

**ANALYSIS OF THE IMPLEMENTATION OF THE 2013 REVISED
SECONDARY SCHOOL TEACHER EDUCATION CURRICULUM
AT MUFULIRA COLLEGE OF EDUCATION, ZAMBIA**

By

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A dissertation submitted to the University of Zambia, in partial fulfilment of the requirement for the award of the degree of Master of Education in Curriculum Studies.

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LUSAKA

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DECLARATION

I, **Charity Bowa Luhanga**, do hereby solemnly declare that this Dissertation is my own work, except where otherwise acknowledged and that it has never been previously submitted for a degree at the University of Zambia or any other university.

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APPROVAL

This dissertation of **Charity B. Luhanga** is approved as partial fulfilment of the requirement for the award of the degree of Master of Education in Curriculum Studies by the University of Zambia.

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ABSTRACT

Teacher educators are crucial in improving and maintaining a high-quality teaching workforce. Since teachers are key players in the effective implementation of any education curriculum. However, teachers can only have a significant impact on the effective implementation of any curriculum and thereby improve the quality of teaching and learning in schools if they are well prepared in colleges of education and universities. Effective implementation of any curriculum requires adequate preparation of the implementers and availability of appropriate teaching and learning resources. Despite implementation being the most crucial stage in curriculum development process, little seems to be known about the effectiveness of the implementation of the 2013 revised secondary school teacher education curriculum in Zambia. This study therefore sought to investigate the effectiveness of the implementation of the 2013 revised secondary school teacher education curriculum at Mufulira College of Education. The objectives were to; examine lecturers' preparation for the implementation of the revised curriculum, assess the availability of appropriate facilities and equipment for implementing the revised curriculum and establish the challenges if any, in the implementation of the revised curriculum at Mufulira College of Education.

The researcher employed a phenomenological research design. Semi-structured interview schedules, focus group discussion guide, observation checklist and document analysis guide were used to collect data from the Directorate of Teacher Education and Specialised Services (TESS), and Mufulira College of Education. The sample size was 40, consisting of 2 TESS officials, the Principal, 6 heads of department, 16 lecturers, and 15 students. Data were analysed using the main themes that emerged from the research objectives in relation to related literature that was reviewed and the theoretical framework that guided the study.

The main findings of the study indicated that lecturers were not adequately prepared for the implementation of the 2013 revised secondary school teacher education curriculum at Mufulira College of Education, making it difficult for some lecturers to implement it effectively. The study also revealed that there were inappropriate facilities, equipment, teaching, and learning materials for effectively implementing most of the newly introduced teaching subjects such as special education, music, entrepreneurship, art and design to mention, but just a few which compromised the quality of teaching. In conclusion, effective implementation of the 2013 revised secondary school teacher education curriculum would have been achieved if lecturers were adequately prepared and appropriate facilities, equipment and materials were available for implementing the said curriculum.

Hence, the study recommended that the government should invest more in education in order to provide the needed teaching and learning resources for effectively implementing the revised curricula. In addition, the Ministry of General Education should support the implementers and developers of the education curriculum in revising and implementing the secondary school teacher education curriculum prior to the school curriculum so that the teachers could acquire requisite knowledge and skills for effectively implementing the revised secondary school curriculum.

Keywords: Revised, Curriculum, Teacher, Education, Implementation.

DEDICATION

This work is dedicated to my loving husband, Alfred Mweemba, and children, Luyando, Choolwe and Nchimunya Mweemba.

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ACRONYMS AND ABBREVIATIONS

CAPs	Curriculum and Assessment Programmes
CDC	Curriculum Development Centre
COSETCO	Copperbelt Secondary Teacher's College
CPD	Continuing Profession Development
DRGS	Directorate of Graduate and Research Studies
ECE	Early Childhood Education
ECZ	Examination Council of Zambia
EFA	Education for All
HoDs	Head of Department
HoS	Head of Section
ICT	Information Communication and Technology
MESVTEE	Ministry of Education Science, Vocational Training and Early
MLT	Medical Laboratory Technology
MoE	Ministry of Education
MoGE	Ministry of General Education
MUCE	Mufulira College of Education
NEP	National Educational Policy
TCIG	Teacher Curriculum Implementation Guide
TESS	Teacher Education and Specialised Services
TPD	Teacher Professional Development
UNESCO	United Nations Educational Scientific and Cultural Organisation
ZECF	Zambia Education Curriculum Framework

OPERATIONAL DEFINITION OF KEY TERMS

- Curriculum:* This refers to all the planned learning experiences offered to the learner or students.
- Educational change:* A planned improvement in the educational system aimed at teaching to enhance student achievement under the guidance of the educational institution.
- Effectiveness:* Ability of the education programme to accomplish its designated purpose.
- Implementation:* The process involved in putting the designed curriculum into practice and ensuring that it is effective.
- Revised Curriculum:* It is the modification of the curriculum with the view of making it relevant.
- Teacher Education:* It is the whole process of preparing student teachers for their various future roles as professionals.

CHAPTER ONE: INTRODUCTION

1.1 Overview

In this chapter, the contextual background to the setting of the study has been provided. Further, brief description of the statement of the problem, purpose of the study, specific objectives, research questions, theoretical framework, significance of the study, delimitations, limitations and operational definitions of the key terms have been presented.

1.2 Background

In Zambia, the education policies have been changing over time to provide a vision and strategies in the provision of education since independence in 1964. The Ministry of Education has made several attempts to reform teacher education curriculum, so that it is of good quality and relevant to the education needs of the nation (Manchishi, 2007; Kalimaposo, 2010). Quality teacher educators are crucial in improving and maintaining a high quality teaching workforce; while teachers are key players in the effective implementation of any education curriculum (Mwanza, 2017). According to the Ministry of Education (1996), Zambia has had three main policies on education, namely: The Education Policy Reforms of 1977, Focus on Learning of 1992 and Educating Our Future of 1996. All the three education policy documents have echoed the need to make the curriculum more responsive to the professional needs of student teachers and the society as a whole. For example, in a quest to improve the quality of teacher education, the 1996 National Policy on Education (NEP) recommended that the teacher education curriculum be revised regularly (Ministry of Education, 1996).

In 2013, the Secondary School Teacher Education Curriculum was revised, and the main thrust of its revision revolved around the need to incorporate current areas of social, economic and technological developments in the curriculum and integrate some subjects with interrelated and similar content and competencies into learning areas, in a bid to avoid curriculum overload and fragmentation. Also, review the teacher-learner contact time; review the teaching content in all the subjects and learning areas and incorporate main issues of national concerns in the curriculum (Ministry of Education, 2013). The revision of the 2013 Secondary School Teacher

Education Curriculum followed a critical analysis of the situation at secondary school level, which was characterized by lack of a coherent secondary school curriculum, weak linkages with higher educational institutions, such as skills training, colleges and universities, shortages of qualified teachers, and low achievement levels for the school certificate. In addition, the 2013 Education Curriculum Framework (ZECF) sought to underscore a number of successes based on the aims and objectives as a response to the National Policy on Education, which acts as a guide on curriculum implementation. To this end, ZECF provided curriculum guidelines and the structure at all the levels of the education ladder, ranging from Early Childhood Education (ECE), to Tertiary Education and Adult Literacy (Ministry of Education, 2013). Therefore, this study focused on teacher education curriculum for secondary school. Secondary school level in Zambia is from grade 8 to 12 and there are two Career Pathways at this level. These are; Academic and Vocational. The academic pathway equips learners who have passion for academic subjects and desire for careers in that direction, while the Vocational Career Pathway prepares learners for technical and practical jobs. Since the curriculum provides practical skills to learners starting at Grade 8 through to Grade 12, it is therefore, highly desired that all learners acquire entrepreneurial skills if they are to contribute positively to the development of the nation.

The major strength of the 2013 Revised Teacher Education Curriculum is a shift from the Content-based Teacher Education Curriculum, which does not give a broad picture of the future roles of the student teachers to a Competence-based Curriculum that begins with situation analysis or job description in its development process (Changwe, 2017). What is important in this type of education is what student teachers will be able to do at the end of their educational course (Mulenga, 2015 & Chishimba 2001). In relation to this, Jansen (1998) added that an outcome based-curriculum makes explicit what learners should do and the assessment processes are directed towards specified outcomes. Although this is viewed as strength, the achievement of such desired goals is determined by the effectiveness of the implementation process (Cornbeth, 1990). Therefore, it is against this background that this study intended to investigate the effectiveness of the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education. The college was selected for this study because it is implementing all the newly introduced teaching courses in the revised curriculum. Mufulira College of Education started as a primary teachers' college in 1963 and it has since been upgraded to a Secondary Teachers' College of Education following the upgrading of Copperbelt

Secondary Teachers' College (COSETCO) and Kwame Nkrumah Teachers' College to universities in 1998. The description of the problem that will be addressed is done in the section that follows.

1.3 Statement of the Problem

Every education curriculum is revised to address the challenges and limitations that the education system may be facing. However, effective implementation of any curriculum change requires time, personal interaction, in-service training of personnel and other forms of people based support (Fullan, 1993). This is because if implementers are not given enough time to develop an in-depth understanding and knowledge of the appropriate teaching methodologies and approaches or gain ownership of a revised curriculum, there are chances that the desired results may not be produced. The Zambian secondary school teacher education curriculum was revised in 2013 and the gradual process of being into practice commenced in 2015, as a follow up to the revised secondary school curriculum. Thus, teacher preparation occurred without a critical component; the revised teacher education curriculum itself. Since they were still using the old curriculum at the time the implementation of the revised secondary school curriculum commenced, the implication was that student teachers could have been inadequately prepared to effectively implement the revised curriculum in schools (Mulenga, 2015). The Ministry of General Education has made several attempts to reform the teacher education curriculum so that it is relevant and of good quality to meet the education needs of the learners since independence in 1964 (Manchishi, 2007; Kalimaposo, 2010). Despite the success of any education curriculum being determined by the effectiveness of its implementation, little seems to be known about the effectiveness of implementing the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education. This study indicates a gap in terms of information because if the curriculum is not effectively implemented, the quality of education the nation aspires for is likely to be compromised.

1.4 Purpose

The purpose of this study was to investigate the effectiveness of the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education.

1.5 Objectives

The objectives of this study were to:

1. examine lecturers' preparedness to the implement the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education.
2. assess the availability of appropriate facilities and equipment for implementing the 2013 Revised Secondary School Teacher Education Curriculum
3. establish the challenges, if any, encountered by lecturers in the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education.
4. suggest ways to address the challenges encountered in implementing the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education.

1.6 Research Questions

In order to achieve the objectives stated above, the study attempted to answer the following specific research questions:

1. How were lecturers prepared for the implementation of the 2013 Revised Secondary Teacher Education Curriculum at Mufulira Education Curriculum?
2. What facilities and equipment are available for implementing the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education?
3. What challenges, if any, did teacher educators encounter in implementing the 2013 Revised Secondary Teacher Education Curriculum at Mufulira College Education?
4. How can the established challenges in the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College Education be addressed?

1.7 The Theoretical perspectives of effective teacher education curriculum implementation

This study was guided by the competency-based theoretical approaches which deal with teacher professionalism. The Competence-based teacher education curriculum theoretical approaches were propounded by Huberman and Stinnett (1973) and were later used by other teacher education scholars in Zambia and beyond, such as Shulman (1987), Chishimba (2001), Bowles

(2012), Mulenga (2015) and Changwe (2017). If the secondary school teacher education curriculum is designed to achieve clearly stated outcomes and is effectively implemented, it is likely to produce quality teachers who will teach effectively in schools. This theory, in the context of this study, ensures that the competences to be demonstrated or achieved by the student teachers are clearly specified in advance. The teaching profession is based on the principles of mastering the subject or academic knowledge and professional competencies for would be teachers in that, if teachers have great self-understanding, are self-reflective and self-actualized; they will be better professionals (Vonk, 1995).

Therefore, the competence-based teacher education theoretical approaches informed this study in that it deals with teacher professionalism, as well as assumptions about the development of an effective professional education curriculum. For example, Bowles (2012) indicated that a Competency-based curriculum has specific competencies to be acquired and corresponding criteria for assessment of performance by learners. According to this theory, successful implementation of a revised professional education curriculum is determined by a number of factors and the most basic one is the definition of the competences which are roles that the student teachers are expected to demonstrate upon graduating.

Similarly, the *Zambian 2013 Revised Secondary School Teacher Education Curriculum* is Competence-based in design. In addition, teacher professionalism is based on the principle of mastering the content knowledge on one hand, and pedagogical content knowledge that should be acquired by would be teachers, on the other hand. Therefore, for competent teachers to be produced, they must have undergone through the hands of competent teacher educators.

1.8 Significance of the study

The findings of this study may contribute to the existing literature on the effective implementation of teacher education curriculum. Curriculum Specialists, as well as policy-makers may also be guided by the findings of this study on how to effectively implement the revised curriculum in Zambia. In addition, the results of this study may help curriculum designers and policy makers to plan future implementation of any revised curricular and new educational policies more cautiously, taking into consideration the revision of teacher education curriculum before implementing the school curriculum and ensuring that teacher educators are

well prepared prior to the implementation process in order for them to possess appropriate skills or competencies for effective implementation of the revised curriculum. Furthermore, this study may help in providing a basis for future research on the revised teacher education curriculum implementation in Zambia.

1.9 Delimitation

This study was confined to Mufulira College of Education because it is one of the two colleges that have been offering both Junior and Senior Secondary School teacher training for a long time and the study was limited to the 2013 Revised Secondary School Teacher Education Curriculum implementation. The experts at TESS were targeted.

1.10 Limitation

In this study, the researcher only collected data from the Assistant Director, Pre-Service and Principal Education Officer at TESS. Data was also collected from the College Principal, Head of Departments, lecturers and students at Mufulira College of Education on the information that was obtained using semi-structured interview guides, focus group guide, checklist and document analysis guide. The researcher also focused on information collected from the review of curriculum documents, such as the 2013 and 2015 Zambian Education Curriculum Frameworks (ZECF), Teachers' Curriculum Implementation Guide (TCIG), Teacher Education (TED) syllabus, the Sustainable Development Goal Number Four and the 1996 education policy document. Therefore, the findings of this study may not be generalized to other colleges across the country, Zambia.

1.11 Organisation of the dissertation

In Chapter One the contextual background to the setting of the study, brief description of the statement of the problem, purpose of the study, specific objectives, research questions, theoretical framework, significance of the study, delimitations, limitations and operational definitions of the key terms has been presented.

