



**LEARNER-CENTRED PRACTICES IN PRIMARY SCHOOL HUMAN ECOLOGY
CLASSROOMS: A CASE OF SELECTED SCHOOLS IN CHANKHANGA ZONE,
KASUNGU DISTRICT.**

BY

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Declaration

I, Nelson N. S. Chikwanda, do hereby declare that the work contained herein, including the organization and writing of this thesis “Learner-centred practices in primary school human ecology classrooms: a case of selected schools in Chankhanga zone, Kasungu district” is entirely my own work. It has been carried out at Mzuzu University under the supervision of Dr. Margaret M. Mdolo. This thesis is being specifically submitted in partial fulfilment for the award of the degree of Master of Education (Teacher Education) of Mzuzu University and is not concurrently being submitted for any other degree.

All reference materials contained in here have been dully acknowledged.

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Dedication

This thesis is dedicated to my wife Merlin, my children Cynthia, Priscilla, Eric, Yankho and Thandizo for their love, encouragement, support and humorous outlook on life. They all provided both inspiration for and diversion from long hours of writing.

Abstract

Human Ecology is a specialized science subject that is practical in nature, which needs active involvement of learners, however, for a long time, teachers have been using transmission. In 2001, Malawi adopted the Outcome-Based Education (OBE) which saw pedagogical paradigm shift from the traditional teacher-centred practices to learner-centred practices. The purpose of this study was to explore the extent to which primary school teachers use learner-centred education methods in Human Ecology classrooms. The study explored Human Ecology teachers' understandings of learner centred education; how learner centred the teachers are when teaching Human Ecology content in primary schools; and factors that affect the use of learner centred education methods in primary school Human Ecology classrooms. Employing a qualitative case study design guided by the social constructivist learning theory, this study was carried out in four selected primary schools in Chankhanga zone in Kasungu district. Data were collected through face to face interviews, classroom lesson observation and document analysis and thematically analysed using predetermined and emerging themes.

The findings of the study revealed that teachers have limited knowledge about learner-centred practices and teachers continue to use the traditional teacher-centred education methods in Human Ecology classrooms. Some factors that affect the use of learner-centred education methods in Human Ecology classrooms include large class sizes, lack of teaching/learning and assessment resources, class management problems, teachers' lack of pedagogical content knowledge, misconceptions about the use LCE, big work load, and teachers' limited knowledge about learner-centred education among others.

For primary school teachers to fully embrace learner-centred education methods, there is need for support in terms of TLA resources, CPDs, deploying more teachers to big schools, encourage TALULAR concept and revise the pre-service curriculum in teacher training colleges among others.

Glossary of acronyms/abbreviations

CPD	Continuous Professional Development
DCE	Domasi College of Education
GIZ	Gesellschaft für Internationale Zusammenarbeit/ Germany Agency for International Cooperation
GTZ	Gesellschaft für Technische Zusammenarbeit German Society for Technical Cooperation
HEC	Human Ecology
InWEnt	Internationale Weiterbildung und Entwicklung/Capacity Building International, Germany
IPTE	Initial Primary Teacher Education
LCE	Learner-Centred Education
LCP	Learner-Centred Practices
MIE	Malawi Institute of Education
MIITEP	Malawi Integrated In-service Teacher Education Programme
MoEST	Ministry of Education, Science and Technology
OBE	Outcomes-Based Education
ODL	Open and Distance Learning

PCAR	Primary Curriculum and Assessment Reform
TALULAR	Teaching and learning using locally available resources
TCP	Teacher-Centred Practices
TLAR	Teaching, Learning and Assessment Resources
TTC	Teacher Training College
ZPD	Zone of Proximal Development

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CHAPTER 1: INTRODUCTION TO THE STUDY

1.1 Introduction

This chapter presents an introduction to the study which is entitled ‘learner-centred education in primary school human ecology classrooms: a case of selected schools in Chankhanga zone, Kasungu district’. Learner centred education philosophy entails that learners should take responsibility over their own learning by actively participating in the construction of knowledge in a lesson. The teacher’s role is to motivate and provide guidance/materials and encouragement (Ministry of Education, Science and Technology, 2009). Dupin-Bryant (2004) defines learner-centred methods as a style of instruction that is responsive, collaborative, problem-centred and democratic in which learners and the instructor decide how, what and when learning occurs. In learner-centred classrooms, learners are directly involved in the discovery of their own knowledge. Through collaboration and cooperation with others, learners engage in experiential learning that is authentic, holistic, and challenging. Learners are empowered to use prior knowledge to construct new learning. As a partner in learning, teachers intentionally create organized and cohesive experiences to assist learners to make connections to key concepts (Brown, 2008).

1.2 Background to the study

In Malawi, Learner Centred Education (LCE) was officially introduced in 2004 through the GTZ – InWent project under Ministry of Education, Science and Technology (MoEST) following the introduction of the Primary Curriculum and Assessment Reform (PCAR). The public Teacher Training Colleges (TTCs) and Demonstration Schools took a lead in using Learner-Centred

Education (LCE) methods as necessitated by the Outcomes-Based Education (OBE) that Malawi adopted in 2001 (MoEST, 2012).

Human Ecology (HEC) is a multi-faceted, inter-disciplinary, integrated field of study drawing from a multitude of disciplines including sociology, psychology, anthropology, chemistry, physics, architecture and the arts (Henry, 1995). It is a specialized science subject that is practical in nature. Human Ecology content in Malawi is taught at primary school, secondary school, teacher training colleges (TTCs) as well as at university level. In primary school, Human Ecology content is embedded in the Science and Technology curriculum, specifically within one core element known as nutrition and health. In secondary schools, it is a stand-alone elective subject and is known as Home Economics (H/E). In TTCs and Universities, it is known as Human Ecology (HEC). In this study, the words Home Economics and Human Ecology will be used interchangeably according to preferences of authors of the literature referred to. The curriculum for Science and Technology puts emphasis on learner centred teaching and learning approaches (Malawi Institute of Education [MIE], 2008). Being a practical science subject, it requires a variety of teaching, learning and assessment resources for it to be effectively taught (Domasi College of Education [DCE], 2003). As observed by MIE (2008), Human Ecology has to be taught using learner-centred methods. Kunkwenzu (1997) agrees by saying that in a good Home Economics lesson, students have to be kept active through the use of a variety of student centred teaching methods. Assessment in Human Ecology is done both theoretically and practically. This study therefore seeks to investigate learner centred education in primary school Human Ecology classrooms in Malawi.

1.3 Statement of the problem

The curriculum for Science and Technology, in which Human Ecology topics are embedded in primary school curriculum, puts emphasis on learner-centred teaching and learning approaches (MIE, 2008). Human Ecology as a practical science subject, is supposed to be taught through participatory approaches to promote meaningful interaction between the teacher and learners, among learners themselves and between learners and teaching / learning resources. That is, the need for learners to be actively involved is very central, among others.

However, from my personal experience as a teacher educator in Teacher Training College (TTC), who sometimes observes HEC content lessons in primary schools, teachers do not seem to be using learner-centred education methods, and those who attempt only focus on limited aspects of learner-centred education. This observation is supported by Ministry of Education/UNICEF, (1998), Kadzamira and Chibwana, (2000) and Croft, (2002) who argue that the primary school curriculum in Malawi is intended to be child-centred, but teachers do not appear to be well trained in the methodology that is promoted by the Ministry of Education. It seems that most primary school teachers source, interpret and deliver information for learners, who in turn passively receive it and strive to memorize it. This shows that there is knowledge gap among some primary school teachers on learner-centred education (LCE) methods in teaching HEC content. It is for this reason that this study, was carried out to explore the use of LCE methods in the teaching of Human Ecology content by primary school teachers.

1.4 Rationale for the research study

This research study was carried out to explore the use of learner-centred education methods (practices) in primary school Human Ecology classrooms. Most of the studies done on learner-centred education practices focus on the implementation of learner-centred approaches in general. Observations have shown that many researchers have studied on the successes and failures of learner-centred approaches in general. Not much has been done to explore how learner-centred practices work in different subjects such as Human Ecology, knowing that each subject has its own recommended approaches. This study, therefore, assisted in assessing the extent to which primary school teachers use learner-centred methods in teaching Human Ecology content and also in exploring the practical challenges faced by primary school teachers when teaching Human Ecology content using learner-centred methods, in Malawian context.

1.5 Research questions

The study was guided by one main question: To what level do primary school teachers use learner-centred education practices when teaching Human Ecology? In addition to the main question, there were these three specific questions:

- What are primary school Human Ecology teachers' understandings of learner centred education?
- How learner centred are the teachers when teaching Human Ecology content in primary schools?
- What factors affect the use of learner centred education methods in primary school Human Ecology classrooms?

1.6 Significance of the study

The findings of the study would help add knowledge to the existing body of knowledge, about practical challenges faced by primary school teachers in teaching Human Ecology content using learner centred teaching methods, in Malawian context. The findings would also assist teachers in primary schools to know more about learner-centred education methods and how best they can use them when teaching Human Ecology content in Science and Technology, as a practical science subject. This would in turn help improve teaching and learning in primary schools through the promotion of active, cooperative and reflective learning; construction of knowledge and daily life connections. Above all, this would also help improve the academic performance of learners in primary schools during national examinations.

1.7 Theoretical framework

Learner-centred education (LCE) is a product of research which evolved or emanated from the constructivist approach. This study is guided by constructivist theories. Central in these theories is the internal thinking processes. Constructivist theories suggest that people learn through the interaction between thought and experience: that both doing and thinking are essential for learning (Stuart, Akyeompong & Croft, 2009).

According to Kottler, Zenhm & Kotter (2005) many successful instructional approaches build on social and cognitive constructivists' view of teaching and learning. On the one hand, cognitive constructivist view according to Stuart et al (2009) is mainly associated with Jean Piaget. Key in Piaget's cognitive constructivist view is that an individual constructs own knowledge in an active

process as she or he interacts with the learning environment (Piaget, 1964). McLeod (2018) refers to this Piagetian concept of learning as discovery learning. On the other hand, the social constructivist theory pays more attention to the social context. Key in social constructivist theory is that each individual constructs their own knowledge better when they actively interact with others and resources than when they passively work as individuals (Vygotsky, 1978). McLeod (2018) refers to this Vygotskian concept of learning as guided learning. This study specifically draws from Levi Vygotsky's social constructivist theory.

Constructivists expect classrooms to honour the knowledge and experience that learners bring to school and advocate learning as a social act. Through personal and social experiences, learners should be actively involved in constructing their own knowledge. Constructivists learning theory asserts that learners are not blank tapes to be filled up with the knowledge from the teachers. Rather, learners have prior knowledge hence learning should build on what they already know.

The social constructivist theory, further, emphasizes on the zone of proximal development (ZPD) and the importance of the socio-cultural context of learning. The zone of proximal development (ZPD) has been defined as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Thus, the term proximal refers to those skills that the learner is close to mastering. The ZPD talks about what the learner knows can do on their own and what the learner can do when given help. If the support is appropriate and meaningful, Vygotsky argues that the child's

understanding can be extended far beyond that which they could reach alone. In this model (theory), learning is seen as “assisted performance”. The role of the teacher is to identify the ZPD, help the learners to do what they cannot do on their own, and support them until they can do it independently. Learners can also scaffold each other’s thinking, but the teacher has an important role of challenging and extending their understanding in ways appropriate to their level (Stuart et al., 2009).

The implication of the ZPD is the need for scaffolding. Wood et al. (1976, p. 90)) define scaffolding as a process "that enables a child or novice to solve a task or achieve a goal that would be beyond his unassisted efforts." As they note, scaffolds require the adult's controlling those elements of the task that are initially beyond the learner's capability, thus permitting him to concentrate upon and complete only those elements that are within his range of competence. Scaffolding consists of the activities provided by the educator, or more competent peer, to support the learner as he or she is led through the zone of proximal development. Support is withdrawn as it becomes unnecessary, much as a scaffold is removed from a building during construction. The learner will then be able to complete the task again on his own. As observed here, the learner is supposed to participate actively in a learning process.

From a Vygotskian perspective, the teacher's role is mediating the child's learning activity as they share knowledge through social interaction (Dixon-Krauss, 1996). Lev Vygotsky views interaction with peers as an effective way of developing skills and strategies. He suggests that teachers use cooperative learning exercises where less competent children develop with help from more skilful

peers. This is clear evidence or testimony that social constructivist theory of learning is directly linked to learner-centred education practices.

Learner-centred education (LCE) evolved from the constructivist approach (MoEST/InWEnt, 2009). This, therefore, justifies the choice of social constructivist theory as a theoretical framework that guided this study. According to McLeod (2018), social constructivist theory has the following five principles:

- Knowledge is constructed, rather than innate, or passively absorbed,
- Learning is an active process,
- All knowledge is socially constructed,
- All knowledge is personal,
- Learning exists in the mind.

The first three principles of the constructivist theory are also the principles of learner-centred education. This shows the strong relationship that is there between learner-centred education and social constructivist theory that guided this study. LCE also has five principles which are:

- Active learning,
- Construction of knowledge,
- Cooperative learning,
- Daily life connections and
- Reflective learning.

These principles formed the predetermined themes used in analysing data for the second research question. These five principles also guided the researcher during classroom lesson observation and face to face interviews with participants during data collection.

1.8 Delimitations

The research study only targeted some four selected primary schools in Chankhanga education zone, in Kasungu district, Central East Education Division (CEED). Furthermore, it only targeted two teachers who teach Science and Technology, a carrier subject for Human Ecology content, in standard 5 and 6, at each of the four selected primary schools. This was due to limited time allocated for the research work and lack of funding.

The study specifically focused on primary school Human Ecology teachers' understandings of learner centred education, how learner-centred they are in their Human Ecology classrooms and also factors that affect the use of learner centred teaching methods in primary school Human Ecology classrooms, out of the many aspects of learner-centred education.

1.9 Organisation or sequence of the research report

This thesis report has five chapters, list of references and appendices. The chapters are as follows:

Chapter one introduction to the study, presents the introduction, background to the study, statement of the problem, rationale for the study, research questions, significance of the study, theoretical framework, delimitations and organization of the research report.

Chapter two which is literature review presents an introduction to the chapter, defines learner-centred education, and outlines its principles, misconceptions about it, common LCE methods and potential challenges. The chapter also looks at social constructivists' practices, its principles and features. Finally, it focuses on the meaning of Human Ecology and teaching in Human Ecology classrooms.

Chapter three is research methodology. It presents research paradigm, research approach and research design. It also presents the research site and population target, main sample, pilot sample and sampling techniques. Instruments and data collection methods such as interviews, observation and document analysis have also been highlighted. Data analysis, trustworthiness and research ethics are also presented in this chapter.

Chapter four presents findings and discussion. Findings and discussion have been presented following the way the research questions have been outlined. Research questions 1 and 2 have predetermined themes informed by the principles of learner-centred education while research question 3 has emerging themes.

Finally, chapter five which is about conclusion and recommendations gives an overview of the findings, conclusion, limitations of the study, recommendations on the study findings, and areas for further studies.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter reviews relevant literature on Human Ecology and learner-centred education. The chapter starts by reviewing literature on the definition of learner-centred education, its principles, misconceptions about it, common LCE methods and potential challenges. Then it reviews literature on social constructivists' practices, its principles and features. Finally, the chapter focuses on the meaning of Human Ecology and teaching in Human Ecology classrooms.

2.2 Learner-centred Education

2.2.1 Definition for learner-centred education

Learner-centred approaches are pedagogical practices that “move the focus from the teacher and instruction to the student and learning” (Schuh, 2004, p. 835). On the one hand, UNICEF (2019) defines learner-centred education as a pedagogical approach which gives learners, and demands from them, a relatively high level of active control over the content and process of learning. What is learnt, and how, are therefore shaped by learners' needs, capacities and interests. On the other hand, MoEST (2012) define learner-centred education as a process of teaching and learning whereby the learners are responsible for their own learning; that is, they actively participate in discovering and understanding ideas in a lesson. The teacher's role is to motivate and provide guidance/materials and encouragement. The learner's input, activeness and interaction are of paramount importance. The learner is not just a receiver, but a contributor whose capability

surfaces in the lesson. The knowledge she or he discovers is not easily forgotten. In so doing, learners improve their study skills.

Almost all the activities are done by the learner and the teacher guides the activities. The learner is treated as a hub of the entire learning process. As such, learners understand the concepts fully rather than relying on rote memory. They may also learn through play, provided there is proper guidance from peers, parents and teachers (MoEST, 2012). The understanding is, a learner comes to school with a lot of experiences, be it in the form of knowledge, skills, values or attitudes. Learners have powerful knowledge that can contribute to the teaching and learning process and make them discover more.

