools. One school was urban schools and the rest three were located in rural areas. Data of this study were collected using interviews, observation and documentary reviews. The study was expected to reach 103 respondents, table 4.1 illustrates.

Table 4.1: Expected and reached respondents

Category	Expected respondents	Reached (Female)	Reached (Male)	Total	Percent reached	Remarks
Heads of schools	4	0	3	3	75	Busy
Teachers	12	5	7	12	100	-
Students	80	34	46	80	100	-
Academic teachers	4	0	4	4	100	-
DSEO	1	0	1	1	100	-
School inspectors	2	1	1	2	100	-
Total	103	40	62	102	96	

Source: Research Field Data, 2016

N: B: The large number of male respondents has been largely a result of offices being held by males. For example, all academic teachers and heads of schools were males; however, this has no effect to reliability and validity of the research.

The presentation of findings based on the four objectives of this study. The findings are presented in four main sections. Section 4.2 presents findings on the first objective which was to identify reasons for shortage of instructional resources and facilities in implementing LCMs. Section 4.3 is about strategies for implementing LCMs in the context of shortage of instructional resources and facilities. Section 4.5 is about examining whether strategies of implementing LCMs help to promote performance despite of shortage of resources and facilities. Section 4.6 is to find out views of teachers towards challenges of implementing LCMs within shortage of instructional resources and facilities.

4.2 Reasons for shortage of instructional resources and facilities in implementing LCMs

To understand the reasons for shortage of instructional resources and facilities in implementing LCMs, the researcher asked the respondents to say what causes shortage of instructional resources and facilities in their schools or area of administration. The purpose of this item was to understand the different causes for shortage of instructional resources and facilities in implementing LCMs in the study area. Each respondent gave varied reasons on the item as shown in sections: 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5 and 4.2.6.

4.2.1 Heads of schools responses

Three heads of schools were interviewed on what are the reasons for shortage of instructional resources and facilities. The major reason from the respondents was large number of students compared to the available facilities and resources. This response comes from all three heads of schools.

The head of school complained that,

> *"There is very large number of students up to 80 students in one room required to carry 45 students. Sometimes teachers are obliged to mix two streams into one room to avoid many periods which they cannot*

implement within a planned timetable and moreover, because of shortage of rooms". (Interview, March 2016).

Another head of school complained that,

> *"We receive very large number of students in form one compared to the available rooms and learning materials. For example in this year, we received more than 200 students, but we have only two rooms for them..."* (Interview, March 2016).

Data from class observations shows that there is large number of students in some of classes especially form one and form two. The number was more than 60 students in a room capable of carrying 45 students. The number was larger for art subjects that science subjects in all four schools. This disparity may have been caused apart from the existing ideas that science subjects are difficulty, there were very few science teachers and moreover, laboratory were not well equipped with needed apparatus and chemicals. Some of schools have no laboratory building at all.

Therefore, there is more shortage of instructional facilities and resources for science subjects than arts subjects. This made some students to abandon studying science subjects like physics, and chemistry and shift to arts subjects such as history. However, it was observed that large number of students in some classes was caused by mixing two streams due to shortage of teachers in some subjects like Mathematics, English and science subjects. Thus, teachers mix the streams to avoid large number of periods, which sometimes are not implementable within the allocated teaching timetable.

Other major reason mentioned was lack of fund to buy resources and facilities. This reason comes from all three heads of schools. The funds received from the government is said to be not enough to satisfy all requirements of a school. Only basic needs of the school are bought for example chalks, papers, attendance registers.

Head of school commented.

> *"...laboratory's chemicals and apparatus for example, are very expensive for the school to buy and the government do not bring enough chemicals and apparatus to school either".* (Interview, March 2016).

Failure of teachers to improvise the available resources is another reason for shortage of resources and facilities. It was claimed that some of materials are available at the school but teachers are not using them to facilitate their lessons.

One head of school argue that,

> *"Some materials for instruction can be exploited right from the surrounding environment, but teachers are not using such opportunity to at least reduce the shortage of materials. For example, a biker can be made cheaply by subjecting glass bottle to few processes. Some of rock types are available at the school surroundings. This is a good opportunity for the teachers to have students to observe them, but most of them don't".* (Interview, March 2016).

4.2.2 Teachers responses

Twelve teachers from the four schools responded to the question on the reasons for shortage of instructional resources and facilities. There were multiple answers from the teachers. The major findings were the following.

The government does not provide enough funds to its schools. Shortage of teaching and learning materials was another major factor.

The teacher complained that,

> *"As far as I am teaching science subjects, I face problems like few apparatus and shortage of chemical and models, sometimes these*

materials are not available at all...some of teaching aids are seasonal for example some types of plants like bryophytes". (Interview, March 2016).

Other reasons include priority of a school on how to use capitation money from the government. Schools are given some freedom to plan for the fund received. It was claimed if funds are directed to other purposes than buying instructional resources, a particular school is likely to face shortage of instructional resources and facilities.

One of the teachers commented,

"*If capitation money is directed to other purposes than buying learning materials, this will be a source of the problem of lack of instructional resources and facilities at school".* (Interview, March 2016).

Large number of students selected to join secondary schools has been mentioned to be another source of shortage of instructional resources and facilities. It has been claimed that there are few resources and facilities compared to the joining students and those continuing.

One the teachers argued,

"Location of a school is another reason of lack of resources and facilities. The fact here is some schools that are located far from the district receive less attention by the government compared to those which are located near the district". (Interview, March 2016).

Data from observations of schools environment prove this fact as it was found that all three schools located far from district centre had no laboratories. Only laboratory buildings were on construction and this comes as a plan by the government to build laboratories in all schools.

Lack of awareness from parents is another reason why there is shortage of instructional resources and facilities. Parents do leave everything to be provided by the government. They consider that the government do provide everything to their kids. This is not the case because the government hardly meet the demands of its schools.

It was argued by teacher that,

> *"Parents thought that their children will find everything at school thus, many do not bother buying their kids things like books..."* (Interview, March 2016).

Government failure to implement its plans within time allocated. Teachers claim that the source of shortage of materials in schools is because the government fail to meet its plans on time causing acute shortage of materials. This force some teachers to use their ability such as making of some materials so as to meet the needs of LCMs

One of the teachers claimed.

> *"The government has a lot of good plans like equipping schools with enough teaching materials and facilities. For example, we are frequently asked to report for materials that we lack such as books, models, aids even rooms, tables and chairs. However, the report seems to remain on papers, there is very little implementation for what we report".* (Interview, March 2016).

4.2.3 Students responses

Thorough information from the school management, many students claim that lack of funds in educational sector is one of the causes for lack of instructional resources and facilities.

One of the students said that,

> *"Lack of fund contributes to shortage of technological materials like computers, and accessories. During school meetings between teachers and students, our headmaster tell us that the school lack some of materials because of little amount of funds he receive from the government. If these materials were available, we could learn new things from the internet, understand easily and teachers could lead us well".* (Interview, March 2016).

Other student posited that,

> *"There are shortages of learning materials like books in our school. This limit us from finding answers for a given assignment and other tasks...in science subjects also we learn theoretically because there is no chemicals or apparatus..."* (Interview, March 2016).

It has also been claimed that some of materials such as books are not revealed to the students and others not in use because of several reasons like lack of teachers and few materials in relation to the number of users (students and teachers). For example, computers, certain types of books and papers.

One student said,

> *"In our school for example, we have computer lab which is not being used by students...some books are only kept in the library, we do not have access to them. When we want to borrow them, librarian tells us that there are few copies which are being used by teachers".* (Interview, March 2016).

Data from observations of schools' environment shows that, in one of the schools in the study area, there are some of resources that are not fully utilized, for example, laboratories and computers that are kept closed all school hours. This has been a result

of lack of experts or lack of some apparatus and chemicals in the laboratories. Thus, some of materials are visual available but not used during learning.

For example, a teacher will not use a burette during titration if chemicals for the purpose are not available. Thus, there should be a complete set or pair of materials/resources for an effective implementation of LCMs. In addition there should be a required ratio of the materials or resources in comparison with the population of the users.

4.2.4 Responses from academic teachers

Four academic teachers, one from the four schools were involved in this research. When they were asked, about what causes the shortage of instructional resources and facilities had the following answers. The major reason, which was mentioned by all four academic teachers, was shortage of fund. This factor was said to be the main source of the shortage of instructional resources and facilities.