In Chapter Two, literature related to the study which was reviewed from both foreign and local studies will be presented by giving a general overview of the implementation of the revised curriculum in relation to teacher education in Zambia. Also literature on strategies for effective implementation, lecturers' perceptions on the implementation, challenges in implementing the revised curriculum, models for effective implementation of the revised curriculum as well as the research gap will be presented.

Further, in Chapter Three, the researcher will describe the methodology that was used, including the research design, study site, target population, sample size, sampling techniques, data collection instruments, trustworthiness, data collection procedure and analysis as well as ethical considerations. In Chapter Four, the findings of the study will be presented according to the themes drawn from the research questions. In Chapter Five, the findings of the study will be discussed according to the themes emerging from the findings of the study objectives, in relation to the literature that was reviewed and the theory guiding the study.

Lastly, but not the last, in Chapter Six, the conclusion of the study which focused on investigating the effectiveness in the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education as well as specific recommendations based on the findings of the study will be presented.

1.13 Summary

The government of the republic of Zambia through the Ministry of Education has made several attempts to revise the education curriculum at every level in an effort to improve the provision of quality of education since independence in 1964, and the teacher education curriculum has not been left out. Despite the fact that the teacher education curriculum has been revised and implemented over time in Zambia, it appears the effectiveness of the secondary school teacher education curriculum has not been adequately studied, as evidenced by the scarcity of the Zambian scholarly literature on the subject. This study was designed to address that gap, as well as provide suggestions that could be considered when implementing future revised curricula. The theoretical framework guiding the study has been explained and definition of key operational terms concluded the chapter. In the next chapter, a review of literature related to this study has been presented.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1 Overview

In the previous chapter, the study was introduced by providing the background to the setting of the study. In this chapter the researcher reviewed literature related to the study by giving a general overview of the implementation of the revised curriculum in relation to teacher education in Zambia. Thereafter, a review of related literature on preparation of teacher educators, appropriate facilities and equipment, revised curriculum implementation and challenges to the effective implementation of the revised curriculum has been presented.

2.2 The Concept of effectively implementing the Revised Teacher Education Curriculum

"The problem of change cannot be addressed unless we treat continuous teacher education, both pre-service and in-service as the major means of producing teachers as change agents" (Fullan, 1993:7) in tackling issues of curriculum revision. Therefore, to effectively educate teachers, there is need for educators to grasp the challenges, as well as opportunities to assert their power over shaping the curriculum process that will produce competent and confident teachers (Kruss 2009:22). For example, Fullan and Pomfret (1977) identified intensive in-service training as an important strategy for curriculum implementation. They also reported that teachers that received in-service training shifted toward behaviour consistent with implementation of the curriculum. Additionally, Okoro (2011) stated that effective implementation of innovations requires time, personal interaction and contacts, in-service training and other forms of people-based support. For any revised curriculum to be effectively implemented there is need to equip the implementers with desirable knowledge and skills necessary for teaching and learning, because an effective teacher education curriculum would appropriately prepare teachers on what to teach, who to teach and how to teach what is to be taught in class (Oguba, 1998). This will help to produce quality lecturers who will in turn produce quality teachers whose good performance quality is reflected in the quality of their students (Bishop, 1983). Avong (2013), Okafor and Anaduaka (2013) argued that poor qualifications of teachers and ineffective preparation of student teachers negatively affect the teaching and learning processes in schools. Therefore, the implementation of the curriculum is not a one-day act, but it is a process surrounded by a number

of variables. In this case, lecturers' preparedness towards the implementation of revised curriculum, as well as devising strategies that would turn challenges into opportunities is cardinal. Curriculum revision means modifying the curriculum using data from evaluating its effectiveness after it has been implemented and reflected on what learners did and did not get out of it (Sofia, 2017). It also means making the curriculum different in some way, to give it a new position or direction or altering its philosophy by way of its aims and objectives, reviewing its content, revising its methods and rethinking its evaluation procedures. It is, therefore, important to revise the curriculum in order to consider better ways in which the curriculum interacts with the actual learners in a real school environment. As reflected in the study by Mulemi (2011), teachers' professional life revolves around knowledge and learners. Consequently, the knowledge is always changing, while learners are uniquely different as they live in a rapidly changing social environment. Therefore, implementation of the teacher education curriculum in colleges of education is the most crucial stage of curriculum development in that teachers are key players in the implementation of curricular. Hence, the quality of the teacher educators will determine how effective a revised teacher education curriculum will be implemented.

Fixen et.al (2005) noted that the process of putting the curriculum into practice has defined stages, which involve exploration and adoption, programme installation, initial implementation, full operation, innovation and sustainability. This implies that effective implementation of the revised curriculum needs time and careful planning. In addition, successful implementation of any revised curriculum depends on many factors and these include inputs, processes and the outcomes of the education system. According to the Ministry of Education (2013), some of the key factors include: teaching methodologies, assessment strategies, planning and resource management, physical environment, co-curricular activities, continuing professional development, research and monitoring and evaluation. Such strategies can be used to effectively implement the revised curriculum in the classroom. The Cambridge Guide for School Leaders (2017) stipulated that active teaching and learning is a process that involves questioning, discovery of barriers, devising strategies to overcome the barriers, consistently evaluating process and changing what they do if it does not work. However, this cannot be successfully done unless it is supported by structures and systems that emphasizes making the process of learning an object of reflection for students and teachers by clearly identifying learning aims and objectives in each subject that support its development.

Apart from an ongoing professional development for teachers and the creation of professional learning community committees that support teaching practices, use of assessment for learning, and not just assessment of learning in the teaching and learning process, can also help students to become autonomous, able to assess their own progress and understand what constitute excellence in that particular discipline. Furthermore, creating a culture where learning is valued and done in a positive classroom climate and a good school environment, as well as supportive of co-curricular activities is cardinal in curriculum implementation (Collier, 2005, Guskey, 1998 & Sparks 1988). Though several studies brought out important issues pertaining strategies for effective implementation of the curriculum, it is not clearly shown how the revised teacher education curriculum should be done. Studies by Durlack and Dupre (2008) concluded that the implementation of the curriculum is specific to each classroom setting. In other words, implementation of the curriculum is place-based and this means that each institution has its own strategies for implementing it. However, it should be noted here that designing strategies to implement the revised teacher education curriculum is determined by the way teacher educators were prepared for such changes.

2.3 Implementation of Teacher Education Curriculum in the Zambian Context

The Zambian Government through the Ministry of General Education has been reviewing and revising the teacher education curriculum to meet the ever-changing needs of teachers, and society as a whole since independence in 1964. For example, the Education Reform of 1977 highly recognized teacher educators as a key human resource within the teacher education system and developmental programmes of the country. While the 1992 National Policy on Education, 'Focus on Learning', regarded teachers as leaders in every society in terms of national development and preparation of learners for future adult life, the third national policy on education, 'Educating our Future', of 1996 emphasized the need to update the curriculum as a way of helping student teachers understand the changes taking place in the world around them. As noted by the Ministry of Education (1996:96), 'the speed with which knowledge and techniques are growing requires that the curriculum for higher level institutions be regularly updated'. These changes are conditioned by the social, economic and political changes that keep on taking place at global and local levels (Ministry of education, 1977, 1992 and 1996).

The Zambian Education system, as guided by the national education policy of 1996 on implementation of teacher education curriculum, aims at “promoting the full and well development of the physical, intellectual, social, affective and spiritual qualities” in students. To achieve this, the Ministry of General Education revised the secondary school teacher education curriculum in 2013 in order to address a number of educational issues. One of the main issues was to provide a Competence-based curriculum design that would enable the teachers develop desirable skills and competencies to meet the demands of the Zambian educational needs. The other issue was to equip teacher educators with skills on how assessment should be taught to teachers so that the next generation of teachers would possess the right assessment skills. Lastly, but not the least, there was no link between the secondary teacher education and the secondary school curriculum and hence, the need to align the higher education curriculum to the school curriculum (Ministry of Education, 2013).

Preparation of teachers with high levels of competencies in a variety of areas, such as knowledge of content to be taught, skills in different teaching methodologies, understanding of educational foundations in Zambia and the world as a whole is needed. The world also needs teachers who are creative, constructive and innovative, and one who can provide competent leadership in the execution of their duties (Ministry of Education, 2013). However, it is worth noting that effective and relevant learning outcomes in colleges of education are only achieved through the provision of quality inputs at each stage of instructional process that enable student teachers to acquire relevant knowledge, skills and competences. Therefore, quality teachers are a driving force to quality education, as well as social and economic development of every nation as they play a fundamental role in the social and economic development of any society. In Zambia, like many other countries world over, the teaching profession has constantly been under a lot of pressure to make it more effective and responsive to the education needs of the nation in order to improve the quality of education being provided to the citizens (Simuyaba, 2016). It is for this reason that there was a paradigm shift from teaching of theory to practical skills for sustainability. The need for improving the quality and relevancy of education provided to teachers has been emphasized by the researchers, educationists and policy makers globally and in Zambia in particular.

For example, UNESCO (2016) Global Education Monitoring indicated that the global education community adopted the 2030 Agenda for Sustainable Development in September 2015 in New

York which included Sustainable Development Goal number four. It is further reported that the global education community also adopted a framework for action which aim at providing guidance on implementation of the education goal to ‘ensure inclusive and equitable quality education and promote life-long learning opportunities by 2030’’. The central aim of the education 2030 is to support implementation mechanisms that promote country-led action.

In Zambia, some of these mechanisms are reflected in the 2013 Revised Teacher Education Curriculum framework. Manchishi (2016) revealed that teaching being a practical job, student teachers is supposed to demonstrate their mastery of content knowledge and pedagogical content knowledge which they acquired through peer teaching during their preparation as teachers if they are to teach effectively. However, serving teachers can also help sharpen each other’s skills through group teaching or School Based Continuing Profession Development (SBCPD) programmes in an effort to improve the quality of education. The researcher in this study intended to investigate the effectiveness of the implementation of the 2013 Revised Teacher Education Curriculum, specifically focused on the preparation of lecturers and curriculum implementers, availability of appropriate facilities and equipment and establishing challenges associated with the implementation of the 2013 revised teacher education curriculum.

2.4 Preparation of lecturers for the implementation of the revised curriculum

Managing change is a serious challenge. This is particularly true when managing a teaching staff that has limited conception of their role and duty as lecturers (Kakooza, 2015). Understanding of academic discipline cannot be transmitted from one person to another, unless teaching involves constant decision making about the balance between approaches and strategies if the revised curriculum is to be effectively implemented.

In addition, Kakooza (2015) argued that best practices of curriculum implementation in higher education calls for the utilization of student-focused learning and diverse educational delivery methods as it is no longer acceptable to offer an educational programme that is built entirely on the lecture model. Such information is important in the process of preparing teacher educators for the implementation of the revised curriculum, but in his study Kakooza (2015) did not indicate how teacher educators were prepared to use the new methodologies. Hence, in this study

the researcher intends to find out how the lecturers were prepared to effectively implement the 2013 Revised Secondary School Teacher Education Curriculum in Zambia.

In an effort to deal with the challenges in curriculum implementation, UNESCO (2016) emphasized that curricular developers need to answer many fundamental questions such as: Which knowledge, skills and values should we include in our curriculum? Would the acquisition and development of such skills and values and of the associated capabilities and competencies enable our youngsters to lead meaningful and productive lives in future? Is the current paradigm of a set of 'subjects' a curriculum adequacy consistency? And how can learning be made relevant and interesting to students? This means that the quality of a curriculum is closely connected to the process used in developing it and the means through which it is put into practice.

In other words, assessment of the curriculum itself cannot be done in isolation from the broader processes of curriculum development, implementation and evaluation. This is so because curriculum change is seen as a cycle of development, implementation, evaluation and revision. Curriculum scholars, such as Fixsen et. al, (2005), have argued that the process of implementing a curriculum is dynamic and is surrounded by many classroom variables which include teachers' individuality and learners uniqueness. In relation to this Collier (2005), Guskey (1998), Sparks (1988) have indicated that teachers' belief in their ability to make a difference in student learning is cardinal in effectively implementing a revised curriculum. However, what seems to be clear in all the studies referred to in this section is that the scholars did not consider how teacher educators were adequately prepared for implementing the revised curriculum. However, it should be noted here that preparation of lecturers for effective implementation any revised curriculum is determined by well-designed strategies in order to achieve such changes successfully. In the next section, literature related to strategies for effective implementation of a revised curriculum will be reviewed.

2.4.1 Strategies for effective implementation of a revised curricular

Successful implementation of any revised curriculum depends on many factors and these include inputs, processes and the outcomes of the education system. According to the Ministry of Education (2013), some of the key factors include: teaching methodologies, assessment strategies, planning and resource management, physical environment, co-curricular activities,

continuing professional development, research, monitoring and evaluation. Such strategies can be used to effectively implement the revised curriculum in the classroom. As stipulated in The Cambridge International Examinations (2017), active teaching and learning is a process that involves questioning, discovery of barriers, devising strategies to overcome the barriers, consistently evaluating processes and changing what they do if it does not work.

However, this cannot be successful, unless supported by structures and systems that emphasize making the process of learning an object of reflection for students and teachers by clearly identifying learning aims and objectives in each subject that support its development. Consistent evaluation and changing what educators do in an effort to improve the provision of quality of education, can be achieved through their full participation in curriculum development process from its initial phase through to the implementation stage. The study by Mwanza (2017) on teacher involvement in curriculum development in Zambia in Lusaka urban, utilized concurrent embedded design of the mixed methods approach and data was collected using interviews and questionnaires and was analyzed using themes and descriptive statistics. The findings of her study revealed that teachers were not fully involved in the process of curriculum development. As such, most teachers faced challenges in implementing the developed curriculum effectively. Further, the study revealed that curriculum materials such as textbooks were of poor quality. Therefore, it was recommended that teachers should be involved in the development of the curriculum process because they are an integral part in the delivery of quality education.

Another strategy that would help in effective implementation of a revised curriculum is ongoing professional development for teachers and the creation of professional learning community committees that support teaching practices. In addition, focus should be on the assessment for learning with the aim to help students become autonomous; able to assess their own progress and understand what constitute excellence in that particular discipline. Furthermore, creating a culture where learning is valued with a culture where learning is done in a positive classroom climate and a school environment as well as supportive of co-curricular activities (Collier, 2005, Guskey, 1998 and Sparks 1988). While the studies referred to in this section brought out important issues pertaining to the strategies for effective implementation of a curriculum, it is not clearly shown how the revised teacher education curriculum should be done. Studies by Durlack and Dupre (2008) concluded that the implementation of a curriculum is specific to each

classroom setting. In other words, implementation of a curriculum is place-based and this means that each institution has its own strategies for implementing it. Therefore, in this study, the researcher intended to investigate the strategies designed to implement the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education. In the next section, literature on teacher educators' perspectives will be reviewed.