2.2.2 Principles of learner-centred education

According to Mc Combs (2005) learner-centred principles are organized into four categories. These are: cognitive factors, motivational factors, developmental factors and individual factors. These principles represent the best knowledge about human learning and development and are applicable to all learning levels including primary schools. Mc Clenney (1998) and Weimer (2013) in their discussion of learner-centred paradigm noted that the principles of learner-centred practices support active learning. Principles of learner-centred practices give guidance to the learning as well as standards of assessment (Mc Combs, 2005).

Mc Combs (2005) categorises learner-centred principles into two: actively engaging learners in the learning process and communicating clearly expectations of learning outcomes. However,

MoEST (2012) outlines the following as principles of learner-centred education practices in line with constructivist theory of learning:

2.2.2.1 Active, interesting learning

Learning should be an active process. The learner should be involved in the learning process and learning should be interesting for the learner. Learner-centred education (LCE) allows for more participation. This means that most of the activities are done by learners. Its emphasis therefore is on learning by doing different tasks. For this to be achieved, it calls for a variety of teaching and learning resources. Skills commonly emphasized under this principle of LCE are exploring, experimenting, critical-thinking, observing, recording, analysing, reporting, drawing and measuring.

2.2.2.2 Construction of knowledge

Learning must be a constructive process which aims to help learners to build knowledge. The focus is on learning, not on teaching. The driving force is the learners themselves. Learners are provided with learning resources to discover new concepts on their own through active participation in the activities of the lesson. Learners discover their own ideas and prove them through activities. They also work at their own pace. More importantly, learners learn through exploration under the guidance of the teacher.

2.2.2.3 Daily life connections.

Learning must be a situated process. This means that learning should be embedded in daily life connections. LCE builds upon learners' knowledge or what they already know which they develop through daily life, and lessons are not examination-centred but outcome-based. Connections between lesson content and daily life make learning meaningful. Such connections between lesson content and daily life help learners understand and tackle everyday challenges in life.

2.2.2.4 Cooperative learning

Learning must be a cooperative process in which knowledge is constructed by the learning community (learners and the teacher). Cooperative learning is not just about group work, it is rather about the exchange of arguments and ideas among learners and the teacher. MoEST (2012) argues that group work is not a suitable learner-centred technique unless it is used to provoke learners' thinking, sharing of ideas, and employment of ideas.

2.2.2.5 Reflective learning

Learning should be a reflective process which enables learners to reflect on the process they undertook in acquiring knowledge. Reflective learning means to become aware of one's own learning process and to become confident in one's abilities. LCE calls for continuous assessment to give the teacher feedback which can be used to develop remediation or enrichment activities. It also calls for learners to summarize the activities under the guidance of the teacher.

2.2.3 Misconceptions about learner-centred education (LCE).

Croft (2002) observes that the primary school curriculum in Malawi is intended to be child-centred, including active participation of pupils through group work, debates and problem solving activities. However, teachers do not appear to be well trained in the methodology that is being promoted by the Ministry of Education in conjunction with international agencies, and the curriculum does not appear to be appropriate for, or adapted to use with the large class sizes. Furthermore, Ministry of Education/UNICEF, (1998), and Kadzamira and Chibwana, (2000) agree that teachers often lack teaching and learning materials to enable them to deliver the curriculum effectively. Thus, teachers are observed to continue to use traditional teacher-centred approaches with a large proportion of class time spent on pupils doing exercises which teachers check or mark during the lesson. This can be demotivating and uninteresting for the pupils, particularly in standard one where the large class size means that it is almost impossible for pupils to receive any individual attention. The above observations made by various players in the primary education sector could be sources of some misconceptions about learner-centred practices that some teachers hold. According to MoEST (2009) and Barbara (2011) some teachers hold different misconceptions about learner-centred practices as discussed in the following paragraphs:

It is a common and far reaching misunderstanding that learner-centred education exclusively means the use of group work in the classroom. Group work is very important because it gives learners the opportunity to be actively involved in the learning process, but it is also possible that group work can be a very ineffective tool in any classroom. This is the case, for example, when learners are unclear of how to solve the problem at hand, or how to carry out an activity, when

they don't understand the purpose of the task, or when there is no reflection upon the activity and its goals. Well planned and facilitated group work can serve as one tool in the LCE tool box, but LCE is certainly not limited to group work.

Teachers do not need to have knowledge, is another misconception that is there among teachers. Learners indeed possess knowledge and the ability to learn, but the teacher has to have content knowledge as well as pedagogical knowledge in order for him or her to properly guide or direct learners in a classroom setting. Some teachers hold a misconception that learners already have knowledge. This is so because it is believed that basically, learners construct their own knowledge through active learning in co-operation with others. On the same knowledge, other teachers feel that subject knowledge must not be taught. This is a misconception because ideally learning programmes are based on what learners should be able to do, know and understand.

Worse still, some teachers feel that teachers must not teach actively, but only help the learners learn. This is a misconception because in an ideal situation, teaching means providing learning experiences and guiding, supporting and facilitating the learner or the learning process.

Brown (2008) concurs with MoEST (2009) by saying that there are myths about the concept of learner-centred classrooms. It is important to develop an understanding of what a learner-centred classroom is but also of what a learner-centred classroom is not. A learner-centred classroom is not a learner-controlled classroom. Learner-centred teachers can expect the same, if not better, classroom behaviour from learners who are actively engaged in their learning. The partnership between teacher and learners contributes to the collaborative learning culture. A learner-centred

classroom does not ignore guiding standards of content or cognition. Aligning learning activities to essential concepts and skills is a key attribute of learner-centred classrooms.

2.2.4 Common methods in LCE

According to MoEST (2012) and MIE (2014) some of the common learner-centred education methods and the context in which they can best be used (purposes for selecting such LCE methods) include the following:

Table 2.1 Some common LCE methods and when to use them.

Method	Purposes or when to use each method
Group work	Collecting experiences, processing, discussing opinions, practicing skills and preparing presentations jointly. Used when you want learners to work together towards a shared goal. It is also used to develop teamwork and cooperation skills.
Pair work	Collecting experiences, processing knowledge and practicing skills.
Whole class discussions	Used to make sure that everyone has a chance to contribute. Used when you want learners to share their personal experiences, feelings, opinions and ideas on a topic they already know something about.
Question and answer	Used to check what learners already know about a new topic before you teach it; to make learners curious and interested in a new topic;

	to check that learners understand what you have taught; to check the achievement of the success criteria at the end of the lesson.
Think-Pair-Share	Individual thinking about an issue or problem and sharing the results with a partner.
Role Play	Exploring situations by playing the roles of interacting persons, finding ways out of typical conflict situations.
Individual work	Reading text, processing knowledge and practicing skills.
Debate	Exploring and defending possible points of view on a controversial issue.
Jigsaw	Understanding and summarizing a written text composed of a number of items.

2.2.5 Potential challenges in implementation of learner-centred education

Despite the fact that many educationists world-wide advocate the use of learner-centred methods during the teaching and learning processes, there are challenges in the implementation of learner-centred methods. The following paragraphs present some of the potential challenges:

Cottrell (2011) postulates that learner-centred practices are not only time consuming but also involve many activities. As such, teachers need more time to prepare a variety of teaching and learning resources apart from preparing the activities to be done during lesson delivery. Similarly, learners need more time to practice the skills during lesson presentation in order for them to acquire in-depth understanding and sufficient knowledge.

In their study, Ward and Lee (2002) observe that lack of some prepared teaching and learning resources for classroom lesson delivery poses as a potential barrier to effective implementation of learner-centred practices. Therefore, there is need for schools to be resource-rich in order for them to use learner-centred practices effectively. MoEST/InWent (2009) concurs with Ward and Lee (2002) by citing lack of teaching, learning and assessment resources as a potential challenge with learner-centred practices (LCP). This is because learner-centred lessons require adequate resources. Schools may have problems in sourcing some resources, for example resources that must be purchased. The correct use of resources can also be a challenge as a teacher may have a resource but may fail to utilize them correctly. In her study, Mmela (2006) also made a similar observation that without teaching, learning and assessment resources, it is difficult for teachers to implement learner-centred education because textbooks give confidence to teachers by serving as secure base from which content, teaching strategies and techniques are drawn. Chiphiko (2014) in his study found out that teachers fail to plan thoroughly and consequently fail to arouse learners' interest during lesson delivery because of large class size and inadequate teaching, learning and assessment resources. His results are in agreement with Mmela (2006) and Sunzuma (2013) who also found out that shortage of textbooks and other teaching resources has negative implications on the implementation of learner-centred approaches.

Stuart et al. (2009) observe that one of the potential challenges in implementing learner-centred practices is that where learners expect the teacher to know everything, asking the learners to find their own answers might look like teacher ignorance. In the same vein, Vavrus et al. (2011) posit that one of the principal challenges lying at the heart of learner-centred education methods is the notion that knowledge can be co-constructed by teachers and learners. The assumption may

engender cultural conflict because it challenges the authority vested in teachers as the person in the classroom who possesses knowledge. MoEST/InWEnt (2009) concurs that in some cases, learners who are not used to learner-centred education practices could judge the teacher and consider him/her lazy. They may construe the lack of one way instruction as a lack of knowledge and feel the teacher is resorting to heaping work on them. This poses to be a potential challenge to the implementation of learner-centred education.

UNESCO (2004) report states that teachers in Uganda, Kenya and Tanzania seemed to believe in the values of learner-centred education but were reluctant to fully adopt these strategies because they felt pressure to cover the curriculum and ensure that learners were prepared to take and succeed in the national primary leaving examinations. In the same vein, other reports suggest Ghanaian teachers are still relaying primarily on teacher-centred methods even though government policy calls for learner-centred practices (Mereku, 2002). This is in agreement with the results of a study carried out in Zimbabwe by Sunzuma et al. (2013) which state that although teachers are aware of the goals of learner-centred education, they are guided by the summative examination system in Zimbabwe. This concurs with Vavrus et al. (2011) who postulate that in most countries in Sub-Saharan Africa, their examination system is aligned less with active learning and learner-centred education methods and aligned more with direct instruction, pushing the teaching practices to be more teacher-centred. This is a potential challenge to the implementation of learner-centred education.

Another potential challenge in the use of LCE methods is teachers' limited knowledge on learner-centred education largely due to the way they are trained in teacher training colleges (TTC). This

is in accordance with the observations made by Vavrus et al. (2011) who contend that without high quality initial training teachers largely teach the way they were taught. Vavrus et al. (2011) allude that tutors in TTCs rarely model participatory methods, and as a result very seldom do student teachers actually experience the kind of learner-centered methods that tutors preach.

In agreement to the above argument by Vavrus et al (2011), Chakwera and Gulule (2003) argue that the challenge to curriculum implementation or LCA arises from both teachers' background as well as the context in which teachers implement the new curriculum. That is to say, if teachers face some challenges during their training, this may affect curriculum implementation or management. As alluded to by MIE (2008), teacher educators in teacher training colleges (TTCs) in Malawi fail to vary participatory methodologies so that group work and pair work become the most popularly used learner-centred education methods. As a result, graduates under this programme may often use group work and pair work among a variety of these learner-centred methods. This is possibly because of what they were exposed to while on training in college knowing that teacher educators in TTCs, who are supposed to be role models, are not leading by example. Failure to model different LCE methods by teacher educators during the training of teachers in TTCs is a potential challenge to effective implementation of different learner-centred education methods in primary school Human Ecology classrooms and in other subjects as well.

Closely related to the challenge of teachers' limited knowledge about LCE could be lack of pedagogical content knowledge ((PCK) (Shulman 1986; 1987). The teachers' subject matter knowledge and 'pedagogical knowledge' are crucial to good teaching and student understanding (Shulman, 1986: 1987; Cochran, DeRuiter& King, 1993). Shulman (1986) proposed that effective

teachers have three types of knowledge: knowledge about the subject matter they teach (content knowledge), knowledge of general instructional strategies (pedagogical knowledge), and knowledge of specific strategies for teaching a particular subject matter (pedagogical content knowledge). According to Shulman (1987), pedagogical content knowledge is the knowledge that enables practicing teachers to make connections between their knowledge of pedagogy and their knowledge of content.

Another potential challenge is time management. Using learner-centred methods requires a lot of time for planning. It is time consuming to prepare learner-centred lessons due to the nature of exhibition of learner-centred instruction. The teacher requires ample time to prepare the tasks, resources, directions and activities involved in learner-centred education lessons (MoEST/ InWEnt, 2009).

Teacher's level of commitment to learner-centred education is also a potential challenge. In order to formulate appropriate tasks, prepare relevant resources, and organize lessons, the teacher must be committed. It takes a teacher who is self-motivated to be committed to the demands of learner-centred education methods.

In connection with Human Ecology as a subject, a potential challenge could be lack of subject specific teaching, learning and assessment resources as alluded to by DCE (2003) that being a specialized practical science subject, HEC requires a variety of teaching, learning and assessment resources for it to be effectively taught. However, such subject specific teaching, learning and assessment resources may not be readily available in most primary schools in Malawi. In relation

to this, Kumkwenzu (1997) argues that subject matter knowledge positively affects teaching. Competence in the subject matter knowledge is perceived as very important for effective Home Economics teaching. As a specialised science subject, it is argued that to be a good Home Economics teacher, one has to be a 'master' in all the five content areas (core elements) of Home Economics since they are all taught. It is argued by Kumkwenzu (1997) that specialisation has resulted in Home Economics losing its integrative perspective. It is further argued by Kumkwenzu (1997) that for effective teaching, classroom experiences need to include a lot of practical activities. This calls for subject matter knowledge and knowledge of specific strategies for teaching a particular subject matter (pedagogical content knowledge). This is a potential challenge in primary school Human Ecology classrooms in Malawi because majority of the primary school teachers never studied Home Economics whilst in secondary school as it is an elective science subject that is offered in a few selected secondary schools across the country.

2.3 Social constructivist practices

Constructivism is 'an approach to learning that holds that people actively construct or make their own knowledge and that reality is determined by the experiences of the learner' (Elliott et al., 2000, p. 256). According to McLeod (2019), there are three main types of constructivism. These are: Cognitive constructivism based on the work of Jean Piaget, social constructivism based on the work of Lev Vygotsky, and radical constructivism based on the work of Ernst von Glasersfeld (1974).

Firstly, cognitive constructivism states that knowledge is something that is actively constructed by learners based on their existing cognitive structures. Therefore, learning is relative to their stage

of cognitive development. Secondly, social constructivism states that learning is a collaborative process, and knowledge develops from individuals' interactions with their culture and society. Lastly, radical constructivism states that all knowledge is constructed rather than perceived through senses. This study is based on the social constructivist theory.

2.3.1 Principles of constructivism

All the three types of constructivism generally base on the following principles as stated by McLeod (2019):

2.3.1.1 Knowledge is constructed, rather than innate, or passively absorbed

Constructivism's central idea is that human learning is constructed, that learners build new knowledge upon the foundation of previous learning. This prior knowledge influences what new or modified knowledge an individual will construct from new learning experiences (Phillips, 1995).

2.3.1.2 Learning is an active process

Learning is an active rather than a passive process. The passive view of teaching views the learner as 'an empty vessel' to be filled with knowledge, whereas constructivism states that learners construct meaning only through active engagement with the world, such as experiments or real-world problem solving (McLeod, 2019).

2.3.1.3 All knowledge is socially constructed

Learning is a social activity - it is something we do together, in interaction with each other, rather than an abstract concept (Dewey, 1938). In relation to Dewey's argument, Vygotsky (1978) believed that community plays a central role in the process of "making meaning." For Vygotsky, the environment in which children grow up will influence how they think and what they think about.

2.3.1.4 All knowledge is personal

Each individual learner has a distinctive point of view, based on existing knowledge and values. This means that same lesson, teaching or activity may result in different learning by each pupil, as their subjective interpretations differ. This principle appears to contradict the view that knowledge is socially constructed (McLeod, 2019).

2.3.1.5 Learning exists in the mind

The constructivist theory posits that knowledge can only exist within the human mind, and that it does not have to match any real world reality (Driscoll, 2000). Learners will be constantly trying to develop their own individual mental model of the real world from their perceptions of that world. As they perceive each new experience, learners will continually update their own mental models to reflect the new information, and will, therefore, construct their own interpretation of reality.

2.3.2 Features of a constructivist classroom

Tam (2000) lists the following four basic characteristics of constructivist learning environments, which must be considered when implementing constructivist teaching strategies:

- 1) Knowledge will be shared between teachers and students.
- 2) Teachers and students will share authority.
- 3) The teacher's role is one of a facilitator or guide.
- 4) Learning groups will consist of small numbers of heterogeneous students (Tam, 2000).