It was claimed one of the academic teacher that,

> *"Shortage of funds is the main source of shortage of instructional resources and facilities in our schools. We lack laboratory chemicals and apparatus...we lack teaching models like parts of human body and others because we do not have enough funds to buy them".* (Interview, March 2016).

Another academic teacher claimed,

> *"If we had enough funds, we could buy enough learning materials and construct enough quality rooms that could enable us to implement LCMs more efficiently".* (Interview, March 2016).

Other frequent occurred reason is that of large number of students compared to the available resources. This causes some of classes to have very large number of students which teachers find it difficult to implement LCMs.

One academic teacher said,

> *"...some of classes have up to 80 students, many students are selected in large numbers and classes are overcrowding".* (Interview, March 2016).

In addition, creativity of teachers or improvisation of the available resources was not common to teachers.

One academic master claimed,

> *"We have shortage of varieties instructional materials in our school. But this is not only contributed by lack of funds but also lack of teachers' creativity. This is because even cheaply made materials like wind vane, electric circuit and models like maps, charts which could be made by drawing or moulding are scarce at school".* (Interview, March 2016).

Moreover, absence of power (electricity) in some schools has made some materials to be out of use. This is because some resources such as computers and some of their accessories, and some of laboratory apparatus need power to operate. Absence of power means materials which use power are useless.

One teacher said that,

> *"Some of materials use power so as they can work, if you do not have power, they become useless, it is just like you do not have such materials".* (Interview, March 2016).

Other reasons explained are poor storage of the resources and facilities such as books, teaching aids, models and buildings by both teachers and students.

One of academic teacher claimed,

> *"Learning materials are not well stored by teachers and students. Some are damaged when they are in use because of careless and some are stolen...for example, students break many of our glass apparatus in the lab... some of books and other paper materials have been eaten by termites and rats and others are destroyed by rain spilling".* (Interview, March 2016).

Data from schools' observations confirmed that some buildings were in bad conditions and their environments were not conducive for learning. Moreover, there were very few teachers' houses and some of these houses were in bad conditions something which obliged some of teachers to rent houses outside the school compound. This affected the arriving time for the teachers hence affects subject timetable. This means that even implementation of LCMs is affected. In addition, large number of students in one room was observed, and very few handmade aids were seen. Many of the handmade materials were in form of simple drawings because they are easy to make, no moulded aids or models seen. Also in one school, some materials such as books and other papers were eaten by termites or rats and others show that they were wet at certain time.

4.2.5 DSEO responses

The response on the question on what is the source of shortage of instructional resources and facilities were lack of funds. It was said to be the main cause of the shortage of instructional resources and facilities in schools in the study area.

DSEO claimed that,

> *"There are no enough funds to buy instructional resources like books and aids. Capitation sent to school is not enough to run all activities including buying instructional materials and constructional and*

maintenance of resources of resources hence few teaching materials are bought for the schools" (Interview, March 2016).

Another response from DSEO was that, the shortages are also caused by large number of students in secondary schools, which exceed the capacity of schools such as buildings, books and science apparatus.

He added,

"Most of schools receive large number of students...however the available learning materials and resources such as buildings are not matching the number of students. When this happen, there classes will be overcrowded and LCMs will be difficult to implement". (Interview, March 2016).

4.2.6 School inspectors responses

Two secondary school inspectors were involved in this research. The researcher find out that the major cause for shortage of instructional resources and facilities were shortage of funds to buy instructional resources and facilities.

One of the inspectors confirmed that,

"Capitation received by the schools is not enough to buy all materials for instructions". This cause schools to have acute shortage of materials and facilities". (Interview, February 2016).

The failure by teacher to improvise the available resources has been mentioned to be another factor for lack of instructional resources and facilities.

The school inspector said,

"There are many teaching models and aids that teachers can create, but many teachers depend much on readymade materials which are

expensive to buy...a good example is using mud to make different kinds of physical feature in geography subject" (Interview, February 2016).

This finding indicates that teachers rely much on readymade materials which are not enough in schools hence causing shortage of such materials

In addition, poor storage of materials has caused them to be destroyed or stolen hence causing the shortage of materials. Large number of students compared to the available resources has been mentioned as a reason why there is lack of instructional resources and facilities.

The inspector commented that,

"Some schools have no elaborate rooms for storage of materials like books, chemicals, apparatus, teaching aids and models thus materials are short lived. ...some of students and teachers themselves misuse materials and therefore they do not last for long...Because of poor storage facilities, some materials are stolen or destroyed. These contribute to the shortage of instructional materials". (Interview, February 2016).

The finding reveals that many of school facilities are in appalling condition for facilitating learning and there is delayed maintenance. This contributes to shortage of materials as it leads some of materials to perish as a result of poor storage facilities.

4.3 Strategies for implementing LCMs in the context of shortage of instructional resources and facilities

This section presents, analyzes and discusses the findings in line with the second objective that is the implementation of LCMs despite the shortage of instructional resources and facilities. To get a comprehensible picture, there were focus group discussions with students, interviews to teachers, DSEO, and school inspectors. The

sections below give a broad picture of the strategies used to implement LCMs within shortage of instructional resources and facilities.

4.3.1 Heads of schools responses

Heads of schools were asked to say about the strategies they use in order to implement LCMs within the shortage of instructional resources and facilities, there was a similarity in their answers. Three heads of schools say about insisting the use of LCMs such as group discussion and debate. These methods are said to require less funds than other methods like field trips.

One head of school stated that,

> *"I keep on insisting my teachers to use LCMs despite the challenges. These challenges do not make the methods completely impossible. For example group discussions, debate and even field study can be implemented. Field study for example, is possible if the study is around school environment or near to school, were learners can reach by foot..."* (Interview, March 2016).

This gives a clear picture that LCMs can be implemented even when there is shortage of instructional materials. However some of methods are difficult to implement in this situation because there must be enough gears to support them.

Also, encourage students to write summer of what they are learning. This is aimed at improving English language, which will enable students to be active during learning. When students are fluent with the language they can contribute their ideas. This fact is supported by the following quotation from the respondents.

One head of school said that,

> *"I also ask the students to write their own summer during learning so as to assist them for future review. This in other way helps students to*

> *master English language which in turn makes them to be active during learning. When students become active they participate well through learning..."* (Interview, March 2016).

Also sharing of materials among nearest schools was mentioned as the strategy of implementing LCMs when there is shortage of teaching materials such as aids, models, books and laboratory chemicals and apparatus.

One head of school said that,

> *"Sometimes the school is compelled to share some of materials like books and laboratory chemicals and apparatus with other school. When there is lack of certain materials as mentioned above, I communicate with my neighbour school and if they have such materials we negotiate how we can use them"* (Interview, March 2016).

Other head of school said that,

> *"Sharing of what we have is one way of dealing with the problem of shortage of teaching materials in our schools. In science subject for example we share laboratory building, apparatus and chemicals so as other schools can conduct practical. Every year for example, I receive request from neighbour school to conduct practical in this school. This happen because they lack materials for conducting practical at their schools".*

4.3.2 The outcome from teachers

There was also question for teachers on how to implement LCMs within the shortage of instructional resources and facilities. There were multiple and related responses from this item. Five teachers said that group discussion is the best method to use when there are shortage of teaching resources.

One teacher said,

> *"...this method reduces the number of inputs to the learners such as books, aids or models as group of students share materials. A group of 10 or more students can share one book... Field trips are rare because we do not have funds for the trips".* (Interview, March 2016).

The other teacher commented,

> *"I frequent apply group discussion...because it is easy to implement since I have created the groups and it fits what I want students to learn. Also because of shortage of books, putting students in groups allows them to use few books available".*

Other teacher claimed that,

> *"Group discussions, brainstorming, think pair share... are the frequently methods I use and even other teacher apply them too. This is partly because of the nature of the school. For example, lack of books for each student, few rooms, and lack of funds. Therefore, as a teacher I try to think methods which I can implement within this situation. Other methods like games, drama, seem as part of the school time table. They usually benefit much the physical education subject".*

Think pair share and jig saw fit were also mentioned as the strategies that teachers use within the shortage of instructional resources and facilities. It was suggested that groups should have a mixture of slow learner and fast learner so as fast learners can help slow learners. Group members picked randomly for question or presentation to ensure full participation of each one.