2.4.2 Lecturers' perceptions on the implementation of a revised curriculum

In Tanzania, Komba (2008) conducted a study which focused on critically analyzing teachers' perceptions and practices of teacher professional development by Head Teachers, Primary School Teachers, Ward Education Coordinators, District Education Officers, School Inspectors and members of the committee in selected schools. A mixed method research design was employed to collect and analyze data. The findings of Komba (2008)'s study revealed a conception and practice of teacher profession development which combines both the raising of teachers' academic qualifications and professional growth, as teachers are a key source of knowledge, skills and wisdom as well as a source of inspiration and role models for the students (Komba, 2008). Consequently, teachers are central in facilitating meaningful education outcomes that are affected by quality of the teacher.

In this study, the researcher intended to focus on determining the teacher educator's perceptions on the implementation of the Revised Secondary School Teacher Education Curriculum. As such, Komba's study is relevant to this study in that the former emphasized in-service or continuous professional development (CPD) as being useful in the production of quality teachers. Similarly, in this study, perceptions of lecturers on effective implementation of the 2013 Revised Secondary Teacher Education Curriculum at Mufulira College of Education have been considered. Another study conducted by Khan (2012) aimed at exploring the opinions of teachers about the content of the of Mathematics course in teacher education programmes in Pakistan. The findings of his study revealed that the Mathematics courses for teacher education were not preparing student teachers for conceptual teaching. As such, most graduating students lacked proper content knowledge and pedagogical skills. Khan (2012) further observed that poor content knowledge and pedagogical skills meant that student teachers were prepared to rely on academic qualification at the expense of professional qualifications. However, he did not indicate clearly how effectively the teacher education Mathematics programme was implemented in

Pakistan. Similarly, this study intended to determine the perceptions of lecturers on the implementation of the 2013 Revised Secondary Teacher Education Curriculum at Mufulira College of education. Therefore, if teachers are going to help students to develop the skills and competencies of knowledge creation, then teachers need the experience in building professional knowledge.

In addition, Mubanga (2012) alluded to the fact that teachers play the most important role in meeting the many challenges of providing quality education in any country. As documented in the Zambian National Education Policy 'Educating our Future', the importance of employing well-qualified and competent teachers is to ensure quality and effectiveness of the education system, which largely depends on the quality of its teachers. This is so, because teachers are a single most important resource, and determinant of success in meeting the nation's desired goal (MESVT, 1996). William (2007) pointed out the significance of teachers' perceptions about how coherent their professional development was, for teacher learning, as well as incorporation of time for teachers to plan for implementation and provision of technical support, is significant in promoting education programme implementation.

Further, Mugimu and Mugisha (2013) did a study on educational practices and related curriculum antecedents applied during the design and implementation of the Medical Laboratory Technology (MLT) at Mulango Paramedical School in Uganda. They utilized a mixed methods approach in which document analysis, focus group discussions, checklists, interviews and questionnaires were used to collect data at different compliance levels. Their study revealed that the MLT diploma curriculum was put to effect with a multidisciplinary focus in order to develop confident and dependable health professionals that could be able to work harmoniously in interdisciplinary collaborative teams. Besides, the study revealed that the curriculum designers and educators complied with important curriculum antecedents in its design and implementation process which is a clear indication that student-centered approaches were used. In addition, the hands-on strategies used introduced students to the basic practical clinical skills and competences (Mugimu & Mugisha, 2013). Mugimu and Mugisha (2013) further argued that the use of a variety of educational practices made the teaching and learning process more interesting and this showed that the use of appropriate educational practices during curriculum development and implementation was very critical. However, it is not clear as to whether the MLT Curriculum

Diploma, was effectively implemented in Uganda. Similarly, in this study, the researcher intended to determine the educator's perceptions on the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education in Zambia. The implementation of any revised curriculum come with challenges, but the challenges the lecturers faced in the implementation of the 2013 Revised Secondary School teacher education curriculum at MUCE are not documented in the available literature. In the next section, literature related to the challenges associated with the implementation of the revised teacher education curriculum will be reviewed.

2.5 Challenges in the implementation of revised curriculum

For the implementation of any new or revised curriculum to improve teaching and learning, there is need for educator preparation, new resources, change in policy statement and increased workload. In South Africa, Moodley (2013) conducted a study on curriculum implementation and assessment, which revealed that educators faced challenges in understanding and implementation of various previous curriculum policies, which included policies such as the curriculum 2005 and the revised National Curriculum Statement, which led to the introduction of the National Curriculum and Assessment Policy Statement (CAP) in 2012. The data collected from the focus group interviews and document analysis revealed that while educators welcomed the introduction of CAPS and its clarity, structure, clear guidelines and time frames, they experienced challenges related to the quality and amount of training, inadequate resources, increased work load and the impact of rapid pace of the curriculum on teaching and learning. Although Moodley's study is of great value to the current study, as it revealed challenges in the implementation of the revised curriculum, the study did not focus on the implementation of teacher education curriculum, but junior secondary schools curriculum in South Africa and not in Zambian colleges of education. In this study, therefore, the researcher intended to investigate the challenges to effective implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of education in Zambia. Similarly, Badugela (2012) did a study in South Africa at a single school on problems facing educators in implementing the National Curriculum Statement (NCS). A qualitative approach was utilized in her study and data was collected through questionnaires and interviews. She found out that the implementation of the National Curriculum Statement was problematic and far from satisfactory. Therefore, it was

recommended that there was need for the department of education to prioritize educational resources for schools and educator training in curriculum implementation.

In Zambia, Chilufya (2014) undertook a research, which focused on determining the extent of the integration of environmental issues in the Zambia 2013 science education curriculum at Junior Secondary School level. Mixed methods approach was employed, following a descriptive survey and data was analyzed principally through content analysis. The results from this study showed that the 3 pillars or building blocks of sustainable development were duly represented in the 2013 science curriculum, but more work had been done on topics dealing with ecological issues, social and economic and a bit on political issues. Additionally, more sustainability issues had been integrated in the agricultural science curriculum compared to integrated science curriculum. Apart from that, the curriculum had highly been re-arranged and learning levels raised. She further revealed that stakeholders and pupil-respondents had knowledge on environmental sustainability issues.

However, the knowledge they had was associated only with the ecological environment. Apart from that, varied teaching methods had been identified, but classroom-based approaches occupied proportionally more space and have remained the dominant modes of lesson delivery across the two categories. It was also clear that there were little or no teaching and learning resources for both the old and the revised curriculum. Results also showed that environmental sustainability issues would highly be beneficial to learners and society at large once in the curriculum. Furthermore, the curriculum seemed to be bulk but a good and detailed guiding tool for the teacher, presenting clearly, the knowledge, skills and values needed to be passed on to the learner. However, Chilufya (2014)'s descriptive survey focused on the integration of environmental sustainability issues in the 2013 Revised Science Curriculum at Junior Secondary School level and did not look at the implementation of a teacher education curriculum. Therefore, the focus of this study is on implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira Colleges of Education and not in secondary schools.

Another study by Ahmadi (2015) revealed that education had suffered a plight of inadequate instruction material, inadequate qualified teachers, poor funding syndrome, inadequate instructional facilities and lack of motivation among others, without which, it is very difficult to effectively implement any change in curricular because quality teachers are a driving force in the

delivery of quality education. The availability of suitable infrastructure and equipment is also cardinal in as far as effective implementation of any curriculum is concerned. Another research conducted in Uganda, at the Ugandan Christian University by Kakooza (2015) on the implementation of the revised curriculum in the faculty of law, and the research revealed a number of challenges that were encountered in the implementation of the revised the revised curriculum. These included structural challenges that limited meaningful feedback opportunities for students, the improvement strategies that were built on increasing the workload expectations for lecturers were challenging to implement; there were challenges encountered in securing lecturer buy-in and there was lack of communication between lecturers and there were also problems noted in the provision of timely and regular feedback. However, Kakooza focused on improving the quality of legal education in a university in Uganda, while the researcher in this study, focused on analyzing the 2013 Revised Secondary School Teacher Education Curriculum in Zambian Colleges of education. Moreover, challenges of implementing the revised education curriculum may differ from one institution to another or from one country to another.

Furthermore, Okoth (2016) also conducted a research on the challenges of implementing a top-down Curriculum Innovation in English Language Teaching in Kenya. In his study, Okoth investigated the challenges faced by the form III English teachers when implementing the revised integrated English Language curriculum in schools. A mixed method descriptive design was employed and its findings established that lack of appropriate Teacher Professional Development (TPD), content overload, non-suitable learner characteristics, inadequate directions in course books on integration and inappropriate pre-service training affected curriculum implementation. Okoth (2016), therefore, recommended that involvement of teachers in the development of curriculum innovation, organise continuous TPD, development of materials that support teachers in their implementation and review of assessment procedures would assist in effectively implementing any curriculum. Okoth narrowed down his research to a specific subject which was the integration of English Language curriculum. However, this study is set to investigate the challenges faced by teacher educators in the implementation of the 2013 revised Secondary School Teacher Education Curriculum in Colleges of education in Zambia and not in schools.

Additionally, Makunja (2016) carried out a study on challenges that teachers faced in implementing competence-based curriculum at a community secondary school in Tanzania. This qualitative research approach utilized a case study research design. Its findings revealed that teachers faced a variety of challenges which impeded the effective implementation of competence-based curriculum in teaching and learning. Similarly, this study intended to investigate the challenges that impede Mufulira College of Education lecturers in the implementation of the 2013 Revised Secondary School Teacher Education Curriculum in line with the competence-based aspect, as well. However, the current study focused on the Secondary School Teacher Education Curriculum and not at a Secondary School Curriculum. The challenges that the school may face in the implementation of the curriculum might be different from the challenges faced in the implementation of the curriculum in a college. Turning these challenges into opportunities requires designing a model for effective implementation of revised teacher education curriculum.

2.6 Models for effective Revised Curriculum implementation

According, to Mulenga (2015), models guide curriculum designers in the selection and organisation of elements of the curriculum in order to facilitate the conceptualization of their relationships during curriculum designing. In short, curriculum models act as tools for thinking about the process of curriculum designing. Therefore, models for implementing curriculum are very important as they are a basis for evaluating the effective implementation of any curriculum. To this effect, there are a number of models that contribute a great deal towards educational change and in different ways in as far as effective implementation of curricular is concerned. For example, Havelock's second model known as the Social Interaction Model emphasized the diffusion of innovation through a social system. This model was initially originated by Rodgers and Lionberger, and then further developed by Havelock. He emphasized that a model should relate to the process of diffusion of new ideas, practices or products (Nduanya, 1991), so as to effectively disseminate new information contained in the revised curriculum to the intended group of learners.

In addition, Gundy and Berger (2016) suggested that perspectives on the implementation of educational change can be practically achieved depending on the amount of teachers' inputs and the complexity of the decisions teachers need to make. This is so, because teachers are drivers of any educational change. Therefore, no matter how well designed a curriculum may be, without quality teachers to implement it effectively, it cannot achieve its intended purpose. Further, Cho (1998) described the fidelity perspective model as mostly dominated by scientists prior to 1970. They developed science curricular for the school with an assumption that teachers would implement a curriculum prescribed and provided to them to teach in class using simple decision-making patterns, only focused on effective implementation of the innovation provided to them by educational authorities. This clearly showed that the fidelity perspective model was based on a top-down curriculum development process which may not be responsive to learners' education needs.

Another curriculum implementation model is the mutual adaptation perspective model which is characterized by externally imposed middle-up dynamics. This model requires more complex decision-making on the part of teachers as they adapt and reshape the changes in their classroom teaching. There is also the enactment perspective model. This Model, however, is strongly driven by a bottom-up dynamic, and is internally imposed as it starts with needs analysis to identify education needs of the learners. Therefore, under the enactment perspective model, teachers' decision-making is complex, as they focus on what will, and not be implemented. Unlike many models which are focused only on school systems, the enactment perspective model is focused on involving teachers in implementing the educational changes in classrooms (Gundy & Berger, 2016). This means that teachers are involved in the curriculum development process as they are the implementers of the changes in education and closer to the beneficiaries of the changed curricular.

There are a number of models for effective curriculum implementation as stated earlier in this section which include; the externally driven top-down, mutual adaptation, middle-up and bottom-down enactment dynamics. However, it should be noted that the bottom-up enactment dynamic is more appropriate and relevant in implementing a revised education curriculum. In Zambia, the 2013 Revised Secondary School Teacher Education Curriculum was designed in line with a competence or outcome-based theory in mind. Meaning that, its development process

started with situation analysis in order to meet the education needs of the young Zambians for national development.

2.7 The Research Gap Addressed and Directions from Literature Review

Various authors expressed different views but all point to the fact that lecturers should be adequately prepared for implementation of a revised curriculum. It has been noted from literature that there have been significant efforts that the government of Zambia, through the Ministry of Education, has made to improve the quality of education provision for its citizens by revising the teacher education curriculum. It has also been stressed that teachers are key in driving any positive change in education, as many authors of the literature that was reviewed in this report acknowledged that adequate teacher preparation is crucial to effective curriculum implementation. Additionally, the availability of appropriate resources and infrastructure are vital in effective implementation of any revised curriculum. Despite the effective implementation of the revised curricular being very crucial in ensuring quality education as indicated in various literature that has been reviewed, to the knowledge of the researcher, little or no studies seems to have been done in Zambia to establish the effectiveness of the implementation of the 2013 Revised Secondary School Teacher Education Curriculum. Therefore, it was the intention of this study to fill this gap.

2.8 Summary

In this chapter, the researcher has highlighted the existing literature that is related to the implementation of the revised teacher education curriculum. The various literature related to implementation of the revised curriculum have been considered relevant to this study, as they have shown that similar works have been done elsewhere which relate to the current study, thereby providing justification for its undertaking. In the next chapter, the methodology that was employed in this study has been presented.

CHAPTER THREE: METHODOLOGY

3.1 Overview

In the previous chapter, the researcher reviewed literature related to the study. In this chapter, the researcher described the methodology of the study which include the research design, study site, target population, sample size, sampling techniques, data collection instruments, trustworthiness, data collection procedure and analysis, as well as ethical considerations.