2.3.3 Descriptors of constructivist teaching behaviours

Brooks and Brooks (1993) list twelve descriptors of constructivist teaching behaviours:

1. Encourage and accept student autonomy and initiative.
2. Use raw data and primary sources, along with manipulative, interactive, and physical materials.
3. When framing tasks, use cognitive terminology such as “classify,” “analyse,” “predict,” and “create.”
4. Allow student responses to drive lessons, shift instructional strategies, and alter content.
5. Inquire about students’ understandings of the concepts before sharing [your] own understandings of those concepts.
6. Encourage students to engage in dialogue, both with the teacher and with one another.

7. Encourage student inquiry by asking thoughtful, open-ended questions and encouraging students to ask each other questions.
8. Seek elaboration of students' initial responses.
9. Engage students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion.
10. Allow wait time after posing questions.
11. Provide time for students to construct relationships and create metaphors. Nurture students' natural curiosity through frequent use of the learning cycle model.
12. Nurture students' natural curiosity through frequent use of the learning cycle model.

2.4 Human Ecology teaching

2.4.1 What is human ecology?

Human Ecology is a subject as well as a group of related disciplines that addresses the everyday world of individuals and families by focusing on the provision of food, shelter and clothing within the domestic economy (Henry, 1995). Various models/perspectives of Home Economics have emerged and each has had varying areas of focus. Because of the competing models that have existed, names of the subject have also changed time and again and varied from place to place. For example, Home Economics courses have been labelled under different names such as Human Ecology, Human Development, Home and Family Life, Consumer Services, Technical and Industrial Education, Applied Sciences, Business and Resource Management, Domestic Science, Home Craft, Home Economics, Cookery, Home Management (Kunkwenzu, 2007). The mission of Human Ecology is the promotion of individual and family wellbeing. The family is the main focus.

The definition for Home Economics adopted during the fourth Lake Placid conference in 1902 was: "Home economics ... is the study of the laws, conditions, principles and ideas concerned with man's immediate physical environment and his nature as a social being" (East, 1980, p. II). The content of Human Ecology is non-static and multi-dimensional in order to provide for adequate knowledge to cope with changes in the family as well as the environment at large. Home Economics (Human Ecology) is a unique area of study because it requires the integration of knowledge drawn from the arts, the pure sciences as well as from the social sciences in order to be able to solve the various issues facing the family. In view of this, Henry (1995, p. 10) defined Home Economics as "a multi-faceted, interdisciplinary, integrated field of study drawing from a multitude of disciplines including sociology, psychology, anthropology, chemistry, physics, architecture and the arts". Pendergast (2007) defines Home Economics as a field of study and a profession, situated in the human sciences, that draws from a range of disciplines to achieve optimal and sustainable living for individuals, families and communities. DCE (2003) defines Human Ecology as a field of study which deals with humans both as biological organisms and social beings as they interact with their natural, physical, biological, socio-cultural and human-built environment.

In Malawi, Human Ecology is perceived as a multidisciplinary and integrated subject whose main aim is to promote family wellbeing. As such, Home Economics adopts an ecological perspective in dealing with problems through the use of practical problem-solving approaches. The subject is, therefore, diversified and multidisciplinary in content. Issues of malnutrition, food security and population are critical areas of concern in Malawi for individual and family wellbeing, as well as for national development. Home Economics is, therefore, an important subject in Malawi's school

curriculum, because it deals with practical perennial problems facing the everyday needs of Malawian families (Kunkwenzu, 2007).

There are five main core elements that are commonly known as the main components of Human Ecology, as a subject, in primary schools and teacher training colleges in Malawi. These are: People and the environment, Food nutrition and health, Human growth and development, Family resource management and Clothing and textiles (MIE, 2017).

2.4.2 Teaching in Human Ecology classrooms

Teaching in Human Ecology as a practical subject constitutes two main parts: theory and practice. In either theory or practical part, Kunkwenzu (1997) argues that for effective teaching and learning in Human Ecology, more learner-centred approaches should be used. This involves active participation of learners throughout the lessons. Furthermore, she finds demonstration to be useful because of the practical nature of the subject. This is because demonstration is used to show learners how to do a new skill or activity prior to a practical session where the learners would be expected to perform a task using the skill. The methods perceived as effective for teaching Human Ecology are those that encourage teacher-learner discourse, feature thoughtful discussion, and encourage active participation of the learners. Such participatory teaching and learning methods are described as learner-centred practices. Such learner-centred practices support the results of the teacher effects research (Brophy & Good, 1986). Brophy & Good summarised the findings of the teacher effects research and noted that effective teachers did not merely maximise 'time on task', they also spent a greater amount of time on actively instructing their students. Their classrooms featured more time spent on interactive lessons, featuring more teacher learner discourse and less

time spent on independent seat work (Brophy & Good, 1986). Furthermore, effective learner-centred practices in Human Ecology classrooms emphasise on motivation and active participation of learners.

Apart from using methods of teaching that involve learners actively in Human Ecology, teaching, learning and assessment resources are also a requirement to meet the large class sizes. This is a challenge because the nature of the subject and its recommended teaching methods require adequate teaching and learning resources which are not readily available in primary schools in Malawi (Kunkwenzu, 1997).

2.8 Chapter summary

This chapter has reviewed literature that is related to the researcher's study "Learner-centred education in primary school human ecology classrooms: a case of selected schools in Chankhanga zone, Kasungu district". The chapter has presented what other researchers found and published mainly in the field of learner-centred education.

This review of literature has shown that learner-centred education practices have been developing for over years and generations, and it continues to take on different shapes. Yet, many of the dispositions that are embedded in this education delivery system tend to endure. The nature of all theory is to guide thinking, therefore, learner-centred education should guide teachers' thoughts which will inevitably shape their behaviour. Because the nature of all knowledge is fluid and temporary, responsible use of learner-centred education practices requires educators or teachers to

commit to a life-long pursuit of improving their understanding of learner-centred education and of the broader processes called teaching and learning.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY.

3.1 Introduction

This chapter presents research design and methodology which highlights the details of how the research was conducted. The research methodology explains the details of the research paradigm, research design, sample and sampling techniques, data collection methods, data analysis, trustworthiness and research ethical issues that were taken into consideration during the research study.

3.2 Research paradigm

Paradigms are essential because they encompass ontology, epistemology, and methodology that guide the choice of research questions. Furthermore, paradigms reflect the research design (Lindsay, 2010). There are several paradigms that one would follow when conducting a research study. According to Creswell, (2012) some of the widely discussed paradigms in the literature are: post positivism, constructivism, transformative, and pragmatism.

This study was underpinned on constructivism paradigm (often combined with interpretivism). Constructivist paradigm is a philosophical assumption or idea which believes that individuals seek understanding of the world in which they live and work. Individuals develop subjective meanings of their experiences. These subjective meanings are negotiated socially and historically. They are not simply imprinted on individuals but are formed through interaction with others (hence social

constructivism) and through historical and cultural norms that operate in individuals' lives (Creswell, 2012). This research inquiry was underpinned on this paradigm because the researcher assumed that teachers were trained on learner-centred education methods and that each one of the teachers uses their own environment in which they construct knowledge, therefore, it is the right paradigm. More importantly, the teaching of HEC draws from constructivism because its recommended teaching approaches promote interaction between the teacher and learners and among learners themselves. Thus, constructivist teachers often address the processes of interaction among individuals (Creswell, 2012). Furthermore, interpretive approach guided the researcher in the whole process from data generation to interpretation. Therefore, constructivism paradigm is appropriate for this study as alluded to by Vavrus et al. (2011) who reiterate that learner-centred practices draw on a theory of knowledge known as constructivism. Constructivism assumes that knowledge emerges through interactions and experiences among knowers and through reflection on the knower's own ideas. In other words, knowledge is not external to the knower and awaiting discovery by him or her, rather, that knowledge is created through a process of new information interacting with the prior knowledge and experiences of learners (du Plessis and Muzaffar, 2010). Several prominent education scholars, such as John Dewey, Jean Piaget, and Lev Vygotsky, are associated with constructivism and have demonstrated its relevance to pedagogy.

According to Vavrus et al. (2011), this philosophy of knowledge suggests that teachers should create the conditions for learners to discover and actively construct knowledge, to 'learn to learn', and to develop the higher-order thinking skills of analysis and synthesis through inquiry-oriented lessons in the classroom. The researcher therefore strongly feels that constructivism paradigm is very relevant to this study.

3.3 Research approach

Research approach is a plan and the procedure for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. It involves the intersection of philosophical assumptions, designs, and specific methods (Creswell, 2012). This research study employed qualitative approach. The advantage of qualitative approach is that it provides an in-depth, intricate and detailed understanding of observable and non-observable phenomena, attitude, intentions and behaviours (Cohen, Manion & Morrison, 2011). Myers (1997) adds by saying that qualitative approach provides a forum for participants to express their diverse beliefs and views. Therefore, qualitative approach enabled participants in this research study to express in their own words how they experience learner-centred practices in Human Ecology classrooms in primary schools given the challenges that such schools face in Malawi.

3.4 Research design

Research design is a type of inquiry within qualitative, quantitative, and mixed methods approaches that provide specific direction for procedures in a research study (Creswell, 2012). It therefore refers to the plan, structure, and strategy of research; the blueprint that will guide the research process. Polit and Beck (2008) define research design as an overall plan for obtaining answers to the questions being studied and for handling various challenges to the worth of the study. This research study was a case study. Cohen et al. (2011) define case study as a specific instance that is frequently designed to illustrate a more general principle. According to Creswell (2012) a case study is a qualitative design in which the researcher explores in depth a program, event, activity, process, or one or more individuals. Others would not hold to such tight definition,

for example, Fraenkel et al. (2015) define case study as just comprising one individual, classroom, school or programme. What case study researchers have in common is that they call objects of their research, cases, and they focus their research on the study of such cases. Case studies help researchers gain valuable insights (Fraenkel et al., 2015).

There are three types of case studies: Intrinsic, instrumental and multiple or collective case studies. Multiple case studies are case studies in which a researcher studies multiple cases at the same time as part of the overall study. This research study took the multiple research design because it covered four selected primary schools in Chankhanga education zone within Kasungu district in Malawi. Each school had two participants thereby making a total of eight participants. Each participant was treated as a different case because they were operating in different environment in which they constructed their knowledge. As such, the eight cases could not be compared because knowledge construction was different. The multiple case study design was selected out of the three types of case studies because results from multiple case studies according to Fraenkel et al. (2015) are often considered more compelling and they are more likely to lend themselves to valid generalization. However, the researcher is aware that in case study, one cannot generalize, but just to unveil some insights.

3.5 Sample and sampling techniques

3.5.1 Research site and population target

The site for this research study was some four selected primary schools within Chankhanga education zone in Kasungu district, Central East Education Division (CEED). Chankhanga

education zone in Kasungu district was selected because it has some primary schools that are categorized as urban schools and also other primary schools that are categorized as rural schools. This made the researcher have special interest to find out, how learner-centred Human Ecology classrooms are, in both urban and rural schools.

Population is the entire group that is of interest to the researcher (Wilson & Maclean, 2011). According to Kumar (2015), population is a larger group to which the researcher hopes to apply the results. In this study, the population consisted of standard 5 and standard 6 teachers who teach Science and Technology, (a subject that carries Human Ecology content) in Chankhanga education zone.

3.5.2 Main sample

According to Kumar (2011), sampling is the process of selecting a few (a sample) from a bigger group (the sampling population) to become the basis for estimating or predicting the prevalence of an unknown piece of information, situation or outcome regarding the bigger group. Sampling enables researchers to select a number or a group of individuals in such a way that those selected represent the larger group from which they are selected (Gay, 1987). The advantages of sampling are that it saves time as well as financial and human resources. However, the disadvantage is that you do not find out the information about the population's characteristics of interest to you but only estimate or predict (Kumar, 2011). Qualitative researchers use various non-probability sampling techniques that ensure that right informants or participants are selected. The sampling techniques attempt to reduce or eliminate some unwanted biases, which could be a possible threat to the credibility of the results of the study.

Cohen et al (2011) argue that qualitative research seeks to explore the particular group under study, not to generalize, and that there are no clear rules on the size of the sample in qualitative research; size is informed by “fitness for purpose”. Bryman (2008) further argues that qualitative studies tend to favour in-depth studies with fewer participants. This study therefore focused on four primary schools, two in the rural setting of Chankhanga zone and the other two schools in the urban setting of the targeted zone, with the purpose of having a good number of teachers participating in the research study. Two teachers, who teach Science and Technology in standards 5 and 6, a carrier subject for Human Ecology topics (content) in primary schools, were purposively selected from each school, to make a total of eight participants. The composition of the eight participants was purposively arrived at as well, that is, by virtue of teaching Science and Technology in the targeted classes. Standards 5 and 6 were purposively selected because Human Ecology content is first introduced in Science and Technology in standard 5 and standard 6 was selected in order to monitor how it was developing or progressing. Therefore, the first two years are critical in the teaching of Human Ecology content for the good foundation and progression respectively. Standards 7 and 8 were not targeted because they are busy classes in readiness for national examinations, Primary School Leaving Certificate of Education (PSLCE).

An analysis of the biographical details (profile) of the participants provided some immense insights into the study findings. As it was evident during data collection, there was only one male teacher teaching Science and Technology in standards 5 and 6, a carrier subject for Human Ecology content in the selected primary schools. Again, it was also found that all the participants were trained through MIITEP programme, IPTE conventional programme and IPTE ODL programme. All the eight participants qualified as primary school teachers between 1996 and 2016. All the

eight respondents never studied Human Ecology (Home Economics) when they were at secondary school. Such revelations were critical as they helped in the analysis and subsequent interpretation of the study findings. This information was summarized in a table below, in which numbers were used to represent names of teachers.

Table 3.1 Profile for participants

TEACHER	SEX	MODE OF TRAINING	TEACHING EXPERIENCE
1	Female	IPTE conventional	9 years
2	Female	MIITEP	23 years
3	Female	IPTE conventional	5 years
4	Female	MIITEP	22 years
5	Female	IPTE conventional	3 years
6	Female	IPTE conventional	5 years
7	Male	IPTE conventional	3 years
8	Female	IPTE-ODL	5 years

3.5.3 Pilot sample

Prior to the collection of data, a pilot study was conducted in order to ensure that data collecting instruments (interview guide and lesson observation tool) for this research inquiry were effective or in other words to test the validity of the research instruments which were used. According to Weis and Bucuvala (1998), pre-testing or pilot work to test questions or methodology is very vital for the success of any research. A pilot study was conducted at a certain primary school in a different education zone known as Suza within Kasungu district, not the targeted Chankhanga education zone. The sample size for this pilot study was two teachers who teach Science and Technology, one in standard 5 and the other one in standard 6, as targeted classes for the study.

Pilot study is a small study conducted in advance of a planned project to test aspects of a research design (Kumar, 2011; Creswell, 2012). Robson (2011) defines pilot study as a small scale version of the real thing; a try-out of what you want or propose so that its feasibility can be checked. Piloting is important as it gives room for improvement of the items of the interview guide and observation checklist (Cohen et al, 2011). Piloting, according to Lodico (2006) also helps the researcher determine the duration for interviews, ensure clarity of questions and instructions, remove items which might not have yielded usable data; and establish validity and reliability of the instruments. After this pilot study, the researcher made some amendments to some of the questions on the interview guide that were not very clear to respondents.

3.5.4 Sampling techniques

As already alluded to, qualitative researchers use various non-probability sampling techniques. However, this does not rule out the use of probability sampling techniques where deemed

necessary. This research study used simple random sampling method in order to select four schools in Chankhanga education zone. This was used because of the small number of schools in the zone, where there are ten schools only. However, purposive sampling method was used to select teachers to participate in the study because the study targeted standard 5 and 6 teachers for Science and Technology. Standard 5 was chosen as a class in which Human Ecology content is first introduced in Science and Technology and standard 6 was selected in order to monitor how it was developing or progressing. This is in agreement with Creswell (2012) who emphasizes that one of the advantages of purposive sampling is that the researcher selects individuals and sites for a study because they can purposefully inform an understanding of the research problem or central phenomenon in the study. Patton (1990) further observes that purposive sampling helps the researcher to choose cases that are in line with issues under study. In this case the researcher was able to come up with participants who have relevant experiences in the issues at hand.

3.6 Data generation methods and instruments

Data for this research study was generated by using three methods, namely face to face interviews, classroom lesson observations, and document analysis.