One teacher stated,

> *"In the groups I ensure that there are slow learners and fast learners in each group, fast learners will help slow learners, in other word they act as a teacher...I use group discussion and think pair share because it is easy to implement".* (Interview, March 2016).

Class observations shows that teachers apply group discussions as one of the LCMs. However, it was found that the groups are too big (more than 12 students) and the groups were sometimes more than 7 hence create problems of space and supervision. Classes designed to accommodate 45 students had more than 80 students. This create difficult environment for learners to understand because of few books (only one for a group of 12 students). Moreover, because of space, there are some students may not understand what is going on in their groups as they are far from the reader and voice from nearby groups is also a problem.

Many teachers mentioned about improvisations of the available resources such as using mad or cement to mould teaching aids and paper to draw different models to produce instructional resources, which are too expensive for school to buy. Some of materials can be made by the students or teachers themselves and some of materials are brought to schools by the students. For example, certain kinds of plants and animals.

One teacher said,

> *"I use two balloons, an empty bottle of water and stalks of pawpaw leaves to make respiration system...my students become very interested and they understand quickly. If I need a model like plant or animal and they are scarce around, I usually ask students who can be able to get them and bring them".* (Interview, March 2016).

The other teacher said that,

> *"If there are few or no teaching aids or models I need to facilitate my lesson, I usually opt for another way of making them myself. But sometimes not all materials can be made some must be bought. If this happens, I use drawings or pictures to make my students understand".*

The other teacher said,

> *"Because making of some teaching aids or models may need some skills, I usually consult talented students to help me to make them. Those materials, which I am capable of making myself, I make them".* (Interview, March 2016).

This sounds to be a good technique of implementing LCMs within the constraints of instructional resources and facilities. However it may have negative effects to those students who will be given a task to deal with making or finding of such materials. This is because making of some materials may be time-consuming hence students can use much time to make them than studying.

Borrowing some of instructional materials like books from neighbouring schools has been said to be a part of solution to shortage of instructional materials. This is because some of schools have more materials compared to others.

One teacher claimed that,

> *"In my subject (English) I have only two copies literature books to teach more than 80 students, because of this scarcity, I usually borrow some copies of books from nearby school to fill the gap. This has helped me to reduce scarcity of these books".* (Interview, March 2016).

Another teacher commented,

> *"In our school we do not have laboratory, apparatus or chemicals of any kind. What I do when I want to perform a practical with my students is to go to a neighbouring school where there is a laboratory and all what I need for a particular practical".* (Interview, March 2016).

Other solution for the problem of scarcity of instructional resources and facilities was to visit other schools which have such resources. This has been the case especially in the science subjects because of absence of laboratory and its gears like chemicals and apparatus for conducting different practical.

One teacher commented that,

> *"I have to move with my students to neighbour school after negotiation. We move there and use their laboratory and then come back. If I do not do this my student will learn my subject theoretically because the school has no neither laboratory building nor apparatus or chemicals".*

In addition, communicating with different teachers on how to implement LCMs was mentioned by several teachers. It is said that teachers should collaborate to make LCMs effective to improve performance of the students".

One teacher said,

> *"Teachers work as a team so as to have update from each one on how to implement LCMs. This is because each teacher has unique experience on how to work with a certain kind of method for better results. Therefore, we collaborate for the purpose of improving students' performance through the use of these methods. Our cooperation has shown positive results because students' performance is improving-both fluent with English language and examination performance..."* (Interview, March 2016).

Moreover, asking government to increase budget for schools or buy instructional resources. Parents should be convinced to buy their children some of books, which are scarce, buy highly needed by schools. Private companies and individuals should be asked to buy some of materials or construct/repair infrastructures, which are scarce in schools.

One teacher said that,

> *"Because the government do not send enough money, and parents contribute very little to schools, we ask private individuals to contribute some of school materials. For example, in the year 2013, NMB Bank contributes 50 chairs and tables in our school. This helps us to implement LCMs more efficiently as we have resources we need".* (Interview, March 2016).

4.3.3 Students responses

Students were asked to say about LCMs strategies which their teachers use. This question aimed to find out what LCMs teachers are using during teaching. Many of the respondents confirmed that group discussion is a widely used method other methods mentioned were debate, subject club and field trip.

One of the students said that,

> *"...group discussion is frequently used method. In this method a teacher mixes students of different ability to make them help each other". Also to make all students participate in solving the problem given, a teacher assign a role for each student to present in a class. Another technique used to make all students participate in discussion is that of selecting any student to present or explain something in class. This makes us to be very active during discussion as we know that anyone can be chosen to*

answer a question from the class or explain something". (Interview, March 2016).

Other student added that,

> *"In addition, there are other methods which teachers use however, not frequent as group discussions. These methods are debate, subject clubs, and field study. Debate is conducted only once a week or sometime is organised in a class by a teacher. Subject clubs are conducted in the evening, after class hours, however not daily". Field study is very rare, ... however, when we learn something which is around our school sometimes a teacher tells us to move around for the purpose of learning... For example, when we were studying rocks, our teacher told us to move out of the class and find different types of rock around the school environment".* (Interview, March 2016).

This finding reveals that group discussion is the most used method. This is because it is easy to use and it does not require a lot of funds. Therefore it is the method which is widely used by many teachers. Class observations confirm that most applied is group discussion. However, other methods like brainstorming, and jig saw were observed. Field study is rarely used because of it expenses during the trip however, the findings shows that the method is used when the study materials are around or near to school environment. Debate and subject clubs are used as part of compulsory activities of the schools. Debate in particular is within school subject timetable in all case schools.

Other student added that,

> "*Teachers also ask critical questions which require us to use multiple sources in order to get answers". For example a teacher may come in class and ask a question about growth like what, how and why growth occur. These questions require student to use several sources to get answers... Teachers explain things using real environment around. For*

example a teacher explains growth by giving examples of grasses, trees and flowers outside our class". (Interview, March 2016).

Another student added,

"In addition, some teacher brings a laptop in class and start showing us some of information. For example, when we were studying about rocks in Geography subject, our teacher shows us the type of the rocks in pictures by using laptop". (Interview, March 2016).

This indicates that teachers use brainstorming and question and answer methods to make their students active during learning. It also confirms that teachers use real aid or live aid and other teaching aids like computers to make their students to understand the concept on study using. However, this indicates shortage of materials such as projectors since the teacher was using a laptop without such accessory.

A game as one of the methods of LCMs was also mentioned to be used to enhance learning. This method however, was direct used for subject related with the method i.e. *Physical Education*.

One student commented that,

"*When we learn Physical Education, our teachers take us to the play ground in the evening to play different kinds of games such as basketball, football, handball, netball and table tennis. During playing the teacher told us to learn various characteristics of the games like how it is played, how many players in each team, the names of players, pitch measurements... Then the following day, a teacher asks questions related to previous games".* (Interview, March 2016).

Data from documentary reviews which are lesson plans and schemes of work show that most applied LCMs is group discussion. This finding relates to the interviews by teachers, academic teacher and heads of schools. Class observations also show that

teachers were applying group discussions, brainstorming, question and answers and think pair share methods.

From the observations, it was also revealed that some of the methods like debate and subject clubs were used as compulsory activity at a particular school. In the case schools, one day (different for each school) was selected for debate. For the subject clubs, these were conducted after class hours. Therefore, they were part of remedial classes.

4.3.4 Responses from academic teachers

Data collected from academic teachers from each schools in the study area shows the teachers tend to use group discussion which was a response from all four academic teachers, other strategies said were gig saw fit, using of teaching aids and pair share method.

One academic master said that,

> *"...I usually advise teachers to use LCMs because it is what curriculum wants us to do...Group discussion and pair share are used by most of teachers because they are easy to apply and require few inputs".* (Interview, March 2016).

Academic teacher from other school commented that,

> *"The widely used method is group discussion. This can be observed even in the schemes of work and lesson plans of different subjects".* (Interview, March 2016).

Moreover, it was argued that teachers give learners with take home assignments which students have to solve them through discussion in their groups in a given time. This is done to solve the problem of shortage of materials such as books at school. This is

because students have to work on themselves to find the solutions for the given problem considering that they have a wider range of searching materials.