3.2 Research Design

A research design is defined as a plan used to study a problem or questions (Hines & Valiant, 2000). In the same line, Orlando (2003) defined a research design as the scheme, outline or plan that is used to generate answers to research problems. A clearer definition has been given by Msabila and Nalaila (2013:27) that, “a research design is a plan on how a study will be conducted or a detailed outline on how an investigation will take place.” Further, Chiyongo (2010) described a research design as a programme guiding the researcher in the collection, analyzing and interpretation of the participants’ views concerning the topic under study. In order to fulfill the objectives of the study, a qualitative approach was employed to investigate the effectiveness of the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education. Kirk and Miller (1986) noted that a qualitative research is a particular tradition in social sciences, which depends on “watching people in their own territory”. Having adopted a qualitative approach means that the researcher interacted with the participants in their natural setting and this allowed the researcher to observe and make personal conclusions on hidden feelings and emotions of the participants.

The qualitative enabled participants to describe their experiences concerning the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education. It enabled the researcher to have a face to face situation of data collection by interacting with the participants in their natural setting (Chiyongo, 2010). It was hoped that the participants would share with the researcher their true feelings and attitudes about the implementation of the said curriculum. The qualitative methods deal principally with verbal data which helped the researcher in understanding social phenomenon from the participants’

perspectives, thereby developing a deeper understanding of the phenomenon under investigation, as it allowed the researcher to probe further in order to get more insight of the problem.

Therefore, a phenomenological research design of the qualitative methods was specifically adopted for this study as it allows for a detailed and intensive analysis of the nature and complexity of the subject matter (Bryan, et al, 2013). Kasonde-Ng'andu (2014) observed that phenomenological research describes the participants' perception of the subjective reality of an event or phenomenon as perceived by the participants. Its goal according to Walter (2000) is to describe a 'lived experience' of a phenomenon. This study focused on the effectiveness of the implementation of the 2013 Revised Secondary School Teacher Education Curriculum, which required participants who have had an experience with the implementation of the revised secondary teacher education curricula. The perceptions of the experienced experts, therefore, helped the researcher to analyze the effectiveness of the implementation process of the said curriculum within its natural setting.

3.3 Target Population

The target population in this study was the Directorate Teacher Education and Specialised Services (TESS), the Principal, Heads of Department, Lecturers and Students at Mufulira College of Education. White (2003) defined a population as the universe of units from which the sample is to be selected, while Msabila and Nalaila (2013) viewed it as a complete set of elements (persons or objects) that possess some common characteristic defined by the sampling criteria established by the researcher.

3.4 Sample Size

A sample size is an element that is a smaller group or representation of the target population, which is selected for inclusion in a study (Schulz, 2002). Bless and Achola (1988) defined a sample size as the subset of the whole population which is being investigated by a researcher and whose characteristics may be generalized to the entire population. This research had a sample size of 40 participants, and these include 1 College Principal, 6 Heads of Department (one from each subject area), 16 Lecturers (at least two from each subject area) and 15 Students (at least two from each subject area) and 2 officers from TESS at the Ministry of General Education

(MoGE). This sample size is justified by researchers such as Patton (1990:184) who noted that, “There are no rules for sample size in qualitative inquiry”. The most important aspect in qualitative research is saturation which is a point where all the themes and categories have saturated and new data generated (Morse, 2000).

3.5 Sampling Techniques

Sampling is defined as “a process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group” (Kombo & Tromp 2006: 77). In this study, purposive sampling was employed. This is a non-probability sampling technique where selection of individuals for the sample does not give the entire individual in the population equal chances of being selected. Purposive technique involves handpicking of individuals from the population on the authority’s or the researcher’s judgment or knowledge (Msabila & Nalaila 2013).

Expert and heterogeneous purposive sampling was used to select participants because the researcher was aware of the required characteristic of respondents to provide meaningful insights on the topic by virtue of their knowledge and experience. Bless and Achola (1988) stated that “purposive sampling method is based on the judgment of the researcher regarding the characteristics of a representative sample”. Manion and Morrison (2007) added that in purposive sampling, a researcher uses his/her own judgment to handpick the cases to be included in the sample on the basis of their typicality or possession of particular characteristic that have been thought to meet the researcher’s requirements. The researcher specifically used expert purposive sampling to select two key informants from TESS, these are; the Assistant Director, Pre-Service and Principal Education Officer. The College Principal, 6 Heads of Department and 16 Lecturers (at least 2) from each department at Mufulira College of Education, because their expertise was required in gaining knowledge from their experiences that would provide information on the topic under study.

On the other hand, heterogeneous purposive sampling was used to select 15 students (2) from the 8 different teaching courses and of different streams from Mufulira College of Education. The teaching courses included: Agriculture Science Education, Computer Studies, Design and Technology, Home Economics and Hospitality, Physical Education with Art/ Music,

Mathematics and Science. Heterogeneous sampling involves capturing a wide range of perspectives relating to the object the researcher is interested in studying. The variations in perspectives may range from typical to extreme conditions in nature (Henry, 1990). This sampling technique was specifically chosen to select participants under this category because the study involved participants of different characteristics in nature.

3.6 Description of Data Collection instruments

Research instruments according to Kasonde-Ng'andu (2014) are the tools that the researcher uses in collecting necessary data. In this study, four types of data collection instruments were employed. These were semi-structured interview guides, observation checklist, focus group discussion guide and content analysis guide. Semi-structured interview guides, observation checklist and focus group discussion guide were used as primary data collection instruments, while secondary data was obtained using content analysis guide.

3.6.1 Semi-structured interview guide

Semi-structured interviews are non-standardized and are frequently used in qualitative studies to answer research questions in detail. David and Sutton (2004) noted that the researcher would have a list of key themes, issues, and questions to be covered. In this type of interview, the order of the questions can be changed depending on the direction of the interview and additional questions can be asked (Corbetta, 2003). Taylor (2008) argued that the advantage of the semi-structured interview, is that, it allows the interviewer generate new questions during the interview because of what the interviewee says, which gives an in-depth understanding of the phenomenon. In this study, the researcher used five interview schedules to collect information from the Assistant Director Pre-service and Principal Education Officer at TESS, Mufulira College of Education Principal and Head of Departments, Lecturers and Students.

3.6.1.1 Semi-structured Interview Guide for the Assistant Director Teacher Education (Pre-service) and Principal Education Officer at TESS

The semi-structured interview guide was used to conduct interviews with the Assistant Director Pre-service and Principal Education Officer at TESS to collect information on preparation of lecturers for the implementation of the 2013 Revised Secondary School Teacher Education

Curriculum, strategies, challenges and suggestions for addressing the established challenges, in order to effectively implement the revised curriculum.

3.6.1.2 Interview Guide for the College Principal and Heads of Department

Interviews were conducted with the College Principal and Heads of Department from each subject area to collect information on the preparation of lecturers, the availability of appropriate teaching and learning resources and challenges for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum, as well as their views on how to effectively implement the revised teacher education curriculum.

3.6.1.3 Semi-structured Interview Guide for Lecturers

Another semi-structured interview guide was used to collect information from lecturers at Mufulira College of Education. The interview was conducted on how lecturers were prepared for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum, availability of facilities and equipment, and teaching and learning materials, strategies adopted, successes and challenges encountered in implementing the revised curriculum, as well as their views on how to effectively implement the revised secondary teacher education curriculum.

3.6.2 Focus Group Discussion Guide for Students

Focus group discussion involves interacting with a special group of research participants who share certain characteristics relevant to the study. Persons of the same social status who have the same level of understanding and experience are selected. However, thorough planning and careful facilitation must be undertaken in order to avoid some members of the group dominating other group members during an interview session so as to encourage equal participation from all group members (Patton, 2000 & Mulenga, 2015). In this study, a focus group discussion guide was used to collect information from students on how they had benefited from the 2013 Revised Secondary School Teacher Education Curriculum and their views on the availability of facilities and teaching and learning materials as well as their views on how best a revised secondary teacher education curriculum could be implemented. This instrument was used because it would have not been possible to interview each participant individually looking at the number that was involved under this category.

3.6.3 Observation checklist

Data was also collected through observation. According to Clayton (2005), an observation is defined as a systematic recording of observable phenomenon in a natural setting. Creswell (2003) added that observation is when the researcher takes field notes as she or he observes the behaviour and activities of individuals at the research site. This technique was used in this study in order to generate information on the implementation of the 2013 Revised Curriculum in terms of availability of physical facilities, equipment and materials at the college. To achieve this, the researcher used a checklist to observe the physical facilities and equipment at college while taking notes at the same time. The 2013 Revised Secondary School Teacher Education Curriculum, being a more practical oriented curriculum, there was need for the availability of not only lecture rooms, but also special laboratories for teaching science, workshops for practical subjects, and physical education facilities, as well as equipment and materials required to facilitate effective implementation of the revised curriculum.

3.6.4 Document Analysis Guide

Document or content analysis is defined by Krippendorff (2004) as the systematic reading of texts, images and symbolic matter not necessarily from an author's or user's perspective. However, document analysis is distinguished from other kinds of social science research, as it does not require collecting data from people, but studying recorded information in texts, media or physical items. In this study, the data collected from document analysis provided the main source of the background information and it provided useful contemporary information to the study (Creswell, 2003). The analyzed documents include the national policy on education, 'Educating our Future', the 2013 Zambia Education Curriculum Framework (ZECF) and Mufulira College of Education profile.

In addition, the Secondary School Teacher Education Curriculum Framework, Syllabi, course outlines, Teachers' Curriculum Implementation Guide (TCIG) and Assessment Module for Teacher Education, were also analysed to help the researcher verify information solicited through interviews, focus group discussion and observation on effective implementation of the 2013 Revised Secondary Teacher Education Curriculum at MUCE.

3.7 Trustworthiness

In qualitative research, credibility, dependability, transferability, confirmability and authenticity are used to describe what characterizes the aspects of trustworthiness of data (Patton, 1990; Polit & Hungler, 1999 and Long & Johnson, 2000). Since in qualitative studies researchers do not use instruments with established metrics to determine validity and reliability, trustworthiness is used to establish it (Streubert and Carpenter, 1999). Trustworthiness in this study was achieved through triangulation. Triangulation is very important in ensuring confirmability of results (Chilufya, 2014:52).

In this case, the researcher used different sources of data and employed various methods or techniques in data collection and analysis. Triangulation was also used to enhance credibility and increase the depth and breadth of the findings, thus emphasizing comprehensiveness as multiple sources of data were triangulated and different sources of data were utilized, giving a clear and distinctive description of the research context, selection and characteristics of respondents, data collection, as well as the procedure for data analysis. Dependability was maintained by making sure that the results were fully explained and every detailed to it had been given.

In addition, Transferability was demonstrated by using detailed description to show that this study's findings can be applicable to other similar contexts, situations or circumstances. Confirmability was achieved by ensuring that the study's findings were based on participants' responses and not biased or on the researcher's own personal motivation when interpreting what the participants said, and to establish confirmability, the researcher used member checking.

Lastly, authenticity is an important issue in qualitative research, whereby researchers seek reassurance that both the conduct and evaluation of research are genuine and credible (Given, 2008). As such, in this study, the researcher focused on describing the participants' experiences faithfully and fairly. Data collection procedure is described in the next section.

3.8 Data Collection procedures

According to Creswell (2007), data collection procedures entails setting the boundaries for the study and collection of data as well as the steps taken in gathering information to answer the research questions. In this study, the following data collection procedure was followed: first and

foremost, an ethical clearance was obtained by the researcher from the University of Zambia, Directorate of Research and Graduate Studies (DRGS). Permission to conduct this study was also sought from the Principal for MUCE.

The researcher personally interviewed the Assistant Director Pre-Service and Principal Education officer at TESS, the college Principal, HoDs, lecturers and students at MUCE to collect information that answered the research questions using interview guides and focus group discussion guide. Further, observation of the physical facilities, equipment and materials; the human interaction and programme of learning using an observation guide and check list. In the next section, the researcher describes the procedure of how the collected data was analyzed.

3.9 Data Analysis

The process of analyzing and thinking about data is key to understanding what the data does and does not contain. According to Miles and Huberman (1994), data analysis in the qualitative model, comprising three levels of activities, which are: data reduction, data display and conclusion drawing or verification. In the process of analyzing qualitative data Ghosh (2013) stated that there is no single methodology which is universally applicable for the purpose of analysis of qualitative data, what determines the methodology are the research objectives. The researcher, therefore, used different methodologies of data analysis and these are thematic and content analysis. In an effort to make sense of the data collected in terms of participants' explanations or definitions of the situation, noting patterns, themes, categories and regularities as explained by Cohen, Manion and Morrison (2007), data was organized, accounted for and explained according to participants' perceptions, values, feelings and experiences in an attempt to construct their understanding of the phenomenon.

At the initial stage of data collection, the researcher began to familiarize with the information collected by listening to the interview recordings over and over or repeatedly. The data was then summarized according to what was heard in terms of common words, phrases, themes or patterns which helped the researcher in understanding and interpretation of the data. The analysed data was finally interpreted by identifying the emerging patterns, concepts and explanations from participants in relation to the theory that was adopted for this study, the reviewed related

literature in chapter 2 and the newly found knowledge. The ethical considerations are explained in the next section.

3.10 Ethical Consideration

Ethics are defined as rules for distinguishing between right and wrong. Some of the reasons for adhering to ethical norms in research are promotion of the aims of research as well as the values that are essential to collaborative work, such as mutual respect, trust and accountability (Resnik, 2011). In addition, Mulenga (2015) explained that in research, ethics are concerned with ensuring that the interests and well-being of research participants, as well as their rights to anonymity should not be violated as a result of their involvement in the study.

Therefore, in this study, the researcher tried to observe and uphold critical research principles. First, the researcher obtained an ethical clearance from the Directorate of Research and Graduate Studies (DRGS) through the Assistant Dean (Post Graduate) School of Education before commencing the study. Permission was also sought from Mufulira College of Education Principal and Heads of Department since the study involved interviewing teacher educators and students during working hours. Further, written consent was obtained from all those who agreed to participate in this study. These include the Assistant Director Pre-Service and Principal Education Officer at TESS, the College Principal, Heads of Departments, lecturers and students at Mufulira College of Education. The rights of each individual participant to privacy and confidentiality were highly respected by ensuring that the participants' identity and data collected from them, treated with the highest level of confidentiality. The researcher also maintained good working relationship with research participants by not enticing them into giving information by means of any payment or gift.

3.10.1 Informed Consent from Research Participants

Informed consent is when the research participant is made aware of what the study is all about by the researcher (Cohen, et al. 2007). The participants were briefed about the study and made aware that their participation in the study was highly valued, while reassuring them that their names would remain anonymous and their contributions treated with utmost confidentiality with no risk involved as a result of their participation in the study. However, their role was voluntary

and they were at liberty to withdraw if they felt uneasy in the process of the study. It is for this reason that the findings of this study will be made available to the research participants on request.