3.6.1 Interviews

On the one hand, Cohen et al. (2011) looks at an interview as an interchange of views between two or more people on a topic of mutual interest. On the other hand, Fraenkel and Wallen (2009) define interviews as the careful asking of relevant questions. In this research study, face to face interviews were used to collect data for the three research sub questions from participants who happened to

be teachers for Science and Technology in the selected primary schools. The interview guide and an audio voice recorder were used during the face to face interviews with the participants. For the interview guide, see appendix A. The advantage of using interviews according to Cohen et al. (2011), is that both the interviewer and interviewee discuss their interpretations of the world in which they live and allows both of them to express how they regard situations from their own point of view. In addition, an interview is a flexible tool for data collection that enables multisensory channels to be used: verbal, non-verbal, spoken and heard. Furthermore, interviews give researchers an opportunity to know people quite intimately, so that they can understand how they feel. Fraenkel et al. (2015) add by saying that the interviewer can clarify any questions that are obscure and can also ask the respondent to expand on answers that are particularly important and revealing. In this regard, interviews helped the researcher to probe more by way of asking some follow-up questions.

Each of the face to face interviews with participants ranged in duration; from forty minutes to sixty minutes. All the participants were interviewed individually by the researcher. Each participant was interviewed only once. The interviews took place at the participants' school. All interviews were conducted in English because all participants were comfortable with English. All interviews were audio taped. According to Barribal, and While (1995), audio taping ensures that an identical replication of the contents of each interview is available to facilitate analysis. Further, access to the intonations and pauses recorded helped to validate the accuracy and completeness of the collected information. Audio taping also reduces the potential for researcher error by, for example, recording data incorrectly or cheating by logging an answer to a question that was not asked (Patton, 1990). An interview guide (see appendix C) was used in the initial interview. This style

was selected because of the need to probe deeply and to allow the participants to express their thoughts. The researcher attempted to allow the flow of conversation to develop while returning to the interview guide when appropriate. The guide was then used to maintain the focus of the interview and to verify the internal reliability of the statements made by the participants. By the time of interviewing the seventh participant, it was clear that the saturation point had been reached because the responses from the participants were repetitive and confirmed previously generated data.

The audio tapes were transcribed at the end of each day. The process of transcribing allowed the identification of follow-up questions for the subsequent interviews. All the face to face interviews were conducted after a classroom lesson observation.

3.6.2 Observations

Cohen et al. (2011) define observation as looking (often systematically) and noting systematically (always) people, events, behaviours, settings, artefacts, routines and so on. In other words, it is a method of generating qualitative data which entails the researcher immersing oneself in a research setting so that one can experience and observe at first hand a number of issues in that setting which might include: social action, behaviour, interactions, relationships and many more. In this study, the researcher observed instructional delivery in Human Ecology classrooms in order to find out if teachers use learner-centred practices. Eight classroom lessons were observed, one for each participant. This method is good because it is the most direct means of studying people. Furthermore, Cohen et al. (2011) add by saying that observation offers an investigator the opportunity to gather “live” data from naturally occurring social situations.

A classroom lesson observation tool was used in course of observing the lessons delivered, see appendix D. However, Fraenkel et al. (2015) argue that initially, observation forms should always be used on a trial basis in situations similar to those to be observed in order to work out any buds or ambiguities. As such, the classroom lesson observation tool was piloted as already explained in section 3.5.3.

Observations include both oral and visual data. Therefore, in addition to the observer or researcher writing down details in field notes, a powerful audio-visual recorder was supposed to be used, however, it was not used because participants refused to be video-recorded. Comprehensive audio-visual recording can overcome the tendency towards only recording the frequently occurring events. The video recording could have enabled for several playbacks to be conducted, to scrutinize the data more fully.

3.6.3 Document analysis

Wolf (2004) defines documents as standardized artefacts, in so far as they typically occur in particular formats: as notes, case reports, contracts, drafts, death certificates, remarks, diaries, statistics, annual reports, judgments, letters or expert opinions. In this research study, the researcher analysed primary documents of all the participants such as schemes of work and lesson plans and also secondary documents such as teaching syllabuses. These documents were scrutinized to see if they show signs of being learner-centred in the way they are prepared. Checking the lesson plans was also necessary in order to see if teachers implemented classroom activities as planned in the lesson plans and whether they managed to follow the tenets of the

constructivism learning theory which guided this research study. Schemes of work were also checked in order to see if the suggested teaching methods were indeed learner-centred. Teaching syllabuses for Education Foundation Studies and Human Ecology at TTC level were also scrutinized in order to look at how the curriculum is organized. The researcher made sense of the document contents with the help of the participant teacher, in order to get an insight into how the participant interpreted them.

Here is a summary of data collection methods that were used to collect data to answer specific research questions, summarized in form of a table.

Table 3.2: Data collection methods used to collect data for specific research questions

Research question	Data collection methods used
What are primary school Human Ecology teachers' understandings of learner centred education?	<ol style="list-style-type: none"> 1. Face to face interviews 2. Classroom lesson observation 3. Document analysis
How learner centred are the teachers when teaching Human Ecology content in primary schools?	<ol style="list-style-type: none"> 1. Face to face interviews 2. Classroom lesson observation
What factors affect the use of LCE in primary school Human Ecology content classrooms?	<ol style="list-style-type: none"> 1. Face to face interviews 2. Classroom lesson observation

3.7 Data Analysis

This study employed thematic data analysis. According to Ndengu (2012) this is a multi-stage procedure by which themes develop from cases in the text or data that are defined. Both predetermined and emergent thematic data analysis were used. The predetermined data analysis was based on the principles of learner-centred education as guided by the constructivist theory of learning which promotes active participation of learners in a learning process. This was used to analyse data for research questions 1 and 2. Emergent thematic data analysis was also used in this study to analyse data for research question 3. This is in agreement with what Creswell (2012) explains that the research process for qualitative researchers is emergent. This means that the initial plan for research cannot be tightly prescribed, and some or all phases of the process may change or shift after the researcher enters the field and begins to collect data.

The first step in data analysis involved reading and re-reading the data in order to clearly understand, find the way through and make sense of the data. This step was important in order to stay as close to the data as possible, from initial data collection stage right through to the drawing of final conclusions as observed by O'Leary (2004). In this case, initially, data was collected from participants, transcribed and then coded to develop themes. The whole purpose was to develop categories and themes that addressed the research question. This method was chosen because it works better with the interview method of data collection which the researcher used as the main method of collecting data from participants. During this step (transcription), data from each source were reviewed. The audio recordings were re-played and listened to carefully before transcribing them (Ndengu, 2012). This is because analysis on qualitative research methodology, should be done on data which is in textual format.

Data from interviews were transcribed verbatim and analysed using interpretive approach. Then the transcripts were carefully compared with the recorded interviews to ensure that they were a true reflection of what was recorded. All interviews were conducted within the school setting. Thorough data review was done. The researcher organized the data according to sources for easy coding.

Data from lesson observations were analysed by reading through remarks from lesson observation tools (forms) that were used to collect data. The researcher also read notes from the field note book where he recorded what was observed during lesson delivery. According to O’Leary (2004) data from qualitative research can be analysed using different approaches and through different steps. This view is also shared by Ndengu (2012) who further argues that the steps used in qualitative data analysis are not linear but fluid. The objective of data analysis is to bring order, structure and meaning out of the large volume of the generated data (O’Leary, 2004; Cohen et al., 2011; Woods, 2006). This can be done through different methods and steps as already alluded to.

3.8 Trustworthiness

Issues to do with credibility and trustworthiness in qualitative research studies are worthwhile. Guba & Lincoln (1994) proposed the criteria for judging the soundness of qualitative research. Credibility is all about ensuring whether the researcher had studied that which he intended to study. It focuses on the confidence in the truth of the findings, including an accurate understanding of the context. Krefling (1991) argues that in qualitative research, credibility of a research is obtained from the discovery of human experiences as they are lived and experienced by participants. In this

study, the researcher ensured credibility by prolonged stay in the field with participants (four weeks), by making a detailed description of the study setting, applying reflexivity during data collection period. Credibility was also enhanced by use of participant validation. Participant validation refers to the process whereby the researcher sends data, analyses, interpretations and conclusions from the study back to the participants to check for the accuracy and credibility of the account (Bryman, 2008). This was done by going back to the participants.

Issues of trustworthiness were achieved by ensuring triangulation. Triangulation may be defined as the use of two or more methods of data collection in the study (Cohen et al, 2011). This research study, therefore, used three methods of data collection which were: interviews, classroom lesson observation and document analysis, which contrasted with the ubiquitous but generally more vulnerable single-method approach that characterizes much of research in social sciences. Triangulation is a powerful way of demonstrating concurrent validity, particularly in qualitative research (Kumar, 2005). Triangulation in the social sciences attempts to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint (Cohen et al., 2011), by making use of interviews, classroom lesson observation and document analysis. Triangulation was used in this study in order to make the results of this research inquiry more reliable.

Issues of trustworthiness were also achieved by conducting pilot sampling of the data collection instruments. Piloting was done in order to ensure that data collecting instruments (interview guide and lesson observation tool) for this research inquiry were effective. This is in agreement with

Fraenkel et al. (2015) who argue that, initially, observation forms should always be used on a trial basis in situations similar to those to be observed in order to work out any buds or ambiguities.

Fortunately, the researcher is a teacher educator who by nature of his job, conducts classroom lesson observations on student teachers during the school experience phase of teacher training in teaching practice schools (TPSs). Therefore, he (the researcher) is well versed with classroom lesson observation procedures.

3.9 Research Ethics

Understanding that qualitative research uses methods that tend to infringe on people's personal liberties, which may provoke ethical dilemmas for researchers, the researcher, therefore, sought consent from participants before the face to face interviews, classroom lesson observation and document analysis. In the first place the research proposal was approved by the ethical committee of Mzuzu University. Consequently, the researcher was issued an authorization letter by Mzuzu University as his research centre, see appendix A, to start data collection. Then the researcher sought permission from the District Education Manager for Kasungu district to start data collection from the four selected schools in Chankhanga education zone, see appendix B and H. The researcher then visited the four selected primary schools, where permission was sought from the head teachers to conduct research with their standards 5 and 6 Science and Technology teachers. Information sheet containing all the necessary information about the research study was issued to each head teacher, see appendix F and each participating teacher, see appendix G) in order for them to exactly know what the research study was all about.

Participants also signed consent form prior to their participation in the research study, see appendix E. According to Creswell (2012), participants must have the right to participate and withdraw voluntarily. In line with this, the participants were told of their voluntary participation and withdrawal before the on-set of the research project, see appendix E. The researcher also ensured that the confidentiality or anonymity of the individual participants and individual education institutions was protected or respected by using numbers instead of their names.

3.10 Chapter summary

This study employed qualitative approach in order to have an in-depth understanding of the research topic. It used constructivism paradigm and it took case study design. Data were generated through open-ended, in-depth, face to face interviews, classroom lesson observations and document analysis. These three data generation methods were used in order to ensure that the findings are trustworthy. The interview guide and lesson observation tool were piloted before use in order to moderate them.

Four primary schools were randomly selected from Chankhanga education zone in Kasungu district. Purposive sampling was used for selecting teachers to participate in the study. Two teachers, who teach Science and Technology in standards 5 and 6, were purposively selected from each school, to make a total of eight participants. Standards 5 and 6 were purposively selected because Human Ecology content is first introduced in Science and Technology in standard 5, and standard 6 was selected in order to monitor how it was developing. This study employed thematic data analysis. Predetermined themes were used for research questions one and two. Research

question three used emerging themes. As required in social research, ethical considerations were all adhered to.

CHAPTER 4: FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents findings and discussion. This study was carried out in order to answer the following research questions:

- What are primary school Human Ecology teachers' understandings of learner-centred education?
- How learner-centred are the teachers when teaching Human Ecology in primary schools?
- What factors affect the use of learner-centred-education in primary school Human Ecology classrooms?

Cohen, et al. (2011) point out that there are five ways of organizing and presenting data analysis and these are : Firstly, by groups; that is to say where the respondents said the same, they are organized by groups of respondents in relation to a given issue. The advantage of this method is that it automatically groups the data and enables themes, patterns to be seen at a glance. It is also a useful method for summarizing similar responses. The disadvantage is that the collective responses of an individual participant are dispersed across many categories and groups of people, and the integrity and coherence of the individual respondent risks being lost to a collective summary. Furthermore, it is often used in relation to a single-instrument approach. Secondly, by individuals; here the total responses of a single participant are presented, and then the analysis moves on to the next individual. Its advantage is that it preserves the coherence and integrity of the individual's response and enables a whole picture of that person to be presented. Its main disadvantage is that it requires a second level of analysis in order to summarize the data. Thirdly,

by presenting all the data that are relevant to a particular issue. This method is economical in making comparisons across respondents, however, the method risks losing the wholeness, coherence and integrity of each individual respondent.

Fourthly, according to Cohen et al. data can be organised and presented by research question. It is a very useful way of organizing data, as it draws together all the relevant data for the exact issue of concern to the researcher, and preserves the coherence of the material. In addition, all the relevant data from various data streams are collated to provide a collective answer to a research question. Finally, by instrument; this approach is often used in conjunction with another approach, for example, by issue or by people. The results of each instrument are presented and organized. This approach retains fidelity to the coherence of the instrument. It also enables the reader to see clearly which data derive from which instrument. However, connections between data could be lost if the data are presented instrument by instrument rather than across instruments.

Out of the five ways, the researcher chose to organize and present data analysis by research questions. This was chosen because it draws together all the relevant data for the particular research question, and preserves the coherence of the data collected. In this approach all the relevant data from various data streams (interviews, observations, document analysis) are collated to provide a collective answer to a research question (Cohen et al, 2011).

4.2 Findings and discussion

4.2.1 Primary school Human Ecology teachers' understandings of learner-centred education

The first research question aimed at establishing the understandings of primary school Human Ecology teachers of the learner-centred education. Data for this question were solicited through face to face interviews using an interview guide with standard 5 and standard 6 teachers, through classroom lesson observations guide and through document analysis.

This research question used predetermined themes that were developed or generated based on the different aspects of learner centred education in order to find out their understandings of some of the basic issues about LCE. The themes captured the following: use of terms that are used in describing the meaning of learner-centred education, teachers' ability to give examples of learner-centred education methods, teachers' ability to mention the principles of learner-centred education, misconceptions that some teachers have about learner-centred education and finally the common classroom practices. These predetermined themes were used to analyse data for the first research question. Here is what the study found:

4.2.1.1 Teachers' ability to give the right meaning for learner-centred education.

The findings revealed that generally teachers have limited knowledge about the meaning of learner-centred education because some key words or concepts were missed in their definition for learner-centred education as evident in this excerpt (Teacher 5).

*‘Learner-centred education is when learners participate freely in the lesson, **pause**, ‘ndayiwala koma’ (I have forgotten).*

Some key words are conspicuously missing in this definition and other definitions given by other participants, when compared to MoEST/InWEnt (2008). MoEST/InWEnt defines learner-centred education as a process of teaching and learning whereby the learners are responsible for their learning that is, they actively participate in constructing knowledge or discovering and understanding ideas in a lesson, the teacher’s role is to motivate, provide guidance/materials and encouragement, and the learner’s input, activeness and interaction are of paramount importance. Key in describing learner centred education are terms or phrases such as learners are responsible for their own learning, participate actively, construct knowledge or discover ideas, teachers provide guidance / resources, promote interaction, encouragement or any other word that would mean any of the listed words or concepts.

4.2.1.2 Teachers’ ability to give examples of learner-centred education methods.

The study also revealed that some teachers do not know various examples of learner-centred education methods. This came to light during face to face interviews when respondents were asked to give some examples of learner-centred education methods that they use in Human Ecology classrooms to show that they really understand what learner-centred education is all about. Some respondents were able to give some examples of learner-centred methods, but surprisingly, others struggled to give some examples as evidenced in this excerpt (Teacher 3):

*‘Examples, mmmm **pause**, I don’t know how I can say it on the examples, but that is, as I have already said, that it’s only when you are involving learners, like giving the exercise to learners, it*

means you are involving them, you are not spoon feeding them, you are giving them like an exercise, like maybe you are putting them in groups, in pairs, and they will be like responding, so that can be some of the examples'.

This teacher was not sure about examples of LCE methods and this was clear evidence to the researcher that some teachers have limited knowledge about examples of learner-centred education methods. This also explains why the most common LCE methods that were used by those teachers who attempted to use them during lesson observation were group work and pair work. This is contrary to what MoEST (2012) emphasizes that there are a wide range of methods that are valuable for teaching in a learner-centred way. Teachers who have limited knowledge about examples of LCE methods cannot vary LCE methods during delivery of lessons. This is certainly in sharp contrast to what Shulman, (1986; 1987); and Cochran, DeRuiter and King, (1993) say about pedagogical knowledge as crucial to good teaching and student understanding.