One academic master commented that,

> *"Some teachers provide with learners take home activities such like assignments because it is easy for them in their number to find some relevant materials compared to a teacher who had to work hard to find materials. After marking the work, a teacher may find relevant information and record them for future use".* (Interview, March 2016).

Cooperation with other schools in terms of sharing materials was mentioned as the strategy which teachers use in order to implement LCMs in the shortage of instructional resources and facilities.

One academic master said that,

> *"When we have shortage of materials like laboratory apparatus and books we negotiate with other school which has such materials to borrow them. In terms of lack of laboratory apparatus and chemicals, teachers and students move in nearby school and conduct some practical and then come back. Sometimes we have joint examinations with all schools in a ward in order to share some of materials".* (Interview, March 2016).

This finding implies that schools have shortage of teaching and learning materials, however, this shortage differ from one school to the other. In addition the findings point towards unequal distribution of materials to schools since a school is seen to have more materials than others.

4.3.5 School inspectors' responses

Two school inspectors were interviewed on what should be done in order to implement learner centred methods within the shortage of instructional resources and facilities.

The following responses on were given. One response which was given by the two inspectors was that of improvising the available materials to produce some models or aids. This will reduce the scarcity of some of aids and models.

One of the inspector commented,

> *"Teachers should learn to use local materials to produce some of aids or models...can be plants, animals, mad, sand, plastic bottles, glass bottles and pieces of wood. This will reduce shortage of materials hence facilitate effective teaching of LCMs".* (Interview, March 2016).

Another inspector added that,

> *"Using LCMs need a teacher to have some of materials like models and aids. These materials can be made from the surrounding environment. For example, plastic bottles, papers, class bottles and wood".* (Interview, March 2016).

Moreover, it was suggested for the teachers to cooperate in order share some of ways of teaching LCMs.

One of inspectors said,

> *"During teaching, there should be cooperation among different teachers, for example teachers teaching one subject in a school. This will help them to exchange knowledge different strategies on how to apply LCMs. The strategies can involve creating of materials using local materials hence this will reduce scarcity of instructional materials like aids and mode".* (Interview, March 2016).

Peer teaching was also recommended so as to have students work on themselves. It has been said this method makes students to be active as it reduces shyness and also reduces materials which teachers could use to distribute to each or group of students.

Inspector commented,

> *"Using student to teach their fellow may help to reduce number of materials used by a teacher because student is given a task to find solution for a problem and then present in class. This method makes student to be more active because they do not feel shy as when teacher is guiding them".* (Interview, March 2016).

4.3.6 DSEO responses

The interview with the DSEO on strategies that can be used to implement LCMs within the shortage of resources and facilities yield the following outcome. DSEO suggested to the teachers to use locally available materials to create teaching materials that are not available at their schools. Moreover, he said that, there should be cooperation between teachers from different schools and even within school. The cooperation could be on the matter of ho w to teach different contents of a subject using LCMs.

DSEO suggested that,

> *"I advise teachers to use locally available materials to make instructional materials. They should not always wait for the government to feed them all the materials they need... Some of materials are very expensive for the government to buy so I am advising teachers to use their skills and ability to make some of them from the locally available materials".* (Interview, March 2016).

He added that,

> *"...there should be cooperation among different teachers within a school or even outside school. This will help teachers to increase their knowledge on how to facilitate certain content of a syllabus using LCMs. From this contact some teachers may learn from their fellow, how to use*

local available materials to substitute with read made materials which are scarce or not available in their schools". (Interview, March 2016).

This however, indicates that there is little collaboration among teachers in the school as each teacher try to work on him or herself to try to improve students' performance. This has effects with LCMs as cooperation among teachers may lead to good implementation of the methods through sharing some skills, techniques and moreover, materials.

4.4 Ways in which strategies of implementing LCMs help to promote performance despite the shortage of resources and facilities

The aim of this objective was to get output from the respondents if, and how the strategies used to facilitate LCMs, improve performance. The following sections are the result from different respondents.

4.4.1 Heads of schools responses

There were three heads of schools who responded to the question. Some of the heads of schools confirmed that by using LCMs, general students' performance increases. This is because LCMs makes students to be active during learning and therefore increases their grasping ability

One head of school said that,

"The strategies have improved performance to some extent. I have seen the improvement of performance of students not only in the exams, but also with fluent in English language when they are speaking in the morning speech and presenting in classes. Also through writing their own summer, students increase ability to master English language writing and even fluent speaking". (Interview, March 2016).

It was also pointed out that sharing of teaching materials and resources has helped much to improve performance because students are able to learn science subjects practically. Moreover, some of books are very few in some schools thus sharing enable some schools to have access to such important materials.

One head of school commented that,

> *"When we share materials we have opportunity to enable our students to learn new knowledge easily and quickly. Students therefore, perform better by learning using aids or models, than just learning theoretically"*. (Interview, March 2016).

Another finding is that there is increase of student participation because of improvement of English language. Debate and clubs are said to contribute to these progress.

Another head of school commented that,

> *"There is improvement of English language because the use of group discussions debate and clubs encourage students to practice speaking English, which is the language of instruction. Therefore, there is increasing participation of students in learning process. Improvement of language efficiency help student to perform better in their examinations because they can understand what they are asked".* (Interview, March 2016).

This gives a view that language matters in the use of LCMs. This is because to be active learner has to contribute their views and the way of communication is through the use of English language.

4.4.2 Teachers responses

Teachers gave different responses on whether the strategies used to implement LCMs yield improvement of student performance. Some teachers claim that LCMs such as group discussion, pair share methods and field trip make learners to grasp the content easily than lecture methods.

One teacher commented.

> "*My students seem to enjoy the lesson and they understand quickly when I use group discussion as compared to lecture method because they participate in building the meanings. Group discussions help my students to practice speaking the language (English language) which we use in instruction".* (Interview, March 2016).

Another teacher said,

> *"LCMs makes students to be active during learning...they are able to grasp content quickly than if I lecture them. This is revealed in the tasks I gave them after a lesson, they general perform them very well"* (Interview, March 2016).

It was also revealed that teamwork helps to boost student understanding because teachers can have more skills on how to apply a certain method or invite teacher to facilitate certain content in a syllabus. By doing this students are in a good position to grasp easily the content under study.

A teacher commented,

> *"Teamwork is very effective and efficiency way of helping our students to perform better. This is because a teacher may not be competent in all content of his or her subject, therefore we have to cooperate and work as one team. Even students themselves do enjoy the lesson by seeing different teachers teaching the same subject".* (Interview, March 2016).

Moreover, the methods encourage students to be more active, this helps to cover large content of a syllabus for a short time. In addition, there is improvement in fluent of English language whereby students can explain themselves on a certain problem, search and make their own notes. There is also improvement of the relation between a teacher and students and among students themselves something which make lesson to go smooth.

One teacher commented.

> *"In the past, about five years ago, student teacher relation was far apart. Student barely was able to talk in the class because of feeling shy and they consider that teachers know everything. This was particular caused by the method teachers were using which is lecture method. Currently the relation is close were students can interact with teachers more frequently for the quest of understanding something".* (Interview, March 2016).

4.4.3 Students responses

Students had the following responses on achievements they get through application of LCMs. The frequently answer was that LCMs increases students' teamwork. This is because students have opportunity to cooperate among themselves during learning as a result it increases their performance.

One of the students said that,

> *"LCMs increase the scope of understanding because of cooperation among students themselves. When we are working in groups some of students who know something about what we are searching, helps those who do not know therefore we learn from others who knows something about the problem given..."* (Interview, March 2016).

Students also argue that LCMs increase morale of studying and expand their knowledge because various materials are used. The methods helps students to cooperate hence they can learn new ideas from their classmates.

One student argued that,

> *"When we are given a task, every member of group is given a task to work on. When we meet again, every one presents his/her founding and we compile all together and complete a task given".* (Interview, March 2016).

It was found that LCMs helps students easy to remember what they have studied because students are involved in generation of knowledge (doing practice makes perfect). Other response from the students was that, the methods help students to use variety of materials like books, pamphlets and internet.

One student said,

> *"LCMs help us to use many resources such as various books and other materials because teachers give us the tasks in our groups and we have to find answers. Thus we have to use various sources to find the answers".* (Interview, March 2016).