3.10.2 Confidentiality Assurance

Assurance of confidentiality refers to the researcher's ability to ensure that the research participants are not easily identified in a research project in order to avoid any embarrassment to the participants in case of controversial results (Mulenga, 2015). Therefore, in this study the researcher ensured that the responses from the participants were treated with utmost confidentiality and their rights to privacy and autonomy are highly respected. This was achieved by concealing the participants' real names and instead pseudo names were used.

3.10.3 Research Design Validity

Another ethical consideration in research is having a valid research design. This should be taken into consideration in order to avoid wastage of resources in terms of time on the part of both the researcher and participants as well as wastage of money on the part of the researcher, because use of poorly planned research design might not yield the intended results (Mulenga, 2015). In this study, a phenomenological research design was adopted after the researcher reviewed literature and consulted other researchers on effective curriculum implementation, which helped in generating answers to the research questions. Phenomenological research design allowed the researcher to make a detailed and intensive analysis of the subject matter which is a lived experience in this case, as the study focused on investigating the effectiveness of a programme (Walter, 2000)

3.10.4 Reciprocity

In research, the participant's voluntary involvement in the study and their generosity can be reciprocated by favours or payments in cash or kind from the researcher. This may also help to build a mutual understanding between the researcher and participants and considered as a way of honouring the participant's contribution to the study by the researcher (Mulenga, 2015). However, the researcher in this study, avoided payment of any kind to the participants, as much as possible, as this could have interfered with the participants' responses, thereby affecting the

quality of data collected from them in the sense that, the research participants may give favourable responses to the researcher in an effort to just impress him or her. In this study, the researcher made sure that reciprocity did not influence the participants' responses in any way by not using any means of payment to the research participants in order to collect information from them. However, the findings of this study will be made available to the participants on request as a way of appreciating their contributions to the study.

3.11 Summary

In this chapter, the research methodology of the proposed study has been discussed and as indicated, the researcher intended to use the qualitative phenomenological research design. The researcher has also discussed the research site, target population, sample size, sampling techniques, data collection instruments and procedure, trustworthiness, data analysis and ethical considerations. In the next chapter, the focus will be on the results of the study.

CHAPTER FOUR: PRESENTATION OF FINDINGS

4.1 Overview

In the previous chapter, the researcher described the qualitative methodology which was used to obtain the results presented their in. The results have been presented in themes that emerged from the data collected through observation, interviews, focus group discussions and document analysis. A description of the sample from which the data was collected has also been given in this chapter.

The research questions were as follows:

1. How were the lecturers prepared for effective implementation of the 2013 Revised Secondary School Teacher Education Curriculum at MUCE?
2. What suitable facilities and equipment were available for effective implementation of the 2013 Revised Secondary School Teacher Education Curriculum at MUCE?
3. What were the challenges encountered by teacher educators in implementing the 2013 Revised Secondary School Teacher Education Curriculum at MUCE?

4.2 Demographics of Respondents

In this section, demographics of respondents who took part in the study have been presented. A total of 40 participants were interviewed as summarized in Table 4.1.

Table 1 *Frequency and percentage distribution of participants*

Characteristic	f	%
<u>Gender</u>		
Male	27	67.5
Female	13	32.5
<u>Type of participant</u>		
TESS Officials	2	5
College Principal	1	2.5
Heads of Department	6	15
Lecturers	16	40
Students	15	37.5

Table 1 shows that most of the participants were males (67.5%) and (32.5%) females with a representation of 40% lecturers, 37.5% students, 15% heads of departments, 5.0 % Officials from Teacher Education and Specialised Services (TESS) and 2.5% College Principal.

4.3 Findings of the Study

In order to obtain the results presented in this section, the researcher followed a qualitative research design, specifically the phenomenological design. Most importantly, it should be noted here that the interview schedules had similar questions in line with the research objectives. The researcher also identified themes in relation to research objectives, as well as emerging themes from the opinions of the research participants. In the description of the responses from participants, the actual words were used as much as possible, unless where necessary, some phrases have been paraphrased. However, some ideas were similar hence, could fall into more than one category.

4.4 Lecturers' Preparation for the Implementation of the Revised Curriculum at MUCE

Research question (1) sought information to establish how lecturers were prepared for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum. Information was gotten from the Director Pre-Service and Principal Education Officer from TESS, Mufulira College of Education principal, heads of department and lecturers.

4.4.1 Orientation Programmes

Teacher preparation in the implementation of the revised curriculum is critical and as a way of preparing lecturers for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum, lecturers were oriented through national workshops and briefings. The data obtained through interviews with the Principal Education Officer (refer to appendix II) Head of Departments (refer to appendix V) and lecturers (refer to appendix VI), strongly suggested that preparation of lecturers was inadequate. For example, when asked about how the lecturers were prepared for the implementation of the teacher education curriculum in question the Principal Education Officer explained that;

A national orientation on the changes to align the college curriculum to the secondary school curriculum was done at once through a workshop or seminar where lecturers were invited from both private and public colleges.

The researcher asked a follow up question on why more orientation or in-service programmes to prepare lecturers for the implementation of the revised teacher education could not be adequately carried out. In response the Principal education officer explained that;

There was need for more in-service training for lecturers in order to prepare them for the implementation of the 2013 revised curriculum, but due to lack of enough funding from either government or private sector, it was impossible.

Some lecturers explained that very few lecturers took part in the national orientation programme. When asked to comment on lecturers' preparation for the implementation of the revised curriculum, one Head of Department pointed out that;

Only a small fraction of lecturers participated in the orientation and they only came to share with the rest in a briefing.

In the same vain, one of the lecturers from Mathematics department explained that;

The orientation was not enough, as it only took a few days and there was no much of professional development prior to the implementation of the revised curriculum here at this college.

Some participants noted that not much was done in terms of lecturer preparation for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum due to time factor as it was a very short programme. One lecturer lamented and said that;

I would not say that we were adequately prepared because it seemed whoever the planners were, they were working against time and there was no much consultation from the lecturers because everything was done in a hurry.

When asked to comment on how lecturers were prepared for the implementation of the revised curriculum the college Principal explained that;

I will not be able to explain fully what happened at this college when the revised curriculum was introduced because I was not yet here then, but at another college. So I presume that lecturers could have been taken for workshops and

CDC must have come to train them at the college. Since CDC personnel were the ones championing and reinforcing the implementation process national wide.

Furthermore, some participants attributed inadequate preparation of lecturers to hurried implementation processes of education changes in Zambia. One lecturer from the education department argued that;

As a nation we have a problem because our education curriculum development process is usually done in a hurry when changes are being done and the 2013 revised secondary school teacher education curriculum is not an exception. The stakeholders are not fully involved from its inception and it tends to become a curriculum that is imposed on lecturers to teach it. Since the lecturers are hardly consulted during the revision of the teacher education curriculum.

4.4.2 Synergies between the revised Teacher Education Curriculum and Secondary School Curriculum

The synergies that exist between the revised teacher education curriculum and the secondary school curriculum were explained. In order to understand the connection between the secondary school curriculum and the revised secondary school teacher education curriculum, it was worthy finding out if lecturers understood the philosophy behind its revision. It was revealed that the curricula for secondary school teacher education and secondary school have been aligned and the student teachers are able to experience what they are learning in college and what they will be teaching in schools while they are still in college. When asked why the 2013 Secondary School Teacher Education Curriculum was revised, the College Principal elaborated that;

When you look at the revised teacher education curriculum before 2013, it was more centred on the college and not linked to secondary school curriculum. So what was happening in secondary schools and what was happening in colleges were not in sync and because of that, it necessitated government to look at the curriculum and try to change it.

Some participants explained that due to worldwide technological advancements, student teachers needed to be equipped with skills in that line so that they are able to teach effectively in schools. One lecturer added that;

The changes in the world trend, we had the issues of technology coming in and people have now gone ICT, but our former curriculum did not embrace that. In addition, if we look at what was happening previously, the issues of entrepreneurship, we are not training students only for employment, but also to train them so that they can go and sustain their own livelihoods and they should also go and teach the skills of survival to the learners.

Further, another lecturer said that;

The government saw that what was being done in colleges of education was not what was intended. The teacher education curriculum was not in line with the school curriculum in that teacher education and school curricular were not matching and so when the teachers graduated, they were finding it difficult to teach in schools.

Some participants noted that the 2013 Revised Secondary School Teacher Education Curriculum more is centred on sustainability with regard to practical skills. So that the learners should benefit in terms of skills development for living so much that what they are learning is of much relevance to their lives. One Head of Department pointed out that;

The 2013 Secondary School Teacher Education Curriculum was revised in order to emphasize on more entrepreneurship orientation for self-sustenance.

One Lecturer added that;

To emphasize the shift from teacher centred approach to a more learner centered approach so that the learners can be able to develop lifelong practical skills. For example, in art and design students learn a variety of skills.

The 2013 Revised Secondary School Teacher Education Curriculum was revised to strengthen the areas that seemed weaker and not addressed by the previous curricular, as well as to meet the current educational needs of the nation. Another lecturer said that;

The curriculum was revised in order to patch up the grey and weaker areas that needed to be strengthened in order to address those that were not addressed in

the previous curriculum and to look at the current needs of education that the nation was actually going to benefit from.

However, one lecturer argued that;

The revised curriculum was intended to be aligned to the school curriculum, but it is not really the case because it was not well done. The topics are jumbled up and in some cases, you may find that there is only one new topic that has been added or removed from the old syllabus.

4.4.3 Theory to Practice

With the wave of globalization, education has undergone a paradigm shift in thinking, from being theoretical to being practical. The need for integrating theory and practice was explained by various respondents as evidenced in the responses that follow. Probing further on the reason behind the revision of the 2013 secondary school teacher education curriculum, the researcher asked the respondents to give their views on benefits of revising the said curriculum.

One student explained that;

Previously, emphasis was on white collar jobs, but now theory is being put in practice. Whatever we are doing in college is suiting to what we are teaching in school, so that we deliver as teachers in school.

The participants pointed out that practical work needs to be done in order to help the students develop the required skills as prospective teachers. Some participants argued that lack of teaching and learning resources hindered effective implementation of the revised curriculum. In that, for student teachers to acquire practical skills, they need to practice more. The study established that students' inadequate practical skills development was attributed to lack of enough practice due to non-availability of teaching and learning resources. One student said that;

Content is poor because what is obtaining is that too much theory is being taught as compared to practical work. The curriculum in terms of content is there, but the practical part is not there much. The reason is that there are no resources for us to use in order to become as skilled as we would want to be.

The participants explained that the previous curriculum was tailored to prepare students in the classroom to actually get into a platform that had less hands-on way of teaching while the revised curriculum emphasized the concept of capabilities development in the learners through their active participation in learning practical skills so that the learner will develop their ability that really manifests.

One lecturer from the Home Economics Department stated that;

I think the curriculum was revised so that we can improve certain areas that were lagging behind, specifically the vocational pathway which was being neglected. The curriculum was revised so that we can look at the two-tier system and see how it can benefit the learners.

4.4.4 Possible ways of improving the preparation of Lecturers

Through interviews with the Principal Education Officer from TESS (refer to appendix II, question 3), the HoDs (refer to appendix V, question 3) on the possible ways to improve lecturer preparation for the implementation of the revised curriculum, the Principal Education Officer explained that;

A lot of training was needed to equip lecturers with new knowledge in content, but there was no enough funding. Hence, there are difficulties in finding the right personnel to teach some of the newly introduced subject areas such as social studies, research, curriculum studies and assessment etc.

Similarly, when asked the same question, one Head of Department added that;

A lot of training and financial support was needed to support that cause.

To improve the preparation of lecturers for the implementation of the revised curriculum, there was need for more time and resources to be used in continuing professional development of the lecturers, as well as in supporting and improving in-service training of the teaching staff.

4.5 Summary of the results on preparation and readiness of lecturers as regards the implementation of the revised curriculum

The responses from most of respondents indicated that lecturers were not adequately prepared, for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum. Since the national orientation programme only involved very few lecturers and took only a few days. The participants explained that lecturers, who attended the training workshop, were very few. They only came to share what they had learnt with the rest of the staff over tea break and the time was not enough time to enable all the lecturers get well grounded in the new concepts and methodologies for them to be able to implement the revised teacher education curriculum effectively. In the next section, the findings on the availability of facilities and equipment will be presented.

4.6 Availability of Appropriate Facilities and Equipment

In the previous section the researcher presented the findings on lecturers' preparedness for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum and in this section, the researcher presents findings on the availability of appropriate facilities and equipment for the revised curriculum. The availability or non-availability of appropriate facilities and equipment for implementing the revised secondary school teacher education curriculum would in one way or the other have direct effects on its implementation. It was, therefore, cardinal to establish the implication of the availability of facilities and equipment for implementing the said curriculum in different study areas. The following were the findings from the researchers' observation and participants' responses;

4.6.1 Special Laboratories

Laboratories are central to the teaching and learning of science-related subjects. The adequacy of laboratory facilities in learning institutions is inevitable for effective teaching in as far as putting theory into practice is concerned. Actually, laboratories are considered to be the scientists' workshops where many practical activities have to be conducted in order to enhance meaningful teaching and learning processes of science concepts and theories. However, from observation and responses from interviews with the participants, the study revealed that some courses lacked

special laboratories to be used for teaching subjects such as Agriculture science and Home Economics. The Head of Department for Natural Sciences explained that;

Initially, we had only 2 labs in the science department, but the college has built us 2 more though one is still under construction because we are supposed to have specialized labs for Biology, Chemistry, Physics and Agriculture Science which should be well equipped to teach those specialized areas. However, the Agriculture lab is still under construction hopefully by next year, 2019 it will be fully operational.

However, the Home Economics Department was one of the areas that seemed to have been well equipped to meet the demands of effective implementation of the revised curriculum, as most of the equipment and materials were available for quality teaching and learning. When asked to comment on the availability of appropriate facilities and equipment, the Head of Department (H.E) explained that;

The college management has been very supportive and helped us to procure the necessary equipment and materials that are needed.

Contrary to the Head of Department's sentiments, one lecturer from the H.E Department pointed out that;

We need wardrobes for Fashion and Fabrics projects because as per rule, the garment under construction by a student needs to be kept in the wardrobe after learning hours so that it can be continued later in the next periods and not to be taken away from the lab for fear of it being lost or taken to tailors, the reason being that we need to monitor our students' progress.

In the same vein, another lecturer from the same department added that;

We need labs and classrooms to be separated because we are not supposed to be teaching from the labs. Apart from that, we do not have enough office space.