4.2.1.3 Teachers' ability to mention the principles of learner-centred education

The findings on this revealed that majority of teachers do not know the principles of learner-centred education. This stunning revelation was made when the researcher asked participants during face to face interviews to mention the principles or elements of learner-centred-education that they use in their Human Ecology classrooms. Out of the eight respondents, only one was able to mention one principle, which is construction of knowledge. Four of them frankly said they don't know the principles of LCE. Two of them associated the principles of LCE with group work, while one mentioned demonstration as one of the principles of LCE as evident in the following excerpts:

Teacher 5 *'I don't know any principles about learner-centred practices or education'.*

Another participant (Teacher 8) responded in this way:

*'On that, I can honestly say, **pause**, I don't have any idea or knowledge on principles or elements of learner-centred methods when teaching Human Ecology'.*

This clearly revealed that the respondents have very limited knowledge about the principles of learner-centred education. However, Combs (2005) emphasizes the importance of knowing these principles of learner-centred education as being very vital because it gives guidance to the learning process as well as assessment standards. This stunning revelation confirms what Croft (2002) observes that the primary school curriculum in Malawi is intended to be child-centred but teachers do not appear to be well trained in learner-centred education. This is a worrisome situation because such teachers who do not know the principles of LCE cannot effectively teach using learner-centred methods. This was confirmed during classroom lesson observations whereby some teachers (participants) failed to apply correctly the principles of LCE to ensure effective lesson delivery.

Based on these findings, it was concluded that most primary school teachers have very limited knowledge on the principles of learner-centred education, let alone, on learner-centred education as whole.

4.2.1.4 Some misconceptions about learner-centred education

The findings of this study further revealed some misconceptions that some teachers hold about learner-centred education. For example, when the researcher asked participants the meaning of learner-centred education, some responses given revealed that there are indeed some misconceptions among teachers about what LCE means, as evident in this excerpt (Teacher 2):

‘This is the method where by learners learn through group work, pair work as they are, as the way of giving them creativity as well as brainstorming on their own so that they get an answer’.

This participant defined learner-centred education by giving some examples of learner-centred education methods. This shows that some teachers hold some misconceptions about the meaning for learner-centred education because in reality, LCE is not entirely about group work or pair work. MoEST (2012) regards such kind of understanding of learner-centred education as a misconception that some teachers have about the meaning of learner-centred education because on the contrary, LCE is certainly not limited to group work. MoEST/InWEnt (2009) further argues that putting learners into groups does not mean being learner-centred. Such type of thinking is contrary to constructivist theory which guided this study, because constructivism itself does not necessarily suggest one particular teaching method.

It also transpired during face to face interviews that some teachers do not really understand what it takes for a lesson to be learner-centred. For instance, when the researcher asked the participants about their understanding of a learner-centred lesson. Some responses given by the participants revealed some misconceptions that some teachers hold about learner-centred education as evident in the following excerpts:

Teacher 1 *“First I start by making groups so that when I present a topic, the learners start by..... we can say giving out their own views on how they understand according to the given topic, yaa for example if aaaa I gave them a topic as I did today on laundry, aaaa I first allow the learners to source out their own information or to use their own experience to come up with or views according to their own understanding”.*

Teacher 2 *“By involving them in group work. Some, by involving them in pair work, giving them the work to do, at the end they came up with an answer”.*

Based on the responses given by the participants, it was clear that there are some misconceptions among some teachers in primary schools in the sense that they think that LCE means group work or pair work only. Out of the eight respondents, seven answered by saying that they use group work to make their Human Ecology lessons learner-centred. Only one teacher, Teacher 3 answered differently and sensibly. This was clear evidence to the researcher to support an observation made by MoEST (2009) and Barbara (2011) that there are certainly some misconceptions among some teachers who hold this common and far reaching misunderstanding that learner-centred education exclusively means the use of group work in the classroom.

It was also revealed by some teachers during interviews that some learners have some misconceptions about learner-centred education methods. Five teachers out of eight teachers who participated in the study bemoaned that some learners label them as lazy once they attempt to use learner-centred education methods during Human Ecology lessons and in other subjects' lessons.

To substantiate this, the researcher posed a question to the participants who did not complain about this problem of misconceptions, if ever some learners would label a teacher as being lazy for using learner-centred methods in a Human Ecology classroom. These teachers also accepted that such things indeed happen when they attempt to use LCE methods as evident in this excerpt:

Teacher 5 “*They do*”.

This revelation is in agreement with MoEST/InWent (2009) which argues that in some cases, learners who are not used to learner-centred education methods could judge the teacher and consider him/her lazy. They may construe the lack of the traditional “one way instruction” as a lack of knowledge and feel the teacher is resorting to heaping work on them. As a result, some teachers go teacher-centred, to avoid being labelled lazy. Stuart et al. (2009) concur with MoEST/InWent (2009) by postulating that one problem with LCE methods is that where the pupils (learners) expect the teacher to know everything, asking pupils to find their own answers might look like teacher ignorance.

4.2.1.5 Common classroom practice

The study revealed that the use of the traditional teacher-centred methods is a common classroom practice by many primary school teachers. This is contrary to the constructivist theory of learning.

The researcher observed lessons first before engaging the respondents in face to face interviews. The essence for doing that was to find out their understanding of learner-centred education during the teaching of Human Ecology content in their classrooms and compare the same with documents

that the teachers used in preparing for the lessons. Such documents included schemes of work and lesson plans. This is in line with Matsau (2007) who observes that classroom lesson observation can be undertaken for the purpose of studying and understanding the learners' behaviour as well as getting first-hand information about the actual learner-centred strategies applied in the classrooms during lesson delivery.

It was observed that all the eight participants indicated some LCE methods in their schemes of work. It was evident that the methods indicated in the schemes of work were taken from the teaching syllabus because it is one of the key resources during preparation of schemes of work. However, in the actual lesson delivery, only group work and occasionally pair work were employed out of the list of LCE methods shown in the schemes of work as tabulated in the table below:

Table 4.1: Lessons observed

Participant/ class	Topic	Teaching methods indicated in the schemes of work.	Actual teaching methods used or observed.
Teacher 1 Standard 6	Laundry	Group work, debate, investigation, explanation, pair work, discussion, gallery walk, individual work, role play, bus stop, peer assessment.	Group work, whole class discussion and lecturing
Teacher 2 Standard 5	Food and health	Discussion, demonstration, bus stop, pair work, question and	Group work and lecturing

		answer, group work, role play, gallery walk.	
Teacher 3 Standard 6	Laundry	Gallery walk, explanation, question and answer, individual work, group work, pair work, role play, practice	Group work, pair work and lecturing.
Teacher 4 Standard 5	Bad food habits	Explanation, discussion, gallery walk, group work, question and answer, role play, debate, excursion	Group work, whole class discussion and lecturing.
Teacher 5 Standard 6	Meal planning and presentation	Group work, role play, gallery walk, individual work, pair work, think-pair-share, question and answer	Group work, pair work and lecturing.
Teacher 6 Standard 5	Nutrition and health	Discussion, demonstration, bus stop, pair work, role play, group work, practice, debate, gallery walk.	Group work and lecturing
Teacher 7	Laundry	Group work, debate, demonstration, discussion, explanation, question and answer, pair work, role play, bus stop, individual work, practice	Group work, practice and lecturing.
Teacher 8 Standard 5	Food and health	Gallery walk, group work, role play, practice, peer assessment, research, experimenting, investigation, debate	Group work, whole class discussion and lecturing

This was enough evidence to the researcher to conclude that indeed some teachers just copy teaching methods from the syllabus into their schemes of work even if they don't understand how to use them. Furthermore, group work was ineffectively used and as such, failed to meet the demands of constructivist theory of learning.

In other words, it transpired that what is planned in advance in the teachers' documents or teaching records such as schemes of work and lesson plans is not sometimes followed by some teachers during the actual lesson presentation. The teachers were also seen to dominate during lesson presentation. This was another piece of evidence to the researcher to conclude that some primary school teachers certainly have limited understanding about learner-centred education, as a result, they resort to the traditional teacher-centred approaches. When asked during interviews why they did that, some of them responded like this:

Teacher 4 *"Where the class is large, we use teacher-centred methods"*.

Teacher 5 *"Where I feel I cannot use learner-centred practices, I use teacher-centred. Yes, where the topic is difficult for learners, I can use teacher-centred so that learners can understand"*.

Teacher 6 *"Because of that, most of the times we use teacher-centred, because even the books, we don't have enough books, learners books for Science to distribute to learners so that they can study in their homes, because of that, we give them notes, but we give them notes this term, next term they said I have lost the notes."*

Teacher 7 *"When I don't have resources, sometimes I go teacher-centred"*,

However, the current OBE curriculum's emphasis is to see teachers employing LCE methods in the actual lesson delivery. Croft (2002) contends that the primary school curriculum in Malawi is intended to be child-centred. This means that OBE ought to be taken as a curriculum practice. Kiggundu and Nayimuli (2009) argue that OBE is seen as a classroom practice in that using learner-centred approaches, the teacher meets each learner at his or her level of competency and builds upon the existing strengths throughout the course. This is in line with the social constructivist theory of learning which guided this study. An analysis of classroom observation and the teaching documents so far contradicts the thinking by Kiggundu and Nayimuli. Something is seriously missing to effectively bridge the planning and delivery phases in order to enable teachers to manage the Human Ecology OBE curriculum using learner-centred education methods so as to meet its intended purpose.

The use of teacher centred methods in Human Ecology classrooms is contrary to the recommended learner-centred methods as outlined by MoEST (2012) in table 4.1. This is also contrary to Brooks and Brooks (1993) descriptors of constructivist teaching behaviours, one of which emphasizes that the teacher should encourage learners to engage in dialogue, both with the teacher and with one another.

Human Ecology as a practical science subject requires the use of LCE methods whose purpose is to give learners chance to practice skills. LCE methods that can give learners an opportunity to acquire skills, include the following: demonstration and practice, work station or bus stop, effective group work, individual work and many more. This is in agreement with Kunkwenzu

(1997) who contends that for effective teaching and learning in Human Ecology, more learner-centred approaches should be used.

Based on the above discussions, the study has revealed that primary school Human Ecology teachers have limited understanding of learner-centred education due to among other things their failure to define LCE correctly, struggled to mention some examples of LCE methods, failure to give some principles of LCE that they apply in their Human Ecology classrooms, and their common classroom practice confirmed their limited understanding of learner-centred education. With reference to the first research question, it can therefore be concluded that teachers are not as learner-centred as expected in the teaching of Human Ecology content in primary schools. This is contrary to the demands of the primary school curriculum, which is learner-centred.

4.2.2 Determining how learner-centred teachers are when teaching Human Ecology in primary schools.

Data for this section was obtained through face to face interviews, classroom lesson observations and document analysis. To understand how learner-centred teachers are when teaching Human Ecology in primary schools, the researcher used predetermined themes emanating from the principles of learner-centred education which are: daily life connections, active interesting learning, cooperative learning, construction of knowledge and reflective learning. In short, the principles for LCE informed themes for the second research question.

Interestingly, although teachers had challenges to mention principles of learner-centred education, some principles were seen being demonstrated by some teachers during lessons. Here is the analysis in connection to each principle of learner-centred education.

4.2.2.1 Daily life connections

This principle of LCE was well demonstrated by some teachers during the delivery of lessons. Teachers 4 and 8 who taught “Bad food habits” and “Food and health” respectively, both in standard 5, were able to connect content to learners’ daily lives. This is one of the principles of learner-centred education. This principle is in line with constructivist learning theory which guided this study. The theory encourages learners to connect their prior knowledge and experience with other learners’ and their teacher’s through interaction (Mc Combs, 2005). This was achieved through teacher’s consolidation activity that was done after a plenary session of some group work activities. The other 6 teachers did not connect the Human Ecology content that they taught to learners’ experience, therefore, they failed to meet the demands of the social constructivists learning theory.

Teacher 1 who taught about “Laundry processes” in standard 6 did not connect content to learners’ experience. Instead of building upon learners’ knowledge which they develop through daily life, the teacher simply chose to tell learners the laundry processes that are supposed to be done during laundry. The approach was the same with Teacher 2 who taught about “Food and Health” in standard 5, Teacher 3 who taught about “Laundry processes” in standard 6, Teacher 5 who taught about “Nutrition and Health” in standard 5, Teacher 6 who taught about “Meal planning and presentation” in standard 6 and Teacher 7 who taught about “Laundry processes in standard 6.

They did not focus on the lesson to be outcome-based. All these teachers did not appreciate the fact that connections between lesson content and daily life help learners to understand everyday phenomenon and to tackle problems. For learning to be a situated process, it must be embedded in daily life connections. Reviewed literature by MoEST/InWEnt (2009), postulate that connections between lesson content and daily life make learning meaningful.

4.2.2.2 Active, interesting learning

The principle of active learning was actually demonstrated by only one teacher, Teacher 7 who taught the topic “laundry processes” in standard 6, out of all the eight teachers that formed the sample. This particular teacher actively involved learners in the laundry processes such as sorting, mending, soaking, washing and drying. Ironing, airing and storing were not done because of time factor that limited the duration for the lesson. The rest of the participants did not follow this principle. This principle demands that learning should be active (learning by doing) and interesting. Active learning is one of the principles of the social constructivist theory which states that learning is an active rather than a passive process (McLeod, 2018). This means that information may be passively received, but understanding cannot be, for it must come from making meaningful connections between prior knowledge, new knowledge, and the processes involved in learning. In the lesson by Teacher 7, in standard 6, learners were actively involved in the laundry processes. This is in line with Lang, et al. (1995) who assert that learning is not a spectator sport. In view of the same, Gallagher (2003) observes that the individual learner must be an actor rather than a spectator. However, the rest of the teachers treated their learners as spectators because they chose to dominate the activities of the lessons. This was contrary to Lambert and Mc Combs (2000)

who in their research study found out that there is more learning in learner-centred education (LCE) than in teacher-centred practices (TCP).

Teachers 1, 2, 3, 4, 5, 6 and 8, however, attempted to be learner-centred through poorly organized group work that proved to be ineffective due large class sizes and limited teaching, learning and assessment resources. Due to this, they failed to meet one of the four basic characteristics of constructivists learning environment which according to Tam (2000), learning groups should consist of small numbers of heterogeneous students.

It was observed that teachers dominated by the way of transmitting knowledge to learners contrary to Ayele et al. (2007) who argue that learner-centred practices require active participation of both teachers and learners. Ayele et al. (2007) concur with Dewey (1938) by saying that learning is a social activity. It is something we do together, in interaction with each other, rather than an abstract concept. According to Spencer and Jordan (1999), the role of a teacher requires a fundamental change. In learner-centred education the teacher assumes new roles in the process of teaching and learning. The teacher assumes the role of a facilitator in learner-centred practices. Tam (2000) concurs that the teacher's role is one of a facilitator or guide. This is one of the four basic characteristics of constructivist's classroom environment according to Tam (2000). Twomey (2005) argues that teachers in learner-centred classrooms understand learning to be a self-regulated, ongoing process of making sense of the world through concrete experience, collaborative discourse, and reflection.

Partly, whole class teaching was observed with Teacher 5 who taught “Nutrition and Health” in standard 5. However, generally there was limited learner participation. The lesson was dominated by the teacher, although questioning was used to ensure that learners contributed their own experiences and possibly as a matter of checking learners’ understanding of concepts. The teacher could have prepared more activities for learners to do to ensure their active participation in the lesson. In fact, by not actively involving their learners in the activities of the lessons, teachers demonstrated limited knowledge about this principle of LCE, active learning. What was observed was a teacher-centred classroom environment, not a constructivist learning environment which promotes active involvement of learners.

4.2.2.3 Cooperative learning

As regards the principle of cooperative learning, all the eight participants attempted to demonstrate it, but failed to apply it properly in their lessons. They attempted to demonstrate their knowledge about cooperative learning through the use of group work, but it was ineffectively done. Combs (2005) asserts that learner-centred practices encourage learners to participate in the learning process. The objective for cooperative learning is to develop in learners the ability to work collaboratively with others in a meaningful manner. Cooperative learning is usually done in groups which are guided by the teacher by way of giving them clear instructions and supervising them. Some teachers demonstrated limited knowledge about how best this principle could be effectively applied. It was observed that teachers didn’t guide their learners properly during group work, as such, the group work activities proved to be ineffective. Generally, the so-called group work activities were not well organized probably because of large classes and lack of (in some cases limited) teaching, learning and assessment resources. For example, Teacher 3, taught the topic

“Laundry” in standard 6, in which she was talking about “bleaches” but she didn’t bring any examples of such bleaches to show learners. Cooperative learning can be successful if a teacher has some teaching and learning resources. It was difficult for the teacher to organize learners’ activities in a congested classroom that was also under-resourced. This is contrary to Ott’s (2012) thinking who asserts that LCE learning should be cooperative.