It was also found that LCMs increase performance, as students do not rely on teacher for everything. Students work hard to find solutions for take home assignments or any other tasks. They argue that sometimes the questions solved in their groups appear in the examinations hence easy to score high marks.

4.4.4 Academic teachers' responses

Four academic teachers were asked to respond on how the strategies used in LCMs help to improve performance. The following responses were obtained. LCMs is said to increase students confidence as they work in their groups.

One teacher commented that,

> *"I have experienced a change in my class in comparison to the past. My students now can ask for more elaboration, express themselves and general participation in a learning has increased".* (Interview, March 2016).

Moreover, LCMs improve learners understanding. For example, mixing slow learners and fast learners has improved the understanding of slow learners. Socialization among students themselves and their teachers help to keep up performance.

It has been argued that learner centred methods like field trip, group discussion and debate helps students to keep memory for long time than lecture methods.

One teacher said,

> *"Strategies used in LCMs like group discussion, debate and field trips mix the students who are slow learners and fast learners. This situation increases the rate of grasping of new materials because fast learners act as teachers and help slow learners".* (Interview, March 2016).

Another teacher commented,

> *"...since the methods (LCMs) involve working in groups, they help students to socialize and be able to interact and be free to express their views".* (Interview, March 2016).

4.4.5 School inspectors responses

The interviews with the school inspectors yield the following results. LCMs can enable teachers to teach effectively and make many students to understand the lesson.

One inspector said,

> *"When teachers apply LCMs it makes students to be able to understand quickly the new content. This is because learners are involved in creating the meanings".* (Interview, April 2016).

The other inspector commented,

> *"Teaching by using LCMs helps students to be active. It helps them to generate new knowledge and as a result, they gain new things easily".* (Interview, April 2016).

LCMs make the use of different methods and a teacher could apply various methods alternatively to make students understand. The use of the available resources helps to minimize cost of buying some of materials. This makes LCMs to be easily applied even when there are no enough funds.

The inspector commented,

> *"Improvisation of locally available resources can help a lot in reducing shortage of learning materials hence helping teachers to work with LCMs more efficiently".* (Interview, March 2016).

4.4.6 DSEO responses

The DSEO response to how the efforts made to implement LCMs helps improve performance of the students had the following answers.

One of the responses from DSEO is that,

> "*If the government will increase the funds in education sector, teachers will be able to implement LCMs more effectively. Through increasing funds, teachers will be able to apply LCMs effectively and efficiently because schools will be equipped with enough LCMs gears".* (Interview, March 2016).

Moreover, students participate fully in learning process hence increase their performance. In addition, training of teachers makes them more competent in using LCMs and hence makes their students understand quickly.

DSEO commented that,

> *"When teachers are trained to use LCMs they will be able to guide their students to grasp the content easily. Teachers will therefore use LCMs effectively and efficiently and learners will be more active during learning as a result, there will be improvement of overall performance".* (Interview, March 2016).

4.5 Views of teachers towards challenges of implementing LCMs within shortage of instructional resources and facilities

This objective aimed at finding teachers views towards LCMs. This is important for the research, as it determines the situation of LCMs at schools. This question involved four teachers in each school, academic teachers and heads of the four schools.

4.5.1 Responses from heads of schools

Some of the heads of schools argued that LCMs are good since it makes students to be active and understand taught content easily. Moreover, it leads to the improvement of students' performance. On the matter of improvement of LCMs, one head of school recommend to the government to check the ratio of teacher/student and student/book. It is said that the ratio of student book is 1:10 or more

One head of school suggested,

> *"The ratio should be 1:1 or 1:3 for student/book (depending on the subject) and 1:45 for teacher/student few books and large number of students makes LCMs difficult to implement".* (Interview, March 2016).

The other finding was that the government should check that curriculum is implemented using LCMs. This has to do with frequent inspections to schools.

The head of school said,

> *"Teachers should be inspected frequently this will encourage teachers to apply LCMs because inspectors checks on the implementation of the curriculum".* (Interview, March 2016).

In addition, learning environment should be improved, classes should be repaired, and there should be enough classes, laboratories and libraries.

One head claim that,

> *"The learning environment is not conducive, classes and other infrastructures are not repaired for long time...and they are now in horrible conditions".* (Interview, March 2016).

4.5.2 Teachers responses

Teachers' views were as follows, students understand quickly because LCMs involve students in learning process. Fast learners students helps slow learners during group discussion hence the duty of the teacher become guiding rather than teaching.

One teacher commented,

> *"Students grasp the content easily because students work together to find solutions...usually the groups consists of fast learners and slow learners, fast learners do help slow learners".* (Interview, March 2016).

The methods have been said to help students to improve their fluent with English language. This is because they participate in knowledge creation and become active during learning.

A Teacher argues that,

> *"LCMs improve the fluent of speaking English to the students and their ability to find materials for problem solving. This is because learners become active during learning and therefore, it helps them to be fluent with the language. Group discussions for example are conducted by few students, therefore those who are shy in class can express themselves and thus they gain confidence. As time goes on, they can manage to express in classes".* (Interview, March 2016).

Since LCMs yield good results compared to teacher centred methods, teachers suggested for emphasis to the parents to contribute some of gears for LCMs. These include resources such as buildings and books that can be bought to their students. Moreover, individuals and private companies should be convinced to contribute funds or materials to schools to enable them to have enough resources for implementation of LCMs. Another genuine recommendation is Teachers should use locally available materials, at least reduce the shortage of materials in their schools. One of the teacher suggest for the reviewing of the syllabus in the matter of time used to complete it.

He said that,

> *"There are many contents to cover in a limited time. It is difficult to cover all the contents if I apply LCMs. Sometimes I have to apply lecture method in order to complete the syllabus".* (Interview, March 2016).

4.5.3 Academic teachers' responses

When academic teachers were asked to give, their opinions on LCMs had the following to say. One of the remarkable opinions is that, teachers should be involved in decision making because they are the implementers of the curriculum.

One of the academic masters claimed,

> *"We are just the implementers of what others plan, we are not involved in anything...when top authorities plans they do not consider the limitation to the teachers and students. For example, in case of these LCMs they could consider the number of teachers, learning materials and resources before rushing on pressing teachers just to implement the methods".* (Interview, March 2016).

Moreover, the government should check shortage of teachers. Few teachers find it difficult to implement LCMs because of having many periods.

It was claimed that,

> *"Few teachers cannot implement LCMs effectively because they had large teaching load. Having many periods reduces the ability of a teacher to prepare lessons effectively".* (Interview, March 2016).

Furthermore, consulting stakeholders like companies and community to contribute materials to schools.

It was suggested by one academic master that,

> *"The role of individuals, companies and the community should not be ignored. They should be consulted because they have great contribution to our schools especially the case of shortage of materials and facilities".* (Interview, March 2016).

The government should ensure gears for LCMs are available at schools. Many schools have acute shortage of learning materials, it was suggested by the academics that the schools should be equipped with enough infrastructures and learning materials.

It was suggested by one academic master that,

> *"Teaching of LCMs needs a teacher to be equipped with supporting materials such as books, models and enough rooms. The government therefore should ensure these materials are available in a required quantity".* (Interview, March 2016).

In addition, there should be frequent training of teachers so as ensure smooth teaching of LCMs, an example, INSET.

One academic master claimed that,

> *"Teachers are not trained for long time. This makes them to be rigid in teaching as some rely on teacher centred methods".* (Interview, March 2016).

This finding indicate that there is little training for the teachers, situation which makes some teachers to be to employ teacher centred methods or poorly apply LCMs. Training of teachers is important to update them on how to use LCMs. This will enhance effective use of LCMs.

CHAPTER FIVE

DATA ANALYSIS AND DISCUSSION OF FINDINGS

5.1 Introduction

This chapter discusses the findings of the study. The findings are discussed based on the objectives that are presented in chapter four. There are four sections, namely section 5.2 reasons for shortage of instructional resources and facilities in implementing LCMs. Section 5.3 is about strategies for implementing LCMs in the context of shortage of instructional resources and facilities. Section 5.5 examining whether strategies of implementing LCMs help to promote performance despite of shortage of resources and facilities. Section 5.6 views of teachers towards challenges of implementing LCMs within shortage of instructional resources and facilities.