4.6.2 Information and Communication Technology

Information and Communication Technology (ICT) is another area which was introduced in the 2013 Revised Zambian Education Curriculum. ICT has become an effective educational technology which promotes effective teaching and learning processes. Technologies accord students an opportunity to work more productively than it was in the past. However, at the time of this study, there were a number of setbacks in as far as effective teachings and learning of ICT was concerned. Some participants argued that the available computers were not adequate to meet the constant demands of the students. One lecturer pointed out that;

When they introduced this ICT, they only had 3 computers and since everyone was expected to learn ICT, to meet this demand, the college administration had to go into buying of second-hand computers, but these computers are those that are dumped into African countries. Meaning that you use them today and the very next day they would be off and how do you expect the students to come out with the expected outcomes?

In a separate interview, another lecturer from the department of Mathematics argued that some facilities were not meeting the demands of effective implementation of the revised curriculum as they were falling below the standards. He stated that;

Facilities are not meeting the demands of the revised curriculum, but the college management is trying to support us. However, as at now apart from the hard copy books, in this 21st century, learners need to appreciate the idea of using ICT to learn mathematics. Unfortunately, internet access still seems to be a challenge for the students.

4.6.3 Practical Subjects

Physical education is one of the teaching courses where development of practical skills and capabilities is cardinal. Some lecturers mentioned that they were using their own initiative to improvise some of the equipment to help them teach, thereby, making it difficult for them to provide quality teaching. The researcher also observed that some sports fields were still under construction.

The Head of Department for Practical Subjects explained that;

For art and physical education, we have some of the facilities to keep us going, but in music, the facilities are not appropriate because we are using an ordinary room, which we have just improvised and it is not a proper studio so it needs to be renovated. The swimming pool is being rehabilitated and the football and netball fields, volleyball, basketball, and tennis courts are being constructed.

When asked the same question concerning the availability of appropriate facilities and equipment for implementing the revised curriculum. Another lecturer from the Department of practical subjects pointed out that;

In art and design, there is need for use of potter's wheel and kilns for processing ceramic works, but these are not enough and the potter's wheels that are there are not enough. We also need equipment for screen printing. Apart from that, we have one chain saw but it cannot be used inside the lecture room at the moment because the tables that we have are too fragile for heavy duty work.

In the same vein, one student mentioned that;

When it comes to pictorial or designing works, we are able to use the tables available, but for sculptural and ceramics, we need work surfaces that are suitable for heavy duty. However, for now we are using the slab behind the Art room.

It was observed that there was an electric kiln, but it was not functional. Also, there were 4 potter's wheels but 2 were not working. These were not enough for the numbers of students that were on this particular programme. Further, the Head of Department for Practical Subjects added that;

In terms of appropriate facilities, special Art rooms were constructed and materials wise, the college management is really trying to support the section, but for equipment we still need a lot. For example, printing equipment such as

conventional printers for printing burners. We also need kick wheels for ceramic work; even electric ones are needed so that more works can be done within a short period of time. In terms of infrastructure, it is adequate for now.

4.6.4 Special Education

Another lecturer from the department of education argued that though the 2013 Revised Secondary School Teacher Education Curriculum implementation was in effect, the practical part was still not being taught as it should as guided in the TCIG, due to lack of appropriate equipment and materials. He argued that;

I would say that to a large extent, we do not have appropriate facilities and equipment because the mode that we have taken to prepare for inclusive teaching, I think it leaves out one aspect of the actual hands-on way of teaching where students are actually supposed to be grounded in practical skills for them to be able to handle any kind of disability or special education case within the inclusive needs. However, in terms of equipment the ministry has not really helped. So we are struggling to teach effectively.

When probed further on essential equipment and materials that were lacking in the special education section, another lecturer mentioned that;

As a section, we do not have audiometers; brail frames styluses, brail printers, not even brail plain papers for that matter. However, through initiatives we have tried to source one or two of the materials to enhance teaching when the institution could not procure the materials, as an individual you really have to source for them to try to effectively teach. So, if you may be aware, we are still facing that challenge and we are still rehearsing with the administration to see how they can help us source some of these things.

The lecturer further explained that,

In trying to provide quality education in terms of knowledge and skills required to the students, I have gone out of the way in sacrificing my own resources to

purchase some of the equipment and materials to enable me teach some components of the subject.

4.6.5 Teaching and Learning Materials

To assess the availability of appropriate teaching and learning materials, the respondents were asked to generally, comment on the availability of teaching and learning materials for effective implementation of the revised curriculum. One lecturer from the Mathematics Department lamented and said that;

To cope with the revised curriculum is a challenge due to the fact that there are no resources in terms of teaching and learning materials.

In line with the comments made by the lecturer from the Mathematics department, one Head of Department explained that;

Materials come in 2 main categories; those bought from shops are not readily available and the improvised ones require a lot of time to organise because it involves research, collection and testing, but time is not enough to do that and so, it is challenging.

One lecturer from education department further explained that some essential resources were not available to effectively implement the revised curriculum. He argued that;

In terms of resources, we do not have enough quality books to teach special education effectively and these are areas that are not well supported in Zambia as a whole. Some subjects in other departments, in terms of books, they are well supported whereby they can even have the books distributed or donated to them, but with us here, no.

Shedding more light on the availability of appropriate teaching and learning materials, another lecturer from the education subjects department lamented and said that;

Major materials for teaching entrepreneurship are not really there. Apart from that, students complain in terms of non-availability of reference

books in this study area and they mostly depend on what I can provide for them as a lecturer.

Some participants further explained that there were insufficient quality reference books to meet the demands of the students' population. One lecturer from the Department of Practical Subjects lamented and said that;

We have very few good books. So, they are insufficient and not in good supply for the number of students we have. For example, books of 5 different titles, you will find that there are only 3 or 4 copies of each and these cannot go around because the students are many.

When probed further on how the challenge of inadequate books was being tackled in the Department, some lecturers explained that they have resorted to preparation of modules from which both regular and distance students have benefited. One lecturer added that;

The modules meant for distance students are really helping when teaching our regular students as well. By nature, students interact. So, the regular students are able to access the modules.

Similarly, one student lamented;

Curriculum books are not enough. Biomechanics, anatomy and physiology books are not there. So we are finding it difficult to learn or study.

It was also observed that there were very few quality books in the college library to cater for a large number of students at once. Most of the books were very old and books for the newly introduced teaching courses such as Entrepreneurship, Special Education, Curriculum Studies and Assessment, Technology and Computer Studies, were very few.

4.6 Summary of the results on availability of appropriate facilities and equipment for effective implementation of the revised curriculum

The purpose of this section was to present the results to answer question (2) which sought to establish the availability of appropriate facilities and equipment for effective implementation of the 2013 Revised Secondary School Teacher Education Curriculum at MUCE. Most of the respondents said that some facilities were not meeting the demands of the revised curriculum. Though the college administration had tried to support every department towards effective implementation of the revised curriculum, there was need for more to be done in terms of procurement of equipment and materials. For example, in Home Management, in the Department of Home Economics, it was observed that there were no wardrobes for storage of students' projects. In Art and Design, there were no appropriate working surfaces for heavy-duty practical skills such as sculpture and ceramics; no electric kilns and screen printers, which made it difficult for the lecturers to effectively implement the revised curriculum as well as for the students to acquire the intended practical skills.

4.7 Challenges in implementing the 2013 Revised Secondary School Teacher Education Curriculum

Apart from the challenges that were highlighted in the previous sections such as lack of thorough preparation of lecturers for the implementation of the revised curriculum; non-availability of appropriate facilities and equipment, as well as lack of enough quality books, and other materials, the participants mentioned other challenges that lecturers encountered in implementing the revised curriculum in different teaching courses. The responses from some participants indicated that non-participation of some lecturers in the orientation programme resulted into resistant and Luke-warm attitudes of some lecturers. Apart from that, curriculum overload was also another challenge that negatively affected the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at MUCE. Participants mentioned many others challenges that hindered the effective implementation of the revised teacher education curriculum at MUCE. As explained in the sections that follow;

4.7.1 Lack of enough qualified staff

Teachers are generally seen as the pillars of the education system. Where there is inefficient and poor teaching in some subjects in the school curriculum, the blame has to be borne by some teachers. According to responses from some participants, the study revealed that there was a challenge of lack of enough qualified staff in some study areas such as entrepreneurship, curriculum and assessment, to mention but a few. The Head of Department for Natural Sciences stated that;

For me the main challenge I see apart from equipment, we are still understaffed so much that one lecturer may teach 4 to 5 classes and then you need to mark assessment items for all students in the classes. So even when you want to give as much practical work as possible, you fail because we are supposed to give practical work every week and materials may be there, but if I give a lot of assessment items, I will not mark all of them in time. Therefore, it is challenging and that is the major problem in this Department.

Lack of enough qualified staff is a hindrance in covering the course outlines and indeed a hindrance to the effective implementation of any curriculum. For example, it was revealed that in entrepreneurship there was only one qualified lecturer to handle 115 third year regular students plus 78 distance students in the college. The Head of Department for Education Subjects confirmed this by pointed out that;

The other area is the new course; entrepreneurship, there is only one qualified member of staff to teach both the internal and distance students and this is a compulsory course for all 3rd year students.

This was confirmed by one lecturer who explained that;

In entrepreneurship as a lecturer, I'm the only one against the whole student population, but in terms of teaching, I do it with joy because it is my passion. Lecture rooms are there to accommodate a large number of students at a time. However, when it comes to marking assessment items, it is really hectic for me.

Some respondents attributed another challenge to effective implementation of the revised curriculum to lack of appropriate qualifications by some lecturers. As earlier mentioned, some lecturers were made to teach courses that were not related to what they studied because of lack of human resource in those areas of study. One student stated that;

The curriculum has just been revised now and there is a possibility of some lecturers being under qualified. So, there is need to have more trained staff who should be able to teach us more practical work so that as student teachers, we can develop particular skills to help us teach well in schools after we graduate from here.

Another lecturer from the Department of Practical Subjects emphasized that;

The biggest challenge in this Department has to do with Practical Subjects' staff that is not qualified. For diploma programmes, we have those with first degrees but the degree programme has no qualified staff.

Apart from lack of qualified teaching staff to handle students at degree level, the Head of Department for Natural Sciences mentioned that the department lacked other supporting staff such as Laboratory Assistants to help in preparing for practical science lessons. He said that;

We only have 2 lab assistants and I hope we can have more of those. Maybe 2 more so that one may be in each specialized lab that is for biology, physics, Agriculture science and chemistry so that we reduce on the challenge that we face as lecturers we are forced to actually do certain things in the labs ourselves which are supposed to be done by lab assistants.

4.7.2 Attitude of Staff

The respondents identified another challenge that negatively affected the implementation of the 2013 Revised Secondary School Teacher Education Curriculum, as negative attitude by some lecturers. Since very few lecturers were involved in the national orientation programme for the implementation of the 2013 Revised Curriculum, some lecturers did not easily accept the changes that came with it. The participants said that this had negative impact on the

implementation of the revised curriculum in some departments. One head of department said that;

The lecturers were aware of the 2013 Revised Secondary School Teacher Education Curriculum because it was advice from government that we were moving from one point to another, but whenever you begin something, there is always some resistance from certain individuals because maybe they have not perceived it correctly. For example, the topic, fractions in a college used to begin at a higher level, but because of the changes in the curriculum, we had to begin at a lower level which is secondary school level. Some lecturers did not accept that and they questioned why they were to start teaching topics for secondary school level in a college.

Some participants attributed lack of understanding of the philosophy that guided the revision of the 2013 secondary school teacher education curriculum by some lecturers to their non-participatory in its implementation orientation programmes. Additionally, another lecturer from the Special Education section pointed out that;

The main challenge that we faced when the revised curriculum was introduced was the attitudes of some staff. Some members of staff tend to feel that special education is for a specific group of lecturers and that it should be in specific institutions and not across board. Therefore, this negative attitude and perception is what even makes the materials not to come forth because when we prepare the budget of what we require and give the people responsible, they do not seem to pay much attention to our request.

In a separate interview, when asked to comment on the challenges in implementing the 2013 Revised Secondary School Teacher Education Curriculum at MUCE, the College Principal explained that;

The biggest challenge we have is the attitude. In the sense that, if someone was used to one way of handling the courses that are offered, they would want to have the same happening in the other newly introduced courses. So that is briefly the

problem with the older lecturers who have been in the college for long and are used to only one way of doing things.

4.7.3 Syllabus Coverage

Some lecturers explained that they had difficulties in finishing the course outlines and they attributed this challenge to lack of enough time to cover the syllabus due to curriculum overload. One Head of Department argued that;

When we met in Kabwe and developed these course outlines basing on a 3-year period, we did not have in mind how we were going to teach the syllabus which was meant to be taught for 3 years in one-year period. We did not even have the idea of shedding off some courses after teaching for a year.

When asked to give their opinion on how to address the curriculum overload challenge, one lecturer from the natural science department pointed out that;

ECZ came in and said that a course should be shed off after a year. Now the problem that we have had in education is in trying to teach the syllabus meant for 3 years to be taught in 1 year. The main challenges are in handling the 2nd and 3rd year students who are supposed to go for Teaching Practice in term 2 of their second and third year of study. So course coverage is difficult to accomplish.

Another lecturer from Practical Subjects emphasized that;

For students to develop skills properly they need more time to practice, but it is not workable due to curriculum overload.

Some participants argued that besides the need for enough qualified staff and more time for course coverage, there is need for availability of teaching and learning materials if any curriculum is to be effectively, implemented.

4.8 Suggestions on how to address the challenges

This section provides information obtained through interviews with the College Principal, Head of Departments, Lecturers and Students. According to the responses from participants, it was evident that lecturers encountered a number of challenges encountered in the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at MUCE. Therefore, it was of great important to elicit information from participants on their views on how the challenges to effective implementation of the revised curriculum could be addressed. The participants argued that there was need to address the challenges that were being faced by implementers. When asked about how the challenges could be addressed. The Principal suggested that there was need to buy more books for courses that lacked such, and said that;

Materials such as books for courses like entrepreneurship need to start from the scratch since it is a new course. However, we are encouraging our students to make use of the internet to access information as it is the main tool we have. Internet is available and all computers in the lab are connected. There is also a library though most of the books are old, but we have a few good ones there. We hope that we can improve and buy more books, especially for the library.

One lecturer from Mathematics Department noted that;

Being the 21st Century, more needs to be done on how to use ICT to effectively teach. For example, in Mathematics learners need to be educated on how to access the online materials and how to use them effectively.