Vygotsky (1978) in his social constructivist theory views interaction with peers as an effective way of developing skills and strategies. He suggests that teachers use cooperative learning exercises where less competent children develop with help from more skilful peers, within the zone of proximal development. This was not done in the observed Human Ecology lessons. From the researcher’s point of view, teachers thought cooperative learning is all about putting learners in groups as evidenced during classroom lesson observations. However, MoEST/InWEnt (2009) argues that group work is not a suitable learner-centred method, unless it is used to provoke learners thinking, sharing of ideas and employment of ideas. Learners were not given activities that could provoke their thinking, their arguments and eventually their exchange of ideas. Quist (2000) concurs with MoEST/InWEnt (2009) by arguing that placing learners in groups does not mean implementing learner-centred practices. This is also contrary to constructivist theory because constructivism itself does not suggest one particular teaching method.

Generally, there was limited learner participation; teachers were seen dominating in the lessons. This kind of practice is contrary to constructivists theory of learning as observed by Piaget and Vygotsky, who consider knowledge as relevant for teachers and learners only when it is ‘in use’

rather than when it is delivered in a way that dissociates it from previous experience and from the opportunity for engagement with it.

It was observed that learners' activities were not monitored or checked possibly due to large class sizes which made it difficult for the teacher to make meaningful movements within the classroom during lesson delivery. This situation made it almost impossible for learners to receive any individual attention. However, Jensen (1998) argues that teachers who rely exclusively on teacher-centred practices are missing an important brain-based principle: people are social and the brain grows in a social environment. Jensen (1998) further argues that new meaning comes through social interaction, so the connection between learners is important. This is in line with the social constructivist learning theory propounded by Vygotsky, which guided this study.

Cooperative learning and collaboration should be encouraged. The researcher's view is that these teachers generally lacked the understanding that any learner-centred teacher should recognize this principle of learning and actively infuse collaborative opportunities into each lesson. Collaboration provides learners opportunities to learn from their peers and to gain skills that will be beneficial throughout their lives. Tam (2000) observes that a constructivist learning is characterized by sharing of knowledge and authority between teachers and learners. A constructivist learning environment is supposed to provide such opportunities for cooperative learning to be successfully achieved. This was not practiced by teachers in the observed Human Ecology lessons. In view of this, a conclusion was drawn that these teachers have limited knowledge about this principle of LCE, cooperative learning as teachers failed to demonstrate it correctly in their Human Ecology classrooms.

4.2.2.4 Construction of knowledge

The study found out that construction of knowledge was not effectively achieved in the observed Human Ecology lessons due to mainly lack of teaching, learning and assessment resources. Teachers admitted that it is not easy to find some teaching and learning resources as evidenced in this excerpt (Teacher 3):

“Yaa, they can bring resources but like what we are saying, if we can, if I can ask a certain learner or the class to bring the stain remover, where will they get them. But if I can say bring water tomorrow, bring soap, everybody can what, can bring so it depends on the type of resource you want to use”.

However, MoEST (2012) contends that for construction of knowledge to be effectively done in a classroom setting, learners are supposed to use the provided teaching and learning resources to help them discover new concepts. Contrary to this, most of the observed HEC lessons were taught without some teaching and learning resources which could have assisted learners to discover new concepts, hence construct new knowledge.

Learners had limited input in the development of the lessons because such an opportunity was rarely given. However, it has to be pointed out that Ward (2002) emphasizes that lack of resources for classroom instruction creates barriers to the use of learner-centred practices. Literature by Vavrus et al. (2011) assert that the use of LCE requires the teacher to create the conditions for learners to discover and construct knowledge, it was therefore difficult for the learners to construct their own knowledge in the absence of teaching, learning and assessment resources. The teachers

were really challenged to demonstrate this principle of LCE as teaching, learning and assessment resources could not be provided for learners to use in order to discover new concepts on their own through participation in meaningful activities.

Armed with the knowledge of learners' previous understanding of concepts, Brown (2008) argues that learner-centred teachers create situations that allow learners to make connections to new ideas. These connections can then be developed into entirely new concepts that continue to grow throughout a learner's experiences. A deep understanding occurs when new information offered through higher order thinking activities prompts the learner to rethink and reshape prior ideas. This can be achieved if learners are given thought provoking activities or tasks. All the eight teachers except Teacher 7 failed to create situations that could allow learners to make connections to new ideas in their Human Ecology content lessons. In so doing, these teachers failed to perform within the confines of constructivist theory of learning which guided this study, which says that construction of knowledge is an active process.

As a matter of emphasis, construction of knowledge is one of the principles of LCE. It is also one of the principles of social constructivist theory which guided this study. According to Phillip (1995), knowledge is constructed, rather than innate, or passively absorbed. Central in the social constructivist theory is the idea that human learning is constructed, that learners build new knowledge upon the foundation of previous learning. This prior knowledge influences what new or modified knowledge an individual will construct from new learning experiences (Phillips, 1995). However, in the observed Human Ecology lessons this was not the case because learning was not a constructive process that could help learners build knowledge. This was the case because

teachers were doing it in the traditional way of giving out information to learners. This is contrary to MoEST (2012) who argues that for construction of knowledge to be successfully achieved, focus should be learning, not teaching. The driving force should be learners themselves. However, in the observed HEC lessons, the practice was contrary because teachers were actually teaching. Instead of teaching and learning being a matter of sharing and negotiating socially constituted knowledge, the opposite was true.

4.2.2.5 Reflective learning

This study found out that the principle of reflective learning was not clearly demonstrated in the course of lesson delivery by all the eight participants. The learners were not given chance to summarize their work under the guidance of the teacher in all the eight observed Human Ecology lessons. According to MoEST (2012), reflective learning means to be aware of one's own learning process and to become confident in one's abilities. Mc Combs (2005) contends that reflective learning does not mean telling learners what is right or wrong answer, but through helping them come to the understanding of the concepts by themselves. By not guiding their learners properly as the ZPD demands, the researcher feels that the teachers have limited knowledge on how best to apply this principle of LCE in their Human Ecology lessons. Reflective learning as observed by MoEST/InWEnt (2009), calls for continuous assessment to give the teacher feedback which can be used to develop remedial or enrichment activities. In view of this, the researcher posed a question to the participants during face to face interviews in order to know how they assess their learners' achievement. This was one of the responses that were given. It came from Teacher 3:

"It's by how they are responding. For example, if you have given them a question, I can see how many are they responding, raising a hand to give an answer. If maybe they are just two in a class,

it's when you can judge from, that the lesson hasn't been successful and you see, if it's a lot of learners who are responding to that question then the lesson has been successful''.

From the teachers' responses, it was revealed that these teachers do not usually give remedial activities to their learners because that would mean giving themselves more work in terms of marking as they have large classes. This explains why they shun away from this principle of reflective learning in their practice. During classroom lesson observations, learners were not able to assess their own progress.

Based on what was observed during classroom lesson observations, the researcher's view is that the use of learner-centred practices is quite challenging in classrooms that are overcrowded. The learning environment was not quite conducive for the use of LCE as the classes were overcrowded classrooms and were under-resourced. This is in line with Schunk (2002) who observes that learning in a constructivist environment should create rich experiences that encourage learning. All in all, the study revealed that some teachers in primary schools generally do not follow the principles of learner-centred education in their Human Ecology classrooms.

4.2.3 Factors that affect the use of learner-centred education practices in primary school Human Ecology content classrooms.

Data for this research question were collected by using interview guide and classroom lesson observation tool. Like the other two research questions, data for this question were sourced from standard 5 and standard 6 Science and Technology teachers in the selected schools. This research question used emerging themes that were developed by making sense of what the participants said during data collection exercise. Similar data were then grouped together to form data categories. It was from these categories, that themes began to emerge. By analysing the data collected to respond to research question 3, six data categories came to light. The data categories are tabulated in table 4.2.

Table 4.2: Frequency for each challenge

Challenge mentioned	Number of participants who mentioned a particular challenge out of 8 participants
Large class sizes	8
Lack of teaching, learning and assessment resources	8
Class management problems	8
Lack of pedagogical content knowledge	8
Big work load	6
Teachers' limited knowledge about learner-centred education	8

From the above listed data categories, the emerged theme for research question number three was “challenges”. There are multiple challenges that teachers face when they attempt to use learner-centred education teaching methods in their Human Ecology classrooms. The six data categories that emerged into the theme “challenges” are discussed below.

4.2.3.1 Large class sizes

Based on the findings of the study, from all the eight participants, large class sizes is one of the factors that affect negatively the use of learner-centred education methods in their Human Ecology classrooms. The actual class sizes across the eight teachers were as tabulated in table 4.3 below.

Table 4.3: The actual class sizes across the eight teachers

Participant	Teaching class	Enrolment (class size)
Teacher 1	Standard 6	156
Teacher 2	Standard 5	205
Teacher 3	Standard 6	104
Teacher 4	Standard 5	105
Teacher 5	Standard 6	117
Teacher 6	Standard 5	108
Teacher 7	Standard 6	110
Teacher 8	Standard 5	113

Out of the eight classes where the researcher conducted lesson observations, there was no class that had sixty learners or less as evident in table 4.3 above. The recommended teacher-learner ratio in primary schools in Malawi is 1:60. Any class in excess of sixty learners is therefore deemed to be a large class. Out of the eight sampled classes, the extreme had slightly over 205 learners. The class teacher (Teacher 2) for this class had this to say when asked about how big her class was:

“The class is too big, it is having 205 plus learners”.

This particular school has desks for learners, but they were deliberately removed from this classroom in an attempt to accommodate all the learners. This scenario agrees with an observation made by Croft (2002) who argues that the primary curriculum in Malawi does not appear to be appropriate for, or adapted to use with the large class sizes. As observed during classroom lesson observation sessions, overcrowded classrooms made it difficult for teachers to come-up with good seating arrangement that could promote meaningful interaction between the teacher and learners and among learners themselves during lesson delivery. This was against the expectation of the constructivist learning theory, as alluded to by Brooks & Brooks (1993) who emphasize that a teacher should encourage learners to engage in dialogue, both with the teacher and with one another. It was very difficult for Teacher 2 to monitor learners’ participation in the Human Ecology content lesson that she taught as she literally failed to move within the classroom, because there were no spaces. This situation made it almost impossible for learners to receive any individual attention. When asked by the researcher to explain what she does in such cases to ensure that learners are involved in the activities of the lesson as advocated by the constructivist learning theory. This was the response that the participant gave:

“It becomes difficult for a teacher to control that class if you use learner-centred practices. Where the class is large, we use teacher-centred methods”.

As already observed, this is contrary to the demands of constructivist learning theory and also contrary to the demands of the primary school curriculum which is learner-centred. Stuart (2009) argues that interaction among learners is very important for the social constructivist classroom practices to be successfully achieved. However, this study found out that the seating arrangement did not permit all learners to interact meaningfully with their teacher and among themselves. Interaction among learners, which equally takes place in collaborative and cooperative activities like in group work, failed to take place. This is in sharp contrast with the constructivist learning theory which guided this study. It was observed that the seating arrangement could not provide room for effective group work activities. Some learners were seen seating very close to the chalkboard and others on the door step. One participant lamented that it is hard to go round the class to check and mark learners’ work in such an overcrowded classroom. The overcrowded classes also restricted any meaningful movements that a teacher is supposed to make during lesson presentation. Such limited social interaction among learners during lesson delivery does not provide opportunities for learners to learn from their peers and to gain skills that will be beneficial throughout their lives.

The study therefore has revealed that some teachers resort to teaching Human Ecology content using the traditional teacher-centred practices due to large class sizes. This is contrary to what MIE (2008) advocates that Human Ecology has to be taught using learner-centred methods. Kumkwenzu (1997) concurs with MIE by saying that in a good Human Ecology lesson, learners

have to be kept active through the use of a variety of learner-centred teaching methods. This revelation is also in conflict with constructivists' theory of learning as observed by Piaget and Vygotsky, who consider knowledge as relevant for teachers and learners only when it is 'in use' rather than when it is delivered in a way that dissociates it from previous experience and from the opportunity for engagement with it. One of the characteristics of a constructivist classroom according to Tam (2000) is that the teacher is a facilitator or a guide. This role was not achieved due to large class sizes, hence teachers resort to use the traditional teacher-centred approaches.

4.2.3.2 Lack of teaching, learning and assessment resources (TLAR)

Apart from large classes, lack of teaching, learning and assessment resources was also revealed to be another factor that affects negatively the use of learner-centred education methods in the teaching of Human Ecology content in the primary schools that participated in this study. All the eight participants mentioned lack of teaching and learning resources as one of the major challenges faced when teaching Human Ecology content. The significance of teaching, learning and assessment resources cannot be over-emphasized as it helps learners to learn by using more than one sense. They also help the teacher to organize meaningful activities for learners during class time. This agrees with Rogan and Grayson (2003) who assert that new practices will only survive if there is a fit with the working environment. It came out clearly during lesson observations that the schools were indeed under-resourced in-terms of Human Ecology specific resources as also expressed by Teacher 3 during interviews who said this:

“If I could have them, maybe showing them the resources, that could have been better, because just explaining to them, it doesn't really work. It is easy for them to forget. That's why maybe, if I could give a question, most of them were just saying water, soap because it's the things which they

are familiar with, so it's like next day we will be asking them about them, the bleaches it will be difficult for them to respond, because they don't know the materials".

This teacher (Teacher 3) was observed teaching “Laundry” and some of the teaching/learning and assessment resources that she was supposed to use were bleaches, but the school could not provide such resources for a teacher to use during lesson delivery. This challenge is in agreement with MoEST/InWEnt (2009) which cites lack of teaching, learning and assessment resources as another challenge with learner-centred education. This is because learner-centred lessons require adequate resources. Schools may have problems in sourcing some resources, for example resources that must be purchased. However, despite this being the situation on the ground, Domasi College of Education (2003) emphasizes that Human Ecology, being a practical science subject, requires a variety of teaching, learning and assessment resources for it to be effectively taught. MoEST (2012) concurs by saying that for construction of knowledge to be successfully achieved during the process of teaching and learning, learners should be provided with some teaching, learning and assessment resources.

In such situation where there was lack of teaching, learning and assessing resources, some teachers resorted to using the traditional teacher-centred practices. Ministry of Education/UNICEF (1998) and Kadzamira and Chibwana, (2000) agree that teachers often lack teaching and learning materials to enable them to deliver the curriculum effectively. Thus, teachers are observed to continue to use traditional teacher-centred approaches.

This is what some of the teachers had to say when asked about some of the factors that affect the use of learner-centred methods in teaching Human Ecology content in primary schools:

Teacher 6 *“Because of that, most of the times we use teacher-centred, because even the books, we don’t have enough books, learners books for Science to distribute to learners so that they can study in their homes.”*

When asked if the school management does assist in the provision of teaching/learning and assessment resources, Teacher 7 responded in this way:

“No, sometimes, if I have money I am supposed to buy, but if I don’t have money, I just go with the theory thing”.

Lack of teaching, learning and assessment resources to the extent that some teachers buy some resources on their own is quite demoralizing on the part of teachers, and is against one of the principles of learner-centred education which talks about knowledge construction. Construction of knowledge is possible where teaching and learning resources are provided during lesson presentation.

In summary, the study has revealed that teaching without some teaching, learning and assessment resources is very common in primary school Human Ecology classrooms. Teachers blame this on lack of Human Ecology specific resources and other resources such as text books, in their schools. As such, most of them go teacher-centred because learner-centred education cannot be effectively achieved in the absence of some teaching, learning and assessment resources.

4.2.3.3 Class management problems

Based on the findings of the study, from all the eight participants, large class sizes and lack of teaching, learning and assessment resources were cited as root causes of class management problems, and is one of the factors that affect negatively the use of learner-centred education methods in Human Ecology classrooms. This was revealed during classroom lesson observations and interviews with participants. Most of the respondents made an observation that some learners cause problems where one has a large class and the classroom environment is also under-resourced as evident in this excerpt:

Teacher 2 *“Some play, instead of having discussions with their group members, they think it’s time for them to play, they don’t participate fully”.*

Teacher 4 *“It becomes difficult for a teacher to control that class if you use learner-centred methods. But if it is too large or too big, it is difficult for a teacher to control learners using these learner-centred practices, that’s why we use teacher-centred. Where the class is large, we use teacher-centred methods”.*

During classroom lesson observations, it was also noted that where the teacher tried to use group work in such large classes, this resulted in learners playing and making noise. It proved to be difficult and almost impossible for teachers to employ group work effectively. Classroom environment itself failed to meet characteristics of a constructivist classroom which according to Tam (2000), the learning groups should consist of small numbers of heterogeneous students. Learners failed in most cases to form distinct groups because they were congested and as a result, class management was a challenge. In order to formulate appropriate tasks, prepare relevant resources, and organize lessons, the teacher must be committed. Otherwise, the study has revealed

that some teachers resort to teacher-centred approaches where they have large classes that are also under-resourced in order to avoid class management challenges that characterize such classes if the teacher employs learner-centred education methods. MoEST/InWEnt (2009) concurs that teachers' level of commitment to learner-centred education is also a challenge. However, the researcher's view is that teachers should not blame LCE methods for class management problems; it has to do to a larger extent, with planning. It has to be understood that a learner-centred classroom is not a learner-controlled classroom as rightly observed by Brown (2008).