5.2 Reasons for shortage of instructional resources and facilities in implementing LCMs

The purpose of this objective was to find out what are the causes for the shortage of resources and facilities for implementing LCMs in schools. The data for this objective were collected through interview, focus group discussion and observations. Interviews were conducted to teachers who include academic teachers and heads of schools. Moreover, interviews collect data from DSEO and school inspectors. Focus group discussion was conducted to students.

With regard to the reasons for shortage of instructional resources and facilities in implementing LCMs, there were multiple answers from the respondents. From the findings, it is clear that there is overcrowding of students in classes.

This finding corresponds to that of Mtitu (2014) who found that one of the challenges affecting the implementation of LCMs is that of resource constraints. From the findings, it indicates that LCMs are being applied within the shortage of instructional resources and facilities.

However, large number of students in class affects its implementation because of difficult in supervising the groups. The groups are too large for the teacher to handle leading to failure of teacher to make their students active. The methods is well implemented when there is average number of students in an average class i.e. 45 students.

Other major reason for shortage of instructional resources and facilities was reported to be shortage of funds. It has been said that funds from the government i.e. capitation is not enough to run the school. This finding are related with that of McGregor et al. (2000) which revealed that most of the teachers indicated that the challenges they faced were shortage of learning materials and financial constraints which made it difficult to use some of the LCMs like field trips.

With regard to these finding, there is a need for the government to consider and take action on how to ensure that LCMs do not face the problems of shortage of funds by increasing the available resources.

Poor storage and maintenance of instructional materials and facilities has been reported to cause shortage of materials in schools. Storage has been difficult due to shortage or absence of required buildings. In addition, the buildings that used for storage are not in a good quality that leads to some materials being stolen. However, teachers and students themselves have caused poor storage. The report shows that, some of books have been eaten by termites and rats. Some of books show that teachers or students use them in a rough way in the way that they lose their covers and some pages within a short time.

From these findings, it is shown that poor storage of materials has affects on LCMs. There is a need to train teachers and students on better ways of storing instructional materials and facilities. Moreover, there is necessitate to ensure that there are effective facilities especially buildings for storage of instructional materials.

Moreover, the finding suggests that there is unequally distribution of materials in schools that makes some schools to have more or scarcity of certain kinds of materials compared to other schools. (Thungu 2010:11) argue that allocation of resources to schools should be timely and should be enough in accordance with the number of students, up to date and relevant to learning environment. Unequal allocation of resources and facilities has negative impact towards implementation of LCMs. The shortage of some instructional materials and resources could be reduced if there is fair distribution of resources and facilities.

Therefore, educational stakeholders like DSEO, heads of schools and teachers should cooperate to ensure equal distribution of resources and facilities.

5.3 Strategies for implementing LCMs in the context of shortage of instructional resources and facilities

The purpose of this objective was to find out how LCMs can be implemented despite of all the challenges. In other words is LCMs possible with all shortcomings which have been mentioned from the first objective? The data for this objective were collected through interview to the teachers, academic teachers, school inspectors, and DSEO heads of schools. Moreover, focus group discussion to students and observations of various sources were carried out.

From the findings, it is clearly, there is shortage of instructional resources and materials such as classrooms, laboratory buildings, chemicals and apparatus, books, teaching models and aids. In order to implement LCMs, respondents suggested that the government should increase funds to meet the demands of schools' instructional resources and facilities. The training of teachers such as INSET should be insisted to increase competence of teachers in using the methods.

This finding has implication that LCMs can be applied effectively when there are enough instructional resources and facilities. Therefore there is a need for the government to increase funds for the education sector in order to meet the

requirements for the schools' facilities and instructional materials. Moreover there is a need to train teachers in order to ensure that LCMs are effectively and efficiently applied.

It was found that many respondents argued for the use of locally available resources in order to solve the problem of shortage of instructional materials. Some materials suggested to be easily obtained from the surroundings and they function similarly to readymade materials. However, from the observation, it was found that many teachers do not improvise the available resources to make some of useful materials for LCMs. This suggests that many teachers wait for the government to provide with all materials while they could simply make some of them.

Thus, there is a need to train teachers on how to use locally available materials to make instructional materials such as aids and models. This will reduce unnecessary expenditures on buying instructional materials.

Methods which require fewer resources help to reduce the problem of shortage of instructional resources and facilities. For example, group discussion, games, debate, subject clubs and field trips around schools. However, this situation can limit teachers to use some of techniques of LCMs that could be advantageous to students. In addition, this suggests that teachers do apply few methods because of lack of instructional resources and facilities.

The government should ensure that all materials needed to implement any LCMs are available to schools. This will help implementation of LCMs to achieve their ends that is quality education.

5.4 Examining whether strategies of implementing LCMs help to promote performance despite of shortage of resources and facilities

The purpose of this objective was to find out if strategies used to implementing LCMs within the shortage of instructional resources and facilities help to promote performance.

Data for this objective were collected through interviews to the teachers, academic teachers, school inspectors DSEO and heads of schools. Moreover, focus group discussion with students was conducted and observations of various sources were done.

Many respondents in this objective responded that strategies for implementation of LCMs help to improve performance. This is because the strategies like group discussions, games, debate and clubs helps students to become active and hence they share knowledge they have and widen their scope of understanding. In addition, the methods are said to simplify the process of learning and increases ability of understanding as students help themselves and teachers become a guider. Moreover, Austin (1997) study reveals that positive group experiences have been shown to contribute to student learning, retention and overall academic success.

This suggests that teachers and students understand the benefit of LCMs as they help in promoting their performance. However, they fail to exploit full the benefits of the methods due to lack of instructional resources and facilities.

Moreover, it was said that LCMs helps to increase students' confidence because learners participate in different situation and share experience together. For example, students can participate by solving questions on a board, answering questions in their groups, and representing their groups in class. These methods also are said to improve the fluent in speaking English language since students participate in different tasks.

These findings relate to that of OFSTED (2008) which shows that some of LCMs like field trips gives learners direct experience, opportunities to develop their knowledge and skills.

The finding confirms that LCMs help to increase morale for the students to study hard because they need feedback from the students. Moreover, LCMs create competition for the students as groups wants to score more than other groups.

LCMs improve performance because they help students to use varieties of sources of materials. When students are given a task, they find their answers in different sources, when they present their findings this become a combination of the various sources. This includes different books, journals and even materials from the internet. In addition the solved questions sometimes appear in different examinations, thus it is easy for the students to remember the solutions.

These findings suggests that LCMs are best methods since they improve retention of materials for long time, quick understanding, help a teacher to teach effectively and leads to active students who keeps close relation among themselves and with their teachers for the sake of their better performance.

5.6 Views of teachers towards challenges of implementing LCMs within shortage of instructional resources and facilities

This objective was aimed to find out views of teachers towards challenges of implementing LCMs within shortage of instructional resources and facilities. Data for this objective were collected through interview to the teachers, academic teachers, school inspectors, heads of schools and DSEO. Moreover, focus group discussion to students and observations of various sources was conducted.

The findings on this objective show that LCMs are good methods as they make students to be active and therefore improve their performance. Students become active because the methods involve students in generating the solutions for their problems

and increase their closeness. There should be close supervision of curriculum implementation, involving teachers in decision-making, making sure that the gears for LCMs are available by consulting stakeholders.

This indicates that teachers understand the value of LCMs but there is lack of supervision of the curriculum that leads to some of them turning into teacher centred methods.

Teachers also argue that gears for LCMs should be available at the school for efficient and effective instruction. In addition, the learning environment such as classes, libraries and laboratories should be improved to make them conducive for learners. These findings relate with that of Thungu (2010:11) who finds that, teaching and learning resources encourage active participation of learners especially resources that can be handled and manipulated by learners.

This suggests that availability of instructional resources and facilities persuade learners to be active during learning hence leading to improved performance.

Training teachers was another major finding from the respondents. Teachers recommend that there should be active in-service training which will improve teachers' ability to apply LCMs. These findings collocate that of Chediel (2004), who found out that failure to implement LCA was largely due to the formidable constraints in the teaching and learning transactions in schools.

The findings suggest that there is lack of training for teachers on how to do with LCMs. This affects the implementations of the methods since teachers lack basic upgrades on their profession.