In addition, some participants argued that if secondary schools were being provided with the necessary equipment and materials by the Ministry of General Education, the Colleges of Education should be provided for as well in order to effectively implement the revised secondary school teacher education curriculum. One Head of Department said that;

Material wise, what is happening in secondary schools should also happen here. Colleges of Education should also be supplied with teaching and learning materials so that the student teachers can get acquainted with the same books they will be using to teach in schools. However, for other materials to be used for

practical teaching and learning activities, we need to make use of more of the local materials.

One student added that;

To address the challenge such as book shortage and equipment, let the college administration procure them before enrolling students and they should consider the numbers to avoid over enrolments.

In order to deal with the problem of inadequate qualified teaching staff, there was need for lecturer to advance in their studies. One Head of Department also suggested that;

There is need for improvement in terms of staff development, professionally. Therefore, lecturers should be encouraged to go for further studies in order to deal with the issue of under qualified staff.

In the same vein, another lecturer from the Department of Education suggested that there was need for more qualified teaching staff in most teaching courses such as Curriculum and Assessment, Special Education, Entrepreneurship, ICT, to mention but just a few.

There is need for more qualified teaching staff in certain areas of study such as Curriculum and Assessment, Information and Communication Technology.

Some participants suggested that the 2013 Revised Secondary School Teacher Education Curriculum needed to be adapted more to the local situation in order to meet the educational needs of the Zambian learner. Another lecturer suggested that;

There was need to review the 2013 Revised Secondary School Teacher Education Curriculum and make it more adaptable and applicable to the local situation for easier implementation.

Further, some participants suggested that the integration of some related subjects into learning areas made the syllabus bulky and so there was need to adjust further in order to make it possible for the coverage of the syllabuses to manageable within the stipulated period. The participants mentioned that content overload could have been avoided if the lecturers were fully involved in the revision of the teacher education curriculum. One lecturer argued that;

In the formulation of the syllabus, lecturers should be fully involved as experts on the ground in order to avoid content overload. For example, the 2013 Secondary School Teacher Education syllabus has some topics that are just jumbled up and bulky. Little was done to adjust the topics to suit the allocated time for coverage. There is need to improve on that.

One Head of Department added that;

As for curriculum overload, what we need to do is maybe allocate per class more than one teacher of mathematics, for instance. So there is need to increase the number of staff to meet the demand of the students so that the syllabus can be covered within the expected period of time.

To improve the quality of education there is need for effective implementation of the revised curriculum. It was suggested that collaboration between lecturers was cardinal in sharpening each other's skills for effective implementation of the curriculum. Another Head of Department emphasized that;

If the curriculum is to be effectively implemented, there was need for members of staff to collaborate so as to help sharpen one another in terms of skills development. As at now, there isn't much depth in terms of collaboration among members of staff.

4.10 Summary

In this chapter, the research findings of this study have been presented based on the themes that emerged from the research questions and research objectives. Based on the responses to the three research questions, the findings strongly suggested that the preparation of lecturers for the implementation of the revised curriculum was inadequate and this caused a number of challenges in terms of its effective implementation. Further, the study established that there were no appropriate facilities, equipment and materials, especially in the newly introduced study areas. Furthermore, the findings of this study revealed a number of challenges encountered by lecturers in the implementation of the 2013 Revised Secondary School Teacher Education Curriculum. The respondents indicated that effective implementation of the revised curriculum could only be achieved if the challenges were addressed. In the next chapter, discussions of the findings of this study are presented.

CHAPTER FIVE: DISCUSSION

5.1 Overview

The researcher in the previous chapter presented the findings of the study, which investigated the effectiveness of the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education. In this chapter, the research findings are discussed following the themes in relation to literature presented in chapter two, research objectives and the theoretical framework.

5.2 Lecturers' preparedness as regards the Implementation of the Revised Curriculum at MUCE

A number of themes as indicated in chapter 4.2 emerged from this study, which revealed how the teacher educators were prepared to implement the 2013 Revised Secondary School Teacher Education Curriculum. The main themes that emerged are discussed in the preceding subsections. In trying to establish how adequately the lecturers were prepared for the implementation of the revised curriculum, it was cardinal to understand the philosophy behind the revision of the 2013 Secondary School Teacher Education Curriculum in Zambia.

5.2.1 The Philosophy behind the 2013 Secondary School Teacher Education Curriculum Change

Every education curriculum is revised in order to address the many challenges that the education system may be facing. In order to understand the participants' understanding of the idea behind the revision of the 2013 secondary school teacher education curriculum in Zambia, the researcher asked the Principal Education Officer, the College Principal, Head of Departments, Lecturers and Students about what was the philosophy guiding the revision of the said curriculum. The findings indicated that the 2013 Secondary School Teacher education was revised to improve the weak areas in the previous curriculum, such as poor linkages of the college curriculum with the secondary school curriculum, poor teaching of assessments in colleges of education and inadequate teaching of practical skills, among others. It was also established that the curriculum was revised in 2013 in order to keep up with the global trends or changes. This finding was in line with what was documented in 2013 Zambian Curriculum Framework. The Zambian

government in 2013 revised the Secondary School Teacher Education Curriculum as a follow up to the revision of the Secondary School Curriculum (Ministry of General Education, 2013). This was done in order to allow student teachers have an experience of what they were to teach in schools while they are still in college so that they are well acquainted with the content knowledge, as well as the pedagogical content knowledge for effective teaching. According to the content analysis of the 2013 revised teacher education curriculum framework, and the data obtained through interviews with the Teacher Education and Specialised Services officers and Lecturers, there are three major changes that are prescribed in the said curriculum. These are: (1) A shift from content-based teacher education to competence-based teacher education; (2) equipping teacher educators with skills on how assessments should be taught to teachers so that the next generation of teachers would poses the right assessment skills and (3) Linking the secondary teacher education and the secondary school curriculum. Competence-based theoretical approach to education seeks to link education to real life experiences as it gives learners skills to access, criticize, analyze and practically apply knowledge (ZECF, 2013). As supported by Makunja (2012) who said ‘competence-based curriculum is a kind of education that seeks to develop in learners the ability to learn and perform activities to a prescribed standard. A curriculum that is competence-based, therefore, contains specific outcome statements that show the competencies to be attained’. In this study, this approach calls for a creation of spaces of learning so that the target learners can learn through practice in all forms and areas of education. It is for this reason that the 2013 Curriculum was revised based on a shift from content-based to competence-based curriculum.

In order to cope with such rapid changes in the context of this study, competence-based teacher education demands that the student teacher and the college community as a whole develop an attitude of principles, flexibility, secure knowledge and commitment to life-long learning which prepares learners to respond to the ever-changing needs of society. What is important to note is that, change is inevitable as it reflects the changes that take place in the society and education system in general, since a curriculum is revised from time to time to meet the demands of a rapidly changing world of which theory has to be put into practice. This is in line with Winter and Szulanski (2001) who clarified that the implementation of any revised education curriculum is a process of putting the curriculum into practice. As noted in this study, it implies that it is not a

one-time act, but a continuous process of improvement and adjustment which demands a critical reflection on the changes needed and how the implementers will be introduced to the content of that change and be convinced to adopt and implement it. Fullan (1993) argued that effective curriculum change and implementation requires time, personal interaction, in-service training of personnel and other forms of people-based support. The whole process of implementing the revised curriculum according to this analysis has to start with key stakeholders especially those that are closer to the needs of the learners; in this case, the lecturers. This process, as observed, can only succeed if the curriculum implementers are thoroughly prepared from the initial stage and if they accept that change.

5.2.2 Orientation Programmes

This study established that efforts were made to prepare lecturers for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum (refer section 4.2.2). During interviews with the Principal Education Officer, College Principal, Head of Departments and lecturers it was revealed that the lectures who attended the national workshop were very few and even the briefings that were done at the college level were just in form of announcements. This disadvantaged the lecturers who did not have an opportunity to attend the national orientation workshop in terms of in depth understanding of this change. Effective implementation of the revised curriculum cannot just happen like that; there is need for deeper collaboration and professional development to equip implementers with the right pedagogical content knowledge.

As indicated earlier, it is no longer acceptable in higher education to work in isolation. As mentioned earlier, the researcher agrees with Fullan (1993) who concluded that effective curriculum change and implementation requires time, personal interaction, in-service training and other forms of people-based support. However, the responses from lecturers clearly show that the implementers of the revised curriculum did not possess appropriate content knowledge and pedagogical content knowledge to effectively implement it since they were not thoroughly prepared prior to its implementation process. This is contrary to the principles of competence-based teacher education theoretical approaches, which postulate that effectiveness of a programme can be judged by the quality of its product Changwe (2017).

Each institution of learning has its own culture and local influences that help define what an effective implementation of the curriculum means. A holistic philosophy that was adopted for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum does not only focus on the learner, but it starts with the learner's needs and interest and expands to the whole teacher education curriculum. According to this study, the lecturers are closer to the student teachers and they have their own experiences of their work, which according to the findings can help to improve the whole process of implementing the revised curriculum. If well implemented, the 2013 Revised Education Curriculum can be able to produce the desired results. However, no matter how good the revised curriculum may be, it can be rendered useless if those who do the actual work do not feel to be part of the change needed. In this case, the lecturers who are central in driving positive change in the education system, since they are the implementers of the curriculum, were left out in the orientation programmes and were not given adequate in-service training in order for them to effectively implement the revised curriculum. While it is always easier to centralize the processes, this study suggested that there have to be ways and means to ensure that the interests of the college community are served. The implication of the lecturers not having an opportunity to attend the national orientation meetings is that they were deprived of the opportunity to acquire relevant knowledge and skills required for effective implementation of the revised curriculum, and also to ask for clarification to those who spearheaded the revision.

Teachers are generally seen as the pillars of the education system. Where there is inefficient and poor teaching in some subjects in the school curriculum the blame has to be borne by some teachers. This can only be avoided if teachers undergo a competence-based teacher education curriculum so that they are equipped with appropriate competencies and skills for effective teaching.

5.2.3 Synergies between the Revised Teacher Education Curriculum and the Secondary School Curriculum

The revision of the 2013 secondary school teacher education curriculum was mainly focused on aligning it to the secondary school curriculum so that the graduating teachers, who were going to teach the learners in schools, would possess appropriate knowledge and skills for quality teaching. Apart from that, student teachers are given an opportunity to experience what they are expected

to teach in schools while they are still in college. This is in accordance with what is stated in the ZECF (2013) that; since knowledge, skills and technological change develop rapidly, the education system must also be renewed continually. Hence, the 2013 ZECF was developed to provide a clear direction that the Zambian education system ought to take in this modern world. However, it is important that these educational changes are effectively implemented in order to achieve the social and economic development the nation aspires for. The study revealed that due to worldwide technological advancements, student teachers needed to be equipped with appropriate skills so that they are able to teach effectively in schools. The competence-based theoretical approaches guiding this study, postulates specification of competencies to be acquired by learners in advance. In this case, the student teachers are expected to be equipped with content knowledge and appropriate pedagogical content knowledge for them to teach effectively.

5.2.4 Theory to Practice

The aim of the 1996 national policy on education is to develop each learner into a complete person for their own fulfilment and that of the society by developing the full and well-rounded development of the physical, intellectual, social, affective, moral and spiritual qualities. Hence, practical skills acquisition was prescribed in the 2013 Zambian Education Curriculum Framework in an effort to achieve this goal. Therefore, it is of great importance that lecturers inculcate these skills in the student teachers, who will in turn teach them to their pupils, and if the students practice whilst in college, then they will be able to do these practical tasks in schools too. This can only be achieved through a more learner-centred approach as opposed to lecture-centred approach in order to develop desirable skills and competencies in the students. This is in agreement with the study by Kakooza (2015) on curriculum implementation which revealed that best practices in higher education calls for the utilization of student-focused learning and diverse educational delivery methods. As it is no longer acceptable to offer an educational product that is built entirely on the lecture model, because quality human resource is cardinal in development. In this case, curriculum implementers needed to have appropriate skills for them to effectively implement the revised curriculum.

5.3 Appropriate Facilities and Equipment

Availability of appropriate facilities and equipment is cardinal in the implementation of any curriculum as stated earlier, because these make the transmission of knowledge and skills from the teachers to the learner possible and vivid. In order to get different views from participants of different categories and experiences, the researcher asked the College Principal, Head of Departments, lecturers as well as students to comment on the availability of appropriate facilities, equipment and teaching and learning materials for effective implementation of the revised curriculum.

According to the responses from participants, it was clear that most practical teaching subjects lacked some essential facilities, equipment and materials. For example, in the teaching and learning of physical education, sports facilities and equipment are necessary for any education institution that offers the subject. However, it was interesting to note that the college only had a hall without appropriate equipment to enhance effective teaching of physical education. As some of the sport facilities such as basketball, volleyball and tennis courts were still under construction. The gymnasium was well equipped, but it was too small to cater for even one class at a time. The physical education students, therefore, suggested that there was need for a multi-purpose sports hall that would make it possible for them to learn physical education effectively.

In addition, Laboratories are central to the teaching and learning of science-related subjects. The adequacy of laboratory facilities in learning institutions is inevitable for effective teaching in as far as putting theory into practice is concerned. Actually, laboratories are considered to be the scientists' workshops where many practical activities have to be conducted in order to enhance meaningful teaching and learning processes of science concepts and theories and putting these into practice in order to enhance the acquisition of specified competencies. However, from observation and responses from interviews with the participants, it was revealed that some teaching courses lacked special laboratories to be used for teaching courses such as Agriculture science and Home Economics. As one lecturer argued that the labs were supposed to be separated from lecture rooms. Due to the importance that is attached to science subjects, it was worrying to discover that at the time of the study, there was lack of specialized laboratories and classrooms at the institution, as some were still under construction which compromised the quality of teaching practical components.

This was contrary to the principle of competence-based theoretical approaches in which the development of practical skills are highly valued. Since practical skills are meant for lifelong sustainability. The study revealed that though the 2013 Revised Secondary School Teacher Education Curriculum implementation was in effect and with its main emphasis on practical skills acquisition, the practical part was still not being taught as it should, as guided in the TCIG, due to lack of appropriate equipment and materials. This finding is in line with Makunja (2016) who revealed that teachers faced a variety of challenges, such as insufficient teaching and learning resources, among others, which impeded the effective implementation of competence-based curriculum in teaching and learning. Availability of suitable infrastructure, appropriate equipment and materials are of paramount importance when it comes to effective implementation of any curriculum. Without which, it is impossible to successfully implement any education programme.