4.2.3.4 Lack of pedagogical content knowledge (PCK).

It transpired during classroom lesson observations and interviews that all the respondents lacked pedagogical content knowledge and this affected their classroom practice in terms of lesson delivery. According to Shulman (1986), pedagogical content knowledge covers three types of teacher knowledge and these are: content knowledge, pedagogical knowledge and pedagogical content knowledge. Content knowledge is all about knowledge of the content of the subject including factual information. Pedagogical knowledge focuses on knowledge of general teaching and assessment strategies. Pedagogical content knowledge mainly looks at knowledge of how to teach a particular subject or topic. Findings revealed that all the eight participants lacked content knowledge and pedagogical content knowledge. When asked whether they studied Home Economics whilst at secondary school, all of them said no. This means that these teachers have limited content of the subject matter. This can make some teachers fail to explain certain concepts to learners in the course of teaching because Human Ecology is a specialized science subject. Shulman (1986) alludes that the teachers' subject matter knowledge and 'pedagogical knowledge' are crucial to good teaching and student understanding. This probably explains why some of the

respondents observed that some terms used in Human Ecology are difficult to understand. For example, Teacher 7 made this observation during interviews:

“Maybe, we can say terms used in Human Ecology, are difficult to learners to understand what is needed to, maybe what they are supposed to do. For them to interpret it is difficult, that is very challenging”.

This is clear evidence about lack of content knowledge which is also coupled with limited pedagogical content knowledge by the teachers as already exposed by research questions one and two. This is in agreement with Ball and Mc Diarmid (1990) who argue that subject matter knowledge positively affects teaching. In this regard, the fact that all of them never studied Home Economics whilst at secondary school explains it all. According to Shulman (1987), pedagogical content knowledge is the knowledge that enables practicing teachers to make connections between their knowledge of pedagogy and their knowledge of content.

Based on the findings of the study, the researcher’s view is that a teacher has to have content knowledge as well as pedagogical content knowledge in order for him or her to properly guide or direct learners in a classroom setting. Therefore, the tendency by some teachers to continue using the traditional teacher-centred practices denies learners an opportunity to construct new knowledge or ideas through gathering and synthesizing information as they interact with peers and integrating it into an existing knowledge base using skills such as inquiry, communication, critical and creative thinking.

4.2.3.5 Big work load

Findings from the study have also revealed that teachers in some schools especially those that are big, are facing some challenges in using learner-centred education methods in their Human Ecology classrooms because they are heavily loaded with work. This was attributed to large class sizes and the fact that some of them teach all the subjects in their particular classes alone. This is because they don't have a partner with whom they can share the work load (subjects) due to understaffing. The issue of large class sizes was evident during classroom lesson observations in all the sampled schools. This is in agreement with O'sullivan (2003) who referred to learner-centred education as western approaches to learning which cannot be transferred to developing countries like Malawi with high teacher-learner ratio.

4.2.3.6 Teachers' limited knowledge about learner-centred education

The study revealed that some teachers have limited knowledge about different aspects of learner-centred practices in general. This is surely one of the factors that affects the use of LCE methods in their Human Ecology content classrooms. This limited knowledge could be attributed to among many other reasons, the nature of initial training these teachers go through in teacher training colleges. This is also alluded to by Vavrus et al. (2011) who observe that tutors (teacher educators) rarely model participatory methods, and as a result very seldom do student teachers actually experience the kind of learner-centred methods that are preached. To find evidence to this effect, the researcher asked participants if they were trained on how to use LCE methods whilst on training in teacher training colleges (TTCs). It was clear from the responses that some just learnt about LCE but there was no chance to practice as is evident in this excerpt (Teacher 7):

I cannot say really trained, but we just learnt at TTC.

Another respondent expressed uncertainty about it as evident in this excerpt (Teacher 8):

I can say yes and I can say no because most of it was, we had to do it ourselves by reading.

The issue of inadequate training on how to use LCE methods by primary school teachers is also echoed by MIE (2008) who contends that teacher trainers or teacher educators in Teacher Training Colleges fail to vary participatory methodologies so that group work and pair work become the most popularly used learner-centred or participatory teaching methods. Another contributing factor to this status quo as expressed by all the eight participants could be lack of continuous professional development (CPD) opportunities on learner-centred education. When asked if she has enough knowledge about learner-centred education methods, one of the participants clearly said that she doesn't have enough knowledge about LCE methods as evident in the following excerpt (Teacher 4):

“Not enough, but I wish I had time to study for it”.

This is enough evidence to support the idea that some teachers have limited knowledge about the much touted learner-centred education methods in the education circles. When asked if they have ever attended any continuous professional development (CPD) workshop on learner-centred education, six out of eight respondents simply answered no as evident in this excerpt (Teacher 5):

“No, no”.

Another teacher responded in this way (Teacher 8)

*“No, because the CPD that I have ever attended was not on learner-centred methods, only that how to write a lesson plan, on introduction, evaluation, conclusion. Not necessary the learner-centred methods, if anything **ndiye** (therefore) maybe, in time to come, but not what I attended”.*

Based on such revelations, it can be concluded that some primary school teachers do not have opportunities for CPDs on learner-centred education despite the fact that these teachers are charged with a noble responsibility of managing the OBE curriculum which is learner-centred. However, Ginsburg (2006) contends that in-service education opportunities can develop the commitment and knowledge of teachers, which is a pre-requisite for using learner-centred education methods. It has to be emphasized that in-service trainings are very important for the continuous professional development in any field of work because knowledge is dynamic. As such, new ways of doing things are always being discovered every time. Lack of CPDs could probably be one of the reasons why these teachers have limited knowledge about learner-centred education and let alone not comfortable to use them in their classroom practice. This is surely one of the factors that affects the use of LCE methods in their Human Ecology content classrooms. You may wish to know that the two participants who responded that they once attended a CPD on learner-centred practices were from the same school, and the only learner-centred education CPD that they attended was school-based, organized by their school head teacher.

4.2.4 Chapter summary

This chapter has presented findings and discussion of the findings. The study has revealed that most teachers in primary schools have limited knowledge about learner-centred practices and its principles which emphasize that learning must be an active process, a constructive process, a cooperative process, connective process and reflective process. It also transpired that teachers' limited knowledge about the principles and other aspects of learner-centred practices affects negatively the use of learner-centred practices. Owing to this, some teachers resort to use the traditional teacher-centred practices. It also transpired that those teachers who attempt to use learner-centred practices, only focus on limited aspects of learner-centredness, and worse still, sometimes wrongly done. The prevalence of transmission pedagogy in primary schools contradicts with literature which promotes the use of LCE methods, which is the current teaching and learning paradigm in Malawi and the world over. In short, the study findings contradict with the constructivist theory which guided this study.

The study findings have the potential to improve teaching/learning through the promotion of active, cooperative and reflective learning; construction of knowledge and daily life connections. The study exposed some practical challenges faced by primary school teachers in teaching Human Ecology content using LCE methods, in Malawian context. Some of the challenges exposed include large class sizes, lack of HEC specific teaching/learning resources, limited knowledge on LCE by teachers, lack of CPDs on LCE, lack of pedagogical content knowledge, class management problems due to large class sizes, and huge work load.

CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS.

5.1 Introduction

This chapter presents summary of the findings, conclusion, limitations of the study, recommendations on the study findings and areas for further research studies.

5.2 Summary of the findings.

The study was interested in answering the following research questions:

- What are primary school Human Ecology teachers' understandings of learner-centred education?
- How learner-centred are the teachers when teaching Human Ecology in primary schools?
- What factors affect the use of learner-centred education in primary school Human Ecology classrooms?

This is what was found out under each research question:

To begin with, the study looked at the primary school Human Ecology teachers' understandings of learner-centred education. The following revelations came to light in connection with this research question:

- The study revealed that some teachers in primary schools have limited knowledge about the meaning for learner-centred education (LCE). This was evidenced by the missing of some key words or key concepts in the way they defined learner-centred education.

- The study also revealed that some primary school teachers do not know some examples of learner-centred methods. Based on this revelation, it was concluded that some primary school teachers have limited knowledge about different examples of learner-centred methods that they can use when teaching Human Ecology content in their classrooms. It transpired that the learner-centred methods that most of the teachers know and attempt to use are group work and pair work.
- The study revealed that there is a misconception among most teachers in primary schools in the sense that they think LCE means group work only. Out of the eight respondents, seven answered by saying that they use group work to make their Human Ecology lessons learner-centred. Only one teacher, Teacher 3, answered differently and sensibly. This revelation gave the researcher an impression that they have limited knowledge about learner-centred education.
- The study also clearly revealed that some teachers have limited knowledge about the principles of learner-centred education. This came to light when the researcher asked the respondents to give the principles of learner-centred education that they apply when teaching Human Ecology content. Only one respondent was able to mention only one principle of LCP, which is construction of knowledge. The other 7 respondents failed to give or mention even one principle of LCP.
- The study revealed that some teachers continue to use the traditional teacher-centred methods when teaching Human Ecology content in primary schools despite the fact that the Human Ecology curriculum demands the use of learner-centred education methods when managing or implementing it.

Secondly, the study looked at how learner-centred the teachers are when teaching Human Ecology in primary schools. The study revealed that almost all the eight teachers that were observed teaching Human Ecology content, had some problems in demonstrating knowledge about the principles of learner-centred education in their teaching. Out of the five principles of learner-centred education, which are active learning, construction of knowledge, daily life connections, cooperative learning and reflective learning, all the 8 respondents failed to demonstrate knowledge about the principles of construction of knowledge and reflective learning. Some of them could actually demonstrate knowledge about the other three principles although with some challenges. This was clear evidence that they have limited knowledge about these principles of learner-centred education. These principles of LCE are in line with the social constructivist learning theory that encourages learners to connect their prior knowledge and experience through interaction.

The last research question looked at factors that affect the use of learner-centred education methods in primary school Human Ecology classrooms. The study revealed that some primary school teachers continue to use the traditional teacher-centred methods in their Human Ecology classrooms. This is as a result of the following factors among others: Large class sizes, lack of teaching/learning and assessment resources, class management problems, lack of pedagogical content knowledge among teachers and misconceptions.

The study also revealed that opportunities for teachers to attend in-service workshops on learner-centred education are very limited. Majority of the respondents have never attended any CPD on learner-centred education ever since they qualified as primary school teachers.

5.3 Conclusion

While learner-centred education methods in teaching Human Ecology in primary school curriculum have been advocated in recent years, teacher-centred teaching styles may still be dominant in actual practice. The study findings revealed that some teachers are still using the traditional teacher-centred practices when teaching Human Ecology content in primary schools and obviously this might be the trend in different subjects taught in primary schools. Teachers gave their own reasons for doing so. The reasons given according to this study, range from teachers having limited knowledge about learner-centred education due to inadequate training on the same during their initial training in teacher training colleges and lack of continuous professional development opportunities, to other factors that affect negatively the use of learner-centred teaching methods during lesson delivery. This study has brought to light the following factors as some of those that affect negatively the use of learner-centred education methods in primary school Human Ecology classrooms:

- Large classes: Based on the findings, all the eight participants cited large classes as one of the factors affecting negatively the use of LCP. This was evident during classroom lesson observations as it could not promote meaningful interaction between the teacher and learners and among learners themselves.
- Lack of teaching, learning and assessment resources (TLA): All the 8 teachers cited this as a factor because lack of these teaching, learning and assessment resources limits activities for learners. Respondents said that in the absence of TLA resources, they go teacher-centred.
- Class management problems: As a result of classes being large and under-resourced, some learners play during lesson delivery.

- Five participants out of eight bemoaned that some learners label teachers who attempt to use LCP as lazy.
- Lack of pedagogical content knowledge (PCK). It transpired during classroom lesson observations and interviews that all the respondents lacked pedagogical content knowledge and this affected their classroom practice in terms of lesson delivery.

In summary, despite the OBE curriculum demanding for a pedagogical paradigm shift from the traditional teacher-centred practices to learner-centred education, it appears that policy has changed more than practice when it comes to primary school teachers actually embracing learner-centred education. The study has revealed the prevalence of transmission pedagogy in primary schools. Probably, Malawi could not be the only country experiencing this challenge of resistance to change so as to embrace the much touted learner-centred practices (LCP). Literature has exposed reports that teachers in Uganda, Kenya and Tanzania seemed to believe in the values of learner-centred education but were reluctant to fully adopt these strategies because they felt pressure to cover the curriculum and ensure that learners were prepared to take and succeed in the national primary leaving examinations. In the same vein, other reports suggest that Ghanaian teachers are still relaying primarily on teacher-centred methods even though government policy calls for learner-centred practices. As explored in this study, the limited reforms of teacher education in Malawi partially explain the continued reliance on the traditional teacher-centred practices. The study, therefore, has revealed that majority of primary school teachers continue to use the traditional teacher-centred methods and that those who attempt to use learner-centred education methods, only focus on limited aspects of learner-centredness, worse still, in some cases, those limited aspects are not effectively conducted.

5.4 Limitations of the study

As noted by Cohen et al. (2006), every research study has its own inevitable limitations. In the case of this study, the following were the limitations:

- This study was confined to one education zone, Chankhanga zone, in Kasungu district within Central East Education Division, and to only four primary schools out of 10 primary schools in Chankhanga zone, which is not a full representation of the entire primary schools in the zone, let alone in the district. However, the procedure used in this study, and its findings can be transferable to another setting.
- An audio-visual recorder was supposed to be used, however it was not used because participants refused to be video-recorded, and it was difficult to capture the way teachers and learners behaved during lesson delivery in the classroom. However, a lesson observation tool was used to capture necessary information, and an audio recorder was used during face to face interviews.

5.5 Recommendations on the study findings

Based on the findings of this study, a summary of recommendations for action has been made in consistent with the related research questions:

- Teacher educators in teacher training colleges should get full orientation on how to use learner-centred education methods in order to fully prepare them to model learner-centred education methods as they train student teachers to become qualified teachers. This is important because they may not have the knowledge or experience required to teach student

teachers about the philosophical and practical elements of LCE and how to utilize them in different content areas.

- Revise the pre-service curriculum. Redesign of content and educational foundation courses is important so that pedagogical content knowledge is not divorced from content knowledge.
- There is need for support for teachers' continuous professional development (CPD) opportunities on learner-centred education at different levels, for example at school level, zone level, district level or even at national level.
- School management should assist in buying some Human Ecology specific teaching/learning and assessment resources in order to make primary school teachers handle Human Ecology content lessons with ease.
- Ministry of Education, Science and Technology should deploy more teachers to schools that have high enrolment of learners in order to split large classes in an attempt to meet the recommended teacher-learner ratio of 1:60. This will help avoid class management challenges that are associated with large class sizes.
- Teachers should be encouraged to use locally available resources where possible (promote the concept of TALULAR) in order to facilitate the teaching of Human Ecology content which requires the use of a variety of teaching/learning resources.

5.6 Areas for further research studies

Looking at the issue under study, and what needs to be done in order to make primary school teachers more learner-centred in Human Ecology classrooms, the following are suggested areas for further studies:

- Exploring challenges that primary school teachers face in teaching Human Ecology content within Science and Technology not as a stand-alone subject.
- Investigating how lack of subject matter content knowledge affects the teaching of Human Ecology content in primary schools in Malawi.
- Which LCE methods can be practically and realistically used to effectively teach Human Ecology content in Science and Technology within the Malawian socio-economic environment?

5.7 Chapter summary

This chapter looked at the summary of the findings by highlighting important points, conclusion which looked at inferences made based on the findings of the study, limitations of the study, recommendations based on the study findings and areas for further research studies.

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APPENDICES

Appendix A: Permission letter from Mzuzu University



MZUZU UNIVERSITY

OFFICE OF THE DEAN
FACULTY OF EDUCATION

Private Bag 201
Luwingu
Mzuzu 2
M.A.L.A.W.I
Tel: (265) 01 320 722575
Fax: (265) 01 320 505

Ref.: MU/1/D3.0

11th April 2019

TO WHOM IT MAY CONCERN

Dear Sir/Madam

PERMISSION TO COLLECT RESEARCH DATA

Nelson Chikwanda is a registered Master of Education (Teacher Education) Program student at Mzuzu university. He is supposed to collect research data for a study titled *Learner-centred practices in primary school Human Ecology classrooms: A case study of selected schools in Chankhanga Zone, Kasungu district*. The Faculty of Education at Mzuzu university has approved and cleared this research proposal.