5.6.1 Materials useful for the implementation of LCMs

Teachers applied several of materials which help them to implement LCMs. These include local made materials like a combine empty bottles of water and balloons to demonstrate respiration process. Some materials were obtained from the surrounding

environment, these includes stones, plants, insects, and small animals like rats and snakes These materials were used to supplements the absence of readymade materials. Some of materials like books, pamphlets, maps, charts, diagrams, pictures and some of laboratory apparatus were available and were being used by teachers and students to facilitate LCMs. Some of materials were available near to schools such as water filtration materials and windmills. Therefore, teachers and students went to visit them for the purpose of learning.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The previous chapter has been about data analysis and discussion of findings. This chapter presents summary, conclusions and policy implications of the study. The chapter has five sections. Section 6.1 is about general introduction of the chapter. Section 6.2 reviews research objectives, questions and a look on a sample used in this study. It also gives a summary of major findings of the study. Section 6.3 presents conclusions of the study. Section 6.4 is about general recommendations and policy implications. Section 6.5 is bout areas for further research.

6.2 Summary of the findings

Some of respondents suggested that materials could as well obtain from contributions from different stakeholders. It was found that the schools rely much on the government to get materials for instruction. However, these materials can be partly contributed by able individuals, companies and parents. Other finding is that parents thought that, the government do provide everything to schools i.e. instructional resources and facilities. This is not the case as it was found that all schools had shortage of certain instructional materials or resources. Shortages of materials have been a result of large number of students joining secondary schools. It was found that there are many students joining secondary education but infrastructures and learning materials have been reported to be few compared to number of students. From the findings it shows that LCMs could well be implemented if the parents' contribution is re-introduced. Lack of materials lead to poor implementation of LCMs in the classrooms, this is because of difficult in to make students active without having enough materials and facilities. Materials are not enough due to lack funds from the government to satisfy the needs of schools.

Therefore, it is suggested that the government has to check availability of infrastructures and instructional materials before sending students to join secondary education. The government can acquire funds for buying learning materials by consulting individuals and the companies for contributions.

6.2.2 Major findings

Schools are being faced with acute shortage of funds to implement apart from other activities the LCMs that needs enough resources and facilities. Lack of funds is the one that contribute to large class sizes and failure of the government to implement its plans. The findings reveal that lack of funds is the main cause of poor implementation of LCMs. Teachers find difficult to implement the methods as they lack some materials. However, it was found that despite the shortage of instructional resources and facilities still teachers use some of LCMs that includes group discussions-the widely used method, debate and subject clubs.

Moreover, it was found that projects and field trips are also used but they are very rare. Field trip is used rarely because of its expenses and mostly is conducted around schools or nearby. Teachers apply it when materials for field study are within the school compound or nearby. A project in particular, is used because The National Examinations Council of Tanzania [NECTA] needs some of marks in Continuous Assessments [CA] from these projects.

Some problems such as the climate that sometimes affects the availability of some animals and plants that required to be used as aids or models especially in science subjects. Moreover, school priorities on the use of capitation may lead to shortage of instructional materials if it is directed to other purposes than instructional materials.

Different techniques have been mentioned on how to implement LCMs within the shortage of instructional resources and facilities. Frequently occurred ones are to use the available materials around to make some of the needed resources. Teachers found

that the solution to lack of materials for instruction resources is to improvise the available materials and produce what they want as a model or aid.

To solve the problem of shortage of materials and facilities, teachers and other respondents recommended for the consultation of different people from companies to individuals who can contribute funds or materials to schools. In addition, the government has been advised to increase funds for the education sector.

Some respondents recommended for the use methods, which are less expensive. For example, brain storming group, discussion, games, debate and clubs. These methods will help to use LCMs within lack of resources and facilities.

Other strategies mentioned were to encourage students to practice English language. This was said to facilitate active participation during learning. In addition, students should be encouraged to write summer of what they learn in order to facilitate self-knowledge.

The researcher also wants to check on whether strategies used to implement LCMs within the constraints of shortage of instructional resources and facilities helps to promote performance. There were several major findings from this objective. Many respondents agree that LCMs are good methods and helps to raise performance of the students. This is because students become active during learning and therefore they create their own meanings or solution to the problems. The results of LCMs have been said to increase confidence of the students. For example, methods like group discussion, debate and subject clubs promotes students' confidence. Working with LCMs therefore helps to improve relation among students themselves and between students and their teachers.

Strategies of LCMs used are said to increase the scope of understanding because learners have to find different materials in order to score higher in the groups. This also increases the morale for studying hard.

Teachers and heads of schools provide their views that LCMs are good methods and many teachers try there level best to use them. Teachers said that the methods make students to be active, enjoy lessons, improve their performance and create closeness among students themselves and their teachers.

In order to improve LCMs, teachers suggested that there should be enough funds to buy gears for LCMs and construction of infrastructures like classes, laboratories and libraries and their maintenance.

Teachers also suggest for their training that will help them using LCMs effective and efficient. In addition, teachers will be able to improvise the available resources. Teachers' decisions should be considered during planning and curriculum implementations should be checked by frequent inspections.

6.3 Conclusions

Overall, it can be concluded that, first; there is acute shortage of funds for teaching materials that can facilitate LCMs. While it is true that funds is the major problem, LCMs doesn't require funds in its application but funds are needed for learning materials. The methods needs gears like enough books, models, aids, computers and accessories like projectors, and printers for best results. Enough rooms, laboratories, libraries that are well equipped are needed to facilitate smooth implementation of LCMs. The governments should increase fund for secondary schools so that they will be able to buy instructional materials, constructing and maintenance of facilities. This will help in improving performance with LCMs.

In addition, the government is advised to employ enough teachers who will have average teaching load that will enable them to implement LCMs effectively and efficiently. Parents' contributions should be reintroduced as the government fail to meet the schools' demands for the instructional resources and facilities. This will help teachers to teach with LCMs in an effective way. Short term solution to shortage of resources have been borrowing what a school do not have from the other school,

asking students to make or come with materials that they are able to make or find and to improvises the available resources to make what is needed in a school. Training teachers has been mentioned as the way of making them to effectively teach LCMs.

Third, the strategies teachers used to implement LCMs within the shortage of instructional resources and facilities are working to improve students' performance. This is because they increase the scope of understanding since students use various materials to find the solutions. In addition, students increase the morale of studying because they have to work hard to find answers. Moreover, when LCMs are applied by teachers they increase students' confidence hence raise their ability to grasp the intended knowledge. Students' activeness also helps to improve fluent in English language that is the language and relations among themselves and their teachers. It was also suggested that the use of locally available resources helps teachers to cope with the scarcity of materials, hence improve understanding of the students.

Funding of schools, help them to be able to satisfy demands for the instructional resources and facilities that are essential for implementation of LCMs.

Lastly, LCMs has been viewed by teachers as the best methods of making learners to retain knowledge fast and for long time. However, close supervision of curriculum has been advised. This includes frequent school inspections. Teachers had a view that they should be involved in curriculum planning and their decisions should be considered for effective LCMs. The government should ensure that the schools are equipped with enough materials and resources that support LCMs this goes together with training of teachers. In the training sessions, teachers should be taught how to use the available resources to make useful materials.

6.4 General recommendations

For effective and efficient implement LCMs, it is worthwhile to ensure that all key educational stakeholders play their roles, without which the good teaching methods

will always remain on papers. The intended methods should be achieved in its implementation i.e. teaching using LCMs.

6.4.1 Policy implications

In order to use LCMs effectively, it is recommended that the government should ensure that teachers attend short course programmes that aiming at directing how to use LCMs so that they become good professional teachers who can apply LCMs efficiently and effectively. Teachers with pedagogical content knowledge, theoretical, and practical competence can feel comfortable and motivated to teach using LCMs. In other words, re-training and training of teachers for LCMs is an imperative issue to achieve the objective of providing quality and relevant education to our students in secondary schools. This will help secondary leavers to have competent knowledge that can help them in their daily life.

Furthermore, given the shortage of instructional resources and facilities, it is recommended that the government should increase school capitation to enable them to buy gears for LCMs, construction and maintenance of different facilities.

Given the financial constraints facing the government and schools, it is recommended that MoEVT should focus on the use of alternative materials or improvise the available resources to produce instructional resources. At the same time, schools could create different projects that can help accumulation of funds that will help in buying instructional resources and maintenance of infrastructures. Some funds can be obtained by contributions from the parents and other individuals including companies.

Finally, the MoEVT may consider reshuffling of education sector, as the current education seems to yield less compared to the inputs. The reshuffling should be in monitoring of learning situation and providing feedback to teachers.

6.5 Recommendations for further research

From the finding of this study regarding the implementation of LCMs within the constraints of shortage of instructional resources and facilities, there are the following recommendations

A study is needed to find out whether the teachers dislike applying LCMs because of shortage of instructional resources and facilities.

A study is required to find out whether LCMs help secondary leavers to manage their living through creating different projects given the available opportunities.

A study is needed to identify if teachers improvise the available materials to supplement for the lack of instructional materials in order to implement LCMs in their schools.

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APPENDICES

INTERVIEW GUIDE

Dear respondent, I am Titus Kawishe, a student at Mzumbe University pursuing a master's degree in Education currently undertaking a dissertation as a partial fulfilment requirement for the award. This interview is being conducted to get your inputs on implementation of LCMs within the constraints of shortage of instructional resources and facilities.

If it is ok with you, I will record our conversation for the purpose of taking all the details but at the same time be able to carry on an attentive conversation with you. I assure you that all answers given will remain confidential and will only be used for the purpose of this study. I will be compiling a report which will contain the information without any reference to individuals. Your contribution is very important. I request you to respond the following questions.

APPENDIX I: FOCUS GROUP DISCUSSIONS FOR STUDENTS

(I assure you that all information provided will remain confidential and will only be used for the purpose of this study).

1. Let me start by having information that will help to describe the sample.
    a. Date of interview _____2016 b. Interviewer's initials _____
    c. Questionnaire No. _____. d. Respondents No. _____
    e. Level of education (class/form) _____
    f. Name of School _____
    g. Ward _____
    h. Gender _____
2. What do you understand by the term learner centred methods?
3. Can you mention some of learner centred methods which your teacher applies in teaching?
4. What problems do you face in using learner centred methods
5. What do you think are the sources of shortage of instructional resources and facilities in implementing learner centred methods?
6. What strategies do you and your teachers use in learner centred methods?
7. How the strategies you have mentioned help to promote your performance?

(Thank you very much for your cooperation)

APPENDIX II: INTERVIEW GUIDE FOR TEACHERS

(The information you will provide is confidential; it will be used for the purpose of this study only)

1. Let me start by having information that will help to describe the sample.
    a. Date of interview _____2016 b. Interviewer's initials _____
    c. Questionnaire no. _____. d. Respondents No. _____
    e. Level of education _____
    f. Name of School _____
    g. Ward _____
    h. Gender _____
2. What do you understand about learner centred methods?
3. Do you apply learner centred methods in teaching your subject(s)? If yes, what are the problems you face in implementing learner centred methods within the shortage of instructional resources and facilities?
4. What are the reasons of the problems you have explained?
5. What are the strategies which you use to implement learner centred methods within the problems you have explained?
6. How the strategies help to improve performance of the students
7. What are your general views towards challenges of implementing learner centred methods within the shortage of instructional resources and facilities?

(Thank you for agreeing to be interviewed)

APPENDIX III: INTERVIEW GUIDE FOR ACADEMIC TEACHERS

(The information you provide is confidential; it is exclusively for this study).

1. Let me start by having information that will help to describe the sample.
    a. Date of interview _____2016
    b. Interviewer's initials _____
    c. Questionnaire no. _____
    d. Respondents No. _____
    e. Level of education _____
    f. Name of School _____
    g. Ward _____
    h. Gender _____
2. What do you understand by the term learner centred methods?
3. Do you have any problem of instructional resources and facilities in implementing learner centred methods in your school?
4. What do you think should be the reasons for shortage of instructional resources in implementing learner centred methods?
5. What strategies do teachers use in implementing learner centred methods in the context of shortage of instructional resources and facilities?
6. How the strategies you have mentioned help to promote students' performance?
7. What are your views towards challenges of implementing learner centred methods within shortage of instructional resources and facilities?

(Thank you for your cooperation)

APPENDIX IV: INTERVIEW GUIDE FOR THE HEADS OF SCHOOLS

(The information you will provide will be confidential and it will be used only for the purpose of this study)

1. The following are the information that will help to describe the sample.
    a. Date of interview _____2016
    b. Interviewer's initials _____
    c. Questionnaire no. _____
    d. Respondents No. _____
    e. Level of education _____
    f. Name of School _____
    g. Ward _____
    h. Gender _____
2. What do you understand by the term learner centred methods?
3. Are your teachers facing the shortage of instructional resources and facilities in applying learner centred methods? If yes, what might be the reasons for shortage of instructional resources and facilities in implementing learner centred methods?
4. What efforts have you made for implementation of learner centred methods within the constraints of shortage of instructional resources and facilities?
5. How the efforts you made helps to improve performance of the students?
6. Would you explain your views towards the challenges of implementing learner centred methods within shortage of instructional resources and facilities?

(Thank you very much for your cooperation)

APPENDIX V: DSEO AND SCHOOL INSPECTORS INTERVIEW GUIDE

(The information you will provide will be confidential and it will be used only for the purpose of this study)

1. Let me start by having information for describing the sample.
    a. Date of interview _____2016
    b. Interviewer's initials _____
    c. Respondents No. _____
    d. Level of education _____
    e. Gender _____
2. What do you understand by the term learner centred methods?
3. What might be the cause for the shortage of instructional resources in implementing learner centred methods in your district?
4. What should be done in order to implement learner centred methods within the constraints of shortage of instructional resources and facilities?
5. How these efforts you have mentioned helps to improve performance of students?

(Thank you for agreeing to be interviewed)

APPENDIX VI: DOCUMENTS REVIEWED

1. Lesson plans
2. Schemes of work
3. Subject log books
4. Inspectors' reports
5. Instructional materials (maps, models, charts, diagrams)

APPENDIX VII: OBSERVATION GUIDE/CHECK LIST

1. Class observation

a. What is the subject's topic taught during a lesson?

b. What are the methods used in teaching?

c. What activities taking place (e.g. group discussion, brain storming, pair share, etc)?

d. What prevents lesson efficiency and effectiveness?

e. What are the possible competencies developed?

f. What is the number of students in a class?

g. What is the number of materials used (models, books, maps, diagrams, etc)?

2. School environment

a. Are instructional materials and resources like laboratories, libraries, computers, books, charts, maps, diagrams and models available in this school?

b. Are teachers' residences available in this school?

c. What is the number of teachers for each subject at school?

d. What is the number of students for science and art subjects in each class?

e. Is there a library at this school?

f. Is the library used effectively?

g. Is the library equiped with enough books?

h. Is there laboratories for biology, physics and chemistry subjects?

i. Are available laboratories equipped with chemicals and equipments?

j. Are these laboratories used effectively?

k. What are periods per day for a teacher?

l. What are periods per week for each teacher?

m. What is the number of classrooms and their capacity?

n. Are teachers attending in classes according to subjects timetable?

APPENDIX XIII: PROJECTED BUDGET OF THE STUDY

S/No.	DAYS	TRANSACTIONS PER DAY (TSH)	TOTAL COST (TSH)
Research proposal	30	25,000	750, 000
Pilot study	5	45,000	225, 000
Pilot study report writing	2	45,000	90,000
Data collection	10	45,000	450, 000
Data analysis	15	45,000	675, 000
Report writing	30	45,000	1,350, 000
Report Editing	10	20,000	200, 000
Report submission	2	45,000	90, 000
TOTAL			**3,830,000**

APPENDIX IX: WORK PLAN OF THE STUDY

MONTH	WEEK	ACTIVITY
July, 2015	1st - 4th	Research proposal
August	1st - 4th	Pilot study
September	1st	First contact
September	2nd - 3rd	Data collection
September-October	4th - 1st	Data analysis
October-November	2nd - 2nd	Report writing
November	3rd	Report editing
November	4th	Submitting first draft
December	1st - 4th	Work on comment
January, 2016	1st - 4th	Work on comment
February	1st - 4th	Work on comment
March	1st	Final Submission