Kindly assist him accordingly.

Yours faithfully,

Associate Professor Victor Mgomezulu
Dean, Faculty of Education.

Appendix B. Permission letter from the District Education Manager, Kasungu

All correspondences should be addressed

To: **The District Education Manager**

In reply please quote ref no.KU-DEM/1/1



SOUTH WEST EDUCATION

P.O. Box 38 , Kasungu

25th April, 2019


TO : PRIMARY SCHOOLS IN CHANKHANGA ZONE, KASUNGU

AUTHORITY TO CONDUCT RESEARCH

I write to kindly request your office to allow **Nelson Chakwanda** search activities at your institution. **Nelson Chikwanda** is a student at Mzuzu University and he is conducting research for his Masters' degree qualification.

I would be most grateful if he is given all the necessary support and guidance so that his research activities are carried out successfully.

I look forward to your usual support and hoping at the same time that you will accord this request all the attention and urgency that it deserves.


THE DISTRICT EDUCATION
MANAGER
RABSON B. KAWALALA
DISTRICT EDUCATION MANAGER

Appendix C: Interview Guide for Human Ecology teachers

1. What do you understand by the term learner-centred practices?
2. Were you trained on how to use learner-centred practices?
3. How learner-centred are you when teaching Human Ecology content in your class?
4. How do you prepare before a Human Ecology class where the approach is going to be learner-Centred?
5. Which principles of learner-centred practices do you follow when teaching Human Ecology content in your class?
6. How easy is it to teach Human Ecology content using learner-centred practices?
7. What challenges do you face when teaching Human Ecology content using learner-centred practices?
8. What do you think should be done to avoid the challenges that you face?

Appendix D: Classroom Lesson Observation Tool

Teacher's name _____

Subject _____

Class _____

LEARNER-CENTRED EDUCATION PRINCIPLE	OBSERVATIONS	THE RESEARCHER'S REMARKS OR VIEWS
Active, interesting learning process		
Construction of knowledge- learning must be a constructive process		

Daily life connections- learning must be a situated process		
Cooperative learning: learning must be a cooperative process		
Reflective learning: learning must be a reflective process		

Appendix E: Informed Consent Form for standards 5 and 6 Science and Technology teachers.

Learner-centred practices in Human Ecology classrooms in primary schools.

I, _____, consent to participate in this study conducted by Nelson N.S. Chikwanda on Learner-centred practices in Human Ecology classrooms in primary schools. I realize that no negative consequences will result from my participation in this study, and that the study is being conducted for purposes of improving the teaching of Human Ecology content using learner-centred practices in our primary schools. I give permission for the material to be used for research or teaching only.

I participate voluntarily and understand that I may withdraw from the study at any time.

Observations:

I further consent to being observed while teaching Human Ecology content in my class as part of the study. I also understand that I have the right to review the notes made of my teaching before these are used for analysis if I so choose. I can delete or amend any material or retract or revise any of my remarks. Everything I say will be kept confidential by the researcher. I will only be identified by a pseudonym in the research report. In addition, any persons I refer to in my teaching and the name of the school will be kept confidential.

Name _____

Signature _____

Date _____

Appendix F: Information sheet for head teachers

Research study on Learner-centred practices in Human Ecology classrooms in primary schools.

I, Nelson N.S. Chikwanda, am conducting research in partial fulfilment for the award of a Master of Education in Teacher Education at Mzuzu University. I am carrying out a study on Learner-centred practices in Human Ecology classrooms in primary schools: A case of selected primary schools in Chankhanga education zone, Kasungu district.

I would like to find out Human Ecology teachers' understandings of learner centred education in primary schools, to find out how learner centred are the teachers when teaching Human Ecology content in primary schools and find out factors that affect the use of learner centred practices in primary school Human Ecology classrooms.

I would like to observe your Human Ecology content lessons in Science and Technology and video record the lessons observed if teachers accept so that I can capture as many information as possible. I would also like to interview these teachers on learner-centred practices in Human Ecology classrooms in primary schools.

My research will benefit your school in that the responses from Human Ecology teachers will contribute to an understanding of the factors that affect the teaching of Human Ecology content using learner-centred practices so that appropriate interventions can be looked into by the pre-service educators and in-service organizers. Furthermore, Human Ecology as a science subject, the

findings will contribute knowledge to the research in science education that developing countries can identify with.

If you allow your school to take part in my study, I would like to make it clear that your participation is entirely voluntary, no negative consequences will result from your participation, and all the information will be treated with confidentiality. If you do accept to participate, please remember you may decline to answer any questions, and you may withdraw from the study at any time. In order to protect confidentiality, all names I use will be fictitious. I will provide you with a summary of my research results on completion of if you would like me to.

Thank you.

Nelson Nephtali Symon Chikwanda

Cell: 0999409948 or 0881900019

Email: nelson.chikwanda@gmail.com

Signature_____

Mzuzu University.

Appendix G: Information sheet for teachers

Research study on Learner-centred practices in Human Ecology classrooms in primary schools.

I, Nelson N.S. Chikwanda, am conducting research in partial fulfilment for the award of a Master of Education in Teacher Education at Mzuzu University. I am carrying out a study on Learner-centred practices in Human Ecology classrooms in primary schools: A case of selected primary schools in Chankhanga education zone, Kasungu district.

I would like to find out Human Ecology teachers' understandings of learner centred education in primary schools, to find out how learner centred are the teachers when teaching Human Ecology content in primary schools and find out factors that affect the use of learner centred practices in primary school Human Ecology classrooms.

I would like to observe your Human Ecology content lessons in Science and Technology and video record the lessons observed if you accept so that I can capture as many information as possible. I would also like to interview you on learner-centred practices in Human Ecology classrooms in primary schools.

My research will benefit your school in that the responses from you and the other Human Ecology teachers will contribute to an understanding of the factors that affect the teaching of Human Ecology content using learner-centred practices so that appropriate interventions can be looked into by the pre-service educators and in-service organizers. Furthermore, Human Ecology as a

science subject, the findings will contribute knowledge to the research in science education that developing countries can identify with.

If you allow your school to take part in my study, I would like to make it clear that your participation is entirely voluntary, no negative consequences will result from your participation, and all the information will be treated with confidentiality. If you do accept to participate, please remember you may decline to answer any questions, and you may withdraw from the study at any time. In order to protect confidentiality, all names I use will be fictitious.

I will provide you with a summary of my research results on completion of if you would like me to.

Thank you.

Nelson Nephtali Symon Chikwanda

Cell: 0999409948 or 0881900019

Email: nelson.chikwanda@gmail.com

Signature_____

Mzuzu University.

Appendix H: Request letter to carry out a research study

Nelson N.S.Chikwanda

Mzuzu University

P/Bag 201,

Luwinga.

Mzuzu

Cell: 0999409948/0881900019

Email:nelson.chikwanda@gmail.com

The District Education Manager,

Kasungu District Education Office,

P.O. Box 38,

Kasungu.

Dear Sir/Madam,

REQUEST TO CARRYOUT RESEARCH WORK IN SELECTED SCHOOLS IN CHANKHANGA ZONE.

I am a post graduate student at Mzuzu University pursuing a Master of Education in Teacher Education. I am carrying out research study on learner-centred practices in Human Ecology classrooms in primary schools: A case of selected schools in Chankhanga zone; in partial fulfilment of the award of the Master's Degree. I am therefore writing to request for permission to carry out this study in some of the schools within your education district.

Attached is an introduction letter from Mzuzu University.

Yours faithfully,

Nelson N.S. Chikwanda.

Appendix I: Request to carry out a research study (head teacher)

Nelson N.S. Chikwanda

Mzuzu University

P/Bag 201,

Luwinga.

Mzuzu

Cell: 0999409948/0881900019

Email: elifalamartin@yahoo.com

The Head teacher,

Dear Sir/Madam,

REQUEST TO CARRYOUT A RESEARCH IN YOUR SCHOOL

I am a post graduate student at Mzuzu University pursuing Master of Education in Teacher Education. I am carrying out a research study on learner-centred practices in Human Ecology classrooms in primary schools: A case of selected schools in Chankhanga zone; in partial fulfilment of the award of the Master's Degree.

I am therefore writing to request for permission to carry out this study in your school. Attached is an introduction letter from Mzuzu University.

Yours faithfully,

Nelson N.S. Chikwanda

Appendix J: Part of the face to face interview transcript

1) What do you understand by the term learner-centred education?

Teacher 5: ‘Learner-centred education is when learners participate freely in the lesson, *pause*, ‘ndayiwala koma’ literally meaning “I have forgotten”.

Teacher 2: ‘This is the method where by learners learn through group work, pair work as they are, as the way of giving them creativity as well as brainstorming on their own so that they get an answer’.

2) Were you trained about learner-centred education?

Teacher 7: I cannot say really trained, but we just learnt at Lilongwe TTC.

Teacher 8: I can say yes and I can say no because most of it was, we had to do it ourselves by reading, studying at home whilst we were teaching, because we were staying almost two weeks at school. So to have full time on knowing much of the content of the college, it was so difficult, so I can say yes, I can say no.

3) Give some examples of learner-centred methods that you know.

Teacher 3: Examples, *mmmm pause*, I don’t know how I can say it on the examples, but that is, as I have already said, that it’s only when you are involving learners, like giving the exercise to learners, it means you are involving them, you are not spoon feeding them, you are giving them like an exercise, like maybe you are putting them in groups, in pairs, and they will be like responding, so that can be some of the examples.

4) Have you ever attended any CPD on learner-centred education?

Teacher 5: No, no.

Teacher 6: No, no.

Teacher 7:No.

Teacher 8: No, because the CPD that I have ever attended was not on learner-centred methods, only that how to write a lesson plan, on introduction, evaluation, conclusion. Not necessary the learner-centred methods, if anything ndiye maybe, in time to come, but not what I attended.

5) How do you make sure that your Human Ecology lessons are learner-centred?

Teacher 2: By involving them in group work. Some, by involving them in pair work, giving them the work to do, at the end they came up with an answer.

Teacher 1: First I start by making groups so that when I present a topic, the learners start by.... we can say giving out their own views on how they understand according to the given topic.

6) Which principles of learner-centred practices do you follow when teaching Human Ecology content in your class?

Teacher 4: I don't know, laughter, maybe I have forgotten, maybe you can remind me.

Teacher 5: Laughter. I don't know any principles about learner-centred practices.

Teacher 6: No, I don't know them.

Teacher 7: Principles, *pause*, as of now laughter, *mmmm* sometimes you can first maybe demonstrate, after demonstration, after demonstrating it means learners have seen what you were

doing then you give chance to learners to do like what you did. But other principles, I have forgotten.

Teacher 8: On that, I can honestly say, *pause*, I don't have any idea or knowledge on principles or elements of learner-centred methods when teaching Human Ecology.

7) What challenges do you face when teaching Human Ecology content using learner-centred practices?

Teacher 1: Okay, it's *pause* I think some of the challenges are large classes and lack of teaching and learning resources. Okay, it's because it is difficult to us to supervise *pause* groups made by learners because of the, sometimes we can talk of congestion in class, so we have limited space, and even when we ask learners to come up with some resources for *pause* some topics such as methods of cooking, it's difficult to some learners to find resources.

Teacher 2: Some play, instead of having discussions with their group members, they think it's time for them to play, they don't participate fully, some they are shy, others they think it's time for them to chat and play. The other challenge is teaching resources. If you don't have enough learning and teaching resources, it is not easy because each and every group you should make sure that it is having enough materials for the lesson to run smoothly.

Teacher 3: Resources, if I could have them, maybe showing them the resources, that could have been better, because just explaining to them, it doesn't really work. It is easy for them to forget. That's why maybe, if I could give a question, most of them were just saying water, soap because it's the things which they are familiar with, so it's like next day we will be asking them about them, the bleaches it will be difficult for them to respond, because they don't know the materials.

Another challenge is the behaviour of learners, because if some learners can be involved in groups or pairs, it's like you are telling them to start playing, which some of them can be disturbed. So some of the learners do not get anything in a group just because some of the learners are playful, so I think that is another challenge.

Teacher 4: Class size can be another challenge if it is too large, it becomes difficult for a teacher to control that class if you use learner-centred practices. But if it is too large or too big, it is difficult for a teacher to control learners using these learner-centred practices, that's why we use teacher-centred. Where the class is large, we use teacher-centred methods.

Another challenge is understaffing.

Teacher 6: Resources, most of the times we use teacher-centred, because even the books, we don't have enough books, learners books for Science.

Another challenge is in groups, these learners, they have large groups. Other learners, they are discussing while others, are playing or they just staying because they can't see what their friends are doing, because the groups are large,

Teacher 7: Maybe, we can say terms used in Human Ecology, are difficult to learners to understand what is needed to, maybe what they are supposed to do. For them to interpret it is difficult, that is very challenging.

Teacher 8: The other challenge could be understaffing.

8) How big is your class?

Teacher 2: The class is too big, it is having 2005 plus learners.

Teacher 1: In my class, I have 150 learners, but the higher enrolment is for girls, yes.

9) Did you study Human Ecology or Home Economics yourself when you were at secondary school?

Teacher 6: No, the other challenge is that because in secondary, I was dropping that subject.

Teacher 3: No, only when I was in TTC carried within Science and Technology.

10) What do you think should be done to avoid the challenges that you face?

Teacher 3: School should be buying those what, those resources like the school should have them, like the bleaches, should have them, so the lesson should be better. CPDs should be happening one after another, like continuously for the teachers not to be forgetting those methods.

Teacher 4: First of all with large classes, they should be of the recommended size of the class that is 1 to 60. Second, resources maybe the government should supply the schools with a lot of resources and the subject teacher should prepare a lot of TALULAR.

Teacher 5: There is also need for CPDs on learner-centred practices.

Teacher 8: On resources, I think the government should make sure that each and every school is provided with much resources so that the Human Ecology is well presented. For instance, we are talking of Human Ecology, Human Ecology requires a lot of resources: the pots, the food, *pause*, the foodstuffs, most of the foodstuffs, we need to buy, so it means that lesson has to have money, because you cannot ask learners to contribute.

Appendix K: Classroom Lesson Observations Summary

Teacher's name _____

Subject _____

Class _____

LEARNER-CENTRED EDUCATION PRINCIPLE	OBSERVATIONS	THE RESEARCHER'S REMARKS OR VIEWS
Active, interesting learning process	<ul style="list-style-type: none"> • Teacher actively involved learners in the laundry processes such as sorting, mending, soaking washing and drying. • Teachers 1, 2, 3,4,5,6 and 8 dominated the activities of the lessons. • Teachers 1, 2, 3,4,5,6 and 8: Poorly organized group work, hence ineffective. 	<ul style="list-style-type: none"> • Ineffective group work (aimed at achieving active participation by learners) could be due to large class sizes and limited teaching, learning and assessment resources.

		<ul style="list-style-type: none"> • Could have asked questions that could provoke thinking in learners. • Probing skills lacked.
Construction of knowledge-learning must be a constructive process	<ul style="list-style-type: none"> • Knowledge construction was not effectively achieved by all the 8 teachers due to mainly lack of teaching, learning and assessment resources. 	<ul style="list-style-type: none"> • Could have provided some teaching, learning and assessment resources to help learners discover new concepts, hence construct new knowledge. • Could have provided more opportunities for learners' input in the development of the lessons.
Daily life connections-learning must be a situated process	<ul style="list-style-type: none"> • Teachers 4 and 8 were able to connect content to learners' daily lives. • Teachers 1, 2,3,5,6 and 7 did not connect content to learners' experience. 	<ul style="list-style-type: none"> • Could have built upon learners' knowledge which they develop through daily life. • Could have appreciated that connections between lesson content and daily life help learners understand everyday

		phenomenon and tackle problems.
Cooperative learning: learning must be a cooperative process	<ul style="list-style-type: none"> All the 8 teachers attempted to demonstrate their knowledge about cooperative learning through the use of group work, but it was ineffectively done. 	<ul style="list-style-type: none"> Could be due to large class sizes and limited teaching, learning and assessment resources. Could have properly guided the groups by way of giving them clear instructions and supervising them. Could have prepared and used a variety of teaching, learning and assessment resources in order to meaningfully engage and organize learners' activities in their classrooms.
Reflective learning: learning must be a reflective process	<ul style="list-style-type: none"> Not clearly demonstrated by all the 8 teachers. 	<ul style="list-style-type: none"> Could have given learners chance to summarize their work under their guidance. Could have slotted in an element of continuous assessment to give themselves (teachers) feedback which could be used to develop remedial or enrichment activities.