In Special Education, it was revealed that the section lacked a number of equipment and materials such as audiometers, brail frames, brail printers and paper, styluses, to mention just a few. This made it difficult for lecturers to implement the 2013 Revised Secondary School Teacher Education Curriculum in that area of study effectively. Makunja (2016) revealed that insufficient teaching and learning resources, among others, impeded effective implementation of the competence-based curriculum.

Therefore, the researcher recommended that teachers should be given opportunities for them to participate in formulation and reviewing curricular; and that the Ministry of Education should devise ways of providing quality and relevant teaching and learning resources that are consistent with the competence-based curriculum. Similarly, the 2013 Revised Secondary School Teacher Education Curriculum in Zambia was designed on competence-based or out-come based principle, where specific competences to be acquired and demonstrated by the learners, in this case the student teachers, are specified in advance (Bowles, 2012). However, without the availability of equipment and materials, it is almost impossible for the lecturers or student teachers to be able to carry out practical tasks. This means that the quality of education will be compromised because the actual hands-on way of teaching where students are actually supposed to be grounded in practical skills that would enable them teach well in schools as emphasized in

the Teacher Curriculum Implementation Guide, will not be compromised. Consequently, the revised curriculum will not be effectively implemented.

Badugela (2012) added that the implementation of the National Curriculum Statement was problematic and far from satisfactory and recommended that there was need for the Department of Education to prioritize educational resources for schools and educator training in curriculum implementation. The aim of education according to MoE (1996) is to develop each learner into a complete person for their own fulfilment and that of the society by developing full and well-rounded development of the physical, intellectual, social, affective, moral and spiritual qualities of an individual. Practical skills acquisition is prescribed in the 2013 Zambian Education Curriculum Framework. Hence, it is of great importance that the teacher educators inculcate these skills into the student teachers who will then teach these skills to the pupils in schools as well. However, to achieve this, students need to practice more while they are in college in order for them to teach well when they graduate, but the question is, how are the students going to practice whilst in college, when there are no appropriate facilities, pieces of equipment and materials?

As noted in chapter 2, UNESCO (2016) stated that the Global Education Monitoring community adopted the 2030 Agenda for Sustainable Development in which Sustainable Development Goal number four was included and whose aim is to improve the quality of education being provided to the learners globally. Further, the global education community also adopted a framework for action which aims at providing guidance on implementation of this education goal to ensure inclusive and equitable quality education and promote life-long learning opportunities by 2030.

The central aim of the education 2030 is to support implementation mechanisms that promote country-led action; in this case, the 2013 ZECF was designed to develop a learner who is analytical, innovative, creative, versatile, employable, entrepreneurial, proactive and constructive, among other qualities, for economic and social development of the country. However, this can only be achieved if the 2013 Revised Secondary School Education Curriculum is effectively implemented; but its success is solely dependent on the availability of appropriate resources and qualified teachers. For example, the study established that in the Art and Design section, there were no suitable work surfaces or tables for heavy duty tasks such as sculptural and ceramic works; no enough porters' wheel, and kilns; no conventional printers and kick

wheels for ceramics. These are some of the most essential pieces of equipment that would help the student teachers acquire sustainable practical skills that they should in turn teach the learners in schools. This finding is in line with Chilufya (2014) who did a study on integrating environmental sustainability issues in the Zambian 2013 Revised Science Curriculum at Junior Secondary School level. One of the main findings was that there were no or little resources for effective implementation of both the old and revised curriculum.

Further, Information and Communication Technology (ICT) is another study area, which was introduced in the 2013 Revised Secondary School Teacher Education Curriculum. ICT is an effective educational technology, which promotes effective teaching and learning processes needed to meet the demands of the technologically fast-growing modern world, because technologies accord students an opportunity to work more productively. The finding of this study indicated that ICT was given the deserving attention in order to ensure its effective implementation. The computer labs were well equipped with computers and internet connection; including an ICT bus which students use for their field trips. However, some students argued that internet was not easily accessed, unless very late in the evening or in the early hours of the day when most students are not using it. That in itself is a hindrance to effective implementation of the revised curriculum.

Therefore, it was suggested that being the 21st century, there was need to do more on how to promote the use of ICT tools for students to learn effectively as they could be able to access some learning materials such as text books, journals etc. online than entirely depending on the few hard copy books. The Home Economics Department, however, was one area that seemed to have been well equipped and had what it takes to meet the demands of effective implementation of the revised curriculum in terms of the ability to teach practical skills to the students. It was observed that most of the necessary equipment, utensils and materials as well as qualified lecturers were available. However, there was need to separate labs from lecture rooms, office space and wardrobes for the Fashion and Fabrics section.

The study established that most study areas, especially the newly introduced courses, lacked essential materials for effective teaching. For example, there were inadequate quality books for teaching courses such as entrepreneurship, Technology and Computer Studies, Curriculum Studies and Assessment as well as Art and Design, which made it difficult for the lecturers to

teach effectively and also for students to carry out assignment tasks, as there were no enough quality reference books. Students said that they could not be able to find sufficient and suitable references in terms of books to use when lecturers gave them assignments, since these were not in good supply in the college library and the only alternative for them was to use the internet, which according to the responses from students, was also not easily accessible. This compromised the quality of assessing students' acquisition of knowledge and skills, thereby negatively affecting effective implementation of the revised curriculum.

It was observed that there were very few quality books in the college library to cater for a large number of students, thereby making it difficult for the students to read extensively in order for them to cement their understanding of the concepts learnt. This had a negative impact on effective implementation of the revised curriculum. Instructional materials do enhance the process of learning and teaching through exhibiting the information that is necessary in order for the learners to acquire the requisite knowledge and skills. Acquisition of basic skills and attitudes to enforce efficiency requires instructional materials. Usually poor performance of learners in various institutions is blamed on the choice of instructional materials. However, the situation on the ground leaves much to be desired. It was suggested, therefore, that there was need to procure more books for most new teaching courses and the lecturers needed to supplement governments' effort by producing more teaching and learning materials such as books, modules, journals and other teaching aids.

5.4 Challenges in Implementing the Revised Curriculum at MUCE

In this section, the findings on the challenges faced by lecturers in the implementation of the 2013 Revised Secondary School Teacher Education Curriculum will be discussed. The study established that there were a number of challenges encountered by lecturers in the implementation of the 2013 revised secondary school teacher education curriculum at MUCE which could have led to its ineffective implementation. Implementation is a very important stage in the development process of the curriculum because this is the time when theory is put into practice, where special competencies are taught to learners to make the curriculum development process complete. Hence, the implementation stage determines the success or failure of any designed curriculum. Therefore, it is contended that curriculum review needed to take into

account not only the nature and characteristics of learners, type and quality of intakes into the education system, but also the inputs and outputs. The education system, including the organization and management of the learning resources, the academic and support staff, as well as the learning environment and opportunities are not lost sight of in the revised curriculum. To achieve effective implementation of any curriculum, there is need to mobilize all the required resources as well as putting in place all the necessary measures.

It was, therefore, vital for the study to establish the challenges lecturers encountered when implementing the 2013 Revised Secondary School Teacher Education Curriculum at MUCE. This is because the challenges that the lecturers faced in the teaching of the revised curriculum, in one way or the other, could have contributed to its ineffective implementation. As some of the lecturers' responses indicated that lack of teaching and learning materials hindered effective implementation of the revised curriculum. Apart from the challenges that have been highlighted in the previous sections, the other challenges that were established included; lack of enough qualified teaching staff, attitude of some Lecturers and syllabus coverage as discussed below.

5.4.1 Lack of enough qualified teaching staff

The findings of this study established that there was a challenge of understaffing or lack of qualified staff in some courses, such as Entrepreneurship, Special Education, Curriculum Studies and Assessment, to mention just a few. In this study, for example, it was revealed that there was only one qualified lecturer to handle the entire third year student population in entrepreneurship. This was worrying because lack of adequate qualified staff is a hindrance to effective implementation of any curriculum. These findings are in line with Moodley (2013) who revealed that educators faced challenges in understanding and implementing various previous curriculum policies in relation to quality and amount of training. This may only mean that the educators were under qualified in the sense that they were not thoroughly prepared for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum. As such, they did not possess appropriate skills for them to implement the revised curriculum effectively.

Chilufya (2014) noted that the three pillars or building blocks of sustainable development, as duly represented in the 2013 science curriculum. In addition, more work done on topics dealing with ecological issues, social and economic issues, and a bit on political issues, but there were

challenges in the implementation of the revised curriculum due to lack of qualified staff and other resources. It is for this reason that lecturers need to possess accurate knowledge and skills for them to understand what to teach.

The implementation of the revised teacher education curriculum can only be successful if lecturers have thorough and coherent knowledge of the subject matter for them to be able to develop appropriate pedagogical skills (Mulenga, 2015). Mubanga (2012) argued that teachers play the most important role in meeting the many challenges of providing quality education in any country. To this effect, as documented in the *Zambian National Education Policy of 1996*, 'Educating our Future', the importance of employing well-qualified and competent teachers is to ensure that quality and effective implementation of the education system, which largely depends on the quality of its teachers, is achieved. This is so, because teachers are a single most important resource, and determinant of success in meeting this goal (MESVT, 1996). William (2007) added that the significance of teachers' perceptions about how coherent their professional development was for teacher learning and implementation, as well as the incorporation of adequate time for teachers to plan for implementation, and provision of technical support were significant in promoting education programme implementation. However, at the time of this study, it was worrisome to note that there was very few qualified teaching staff in most study areas especially the newly introduced teaching courses in the college.

5.4.2 Attitude of some Lecturers

It was also noted from this study that some of the challenges that lecturers faced when implementing the revised curriculum were a result of lack of their participation in the orientation programme for implementation of the 2013 Revised Secondary School Teacher Education Curriculum. As earlier indicated, teacher educators were not thoroughly prepared for the implementation of the revised curriculum. For example, it was revealed that some lecturers exhibited a negative attitude towards teaching of secondary school level Mathematics to their college students. This may only be as a result of their lack of understanding of the purpose of linking the teacher education curriculum to the school curriculum. The revision of the 2013 Secondary School Teacher Education Curriculum was mainly focused on aligning it to the secondary school curriculum so that the graduating teachers who are going to teach learners in schools, would poses the right knowledge and skills for quality education delivery.

This is in accordance with what is stated in the ZECF (2013) that since knowledge, skills and technological change develop rapidly, the education curriculum must also be renewed continually. Therefore, the 2013 ZECF provided a clear guide on which direction the Zambian education system ought to take in this modern world. However, it is important that these educational changes are effectively implemented in order to achieve the social and economic development the nation aspires for.

Therefore, Okoth (2016) recommended that the involvement of teachers in the development of curriculum innovations, organized continuous Teacher Professional Development (TPD), development of materials that support teachers in their implementation and review of assessment procedures, would assist in effectively implementing the curriculum. In addition, Mwanza (2017) argued that teachers' understanding of the principles underlying strategies for reform or innovation plays a significant role in the implementation of a revised curriculum. This is so because educators who lack an understanding of the implementation strategies of the revised curriculum may not effectively implement it. Further, Ahmadi (2015) argued that adequate qualified and motivated teachers, good funding, adequate instructional facilities and materials are cardinal in curriculum implementation without which, it is very difficult to effectively implement any change in curricular because quality teachers are a driving force in the delivery of quality education. There was need, therefore, for more collaboration between lecturers within and between different departments so that they can help sharpen one another in terms of knowledge and skills acquisition for them to be able to implement the revised curriculum effectively.

5.4.3 Syllabus Coverage

The findings of this study also established that there was a challenge in covering the course content due to overloaded content which was attributed to the integration of some subjects into learning or study areas. It was interesting to note that curriculum overload still existed and persisted regardless of the efforts made by the Ministry of General Education to reduce through the integration of the subjects into study/learning areas when revising the 2013 education curriculum. When the Principal, Head of departments and lecturers were asked to comment on the challenges that they were facing in the implementation of the revised curriculum, it became known that one of the main challenges in effectively implementing the revised curriculum was difficulties in covering the syllabus, as the curriculum was still overloaded.

One of the main focuses of the 2013 Zambian Education Curriculum Framework was to reduce curriculum overload. However, some lecturers had difficulties in finishing the course outlines and they attributed it to lack of enough time to cover the course outlines due to curriculum overload. They explained that when they met to develop the course outlines, they based the coverage of those courses on a 3-year period and that they did not have in mind how they were going to teach the syllabus which was meant to be taught in three years, in one year. As a result, the inclusion of the secondary level topics in the teacher education curriculum without much adjustment, the syllabuses are longer and to complete covering all the topics seems to strain not only the lecturers, but the students as well.

Hence, there was need to frequently meet the students in order to complete the syllabus, but this also was a bit of a challenge because of time limitation. This implies that there was less consideration in terms of time and much thought when planning and preparing for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum. It seems everything was done in a hurry without much thought to it, which may have negatively affected implementation of the revised curriculum. If teachers are going to help students to develop the skills and competencies of knowledge creation, teachers need the experience in building professional knowledge and that calls for adequate time.

Some lecturers attributed the challenge on coverage of course outlines to time consumed in sourcing for teaching and learning materials that the college administration could not procure for them and needed to be improvised. The collection of these improvised materials involves research and testing which calls for enough time. For example, clay and natural dyes used in Art and Design courses, needed collection, treatment and testing before they could be used for lessons in class. As indicated earlier in the preparation or drawing of the syllabus, only a few lecturers were involved and that the syllabus was supposed to run for three years, but at the time of implementing that syllabus, required teaching it in one year. The challenge, therefore, has been to compress concepts that are supposed to be taught in three years into one year. This means that it is only in the first year when the students learn in school for the whole year because when they come to second and third year, they have to go for their school teaching experience for one full term and when the student teachers come back in the third term, the focus is on preparing them for examinations. Some lecturers pointed that it was quite challenging for them

to really give out their best in terms of quality education delivery and this is not what is intended in the 2013 ZECF document itself. The bulky revised teacher education curriculum was attributed to non-participation of lecturers in the initial stages of revising and redesigning of the curriculum and its development processes (Mwanza, 2017).

It was further revealed that due to overloaded content, some lecturers found it difficult to administer meaningful assessments and give timely feedbacks to students. As such, time limitation posed another challenge when it came to assessment. For example, some lecturers indicated that in a term, they have to administer 3 tasks for continuous assessment (CA) to see if their students have gotten the concepts and skills right. However, due to the numbers of students, they find it difficult to mark and give feedback in time. Therefore, even the 3 tasks that are to be given to the learners are not achievable. It was interesting to note that it was already in week 11 of the term and one lecturer had only given out one task to the students. Therefore, it was clear that Continuous Assessment was just a cosmopolitan state of affairs and did not really have quality and value attached to it.

This finding is in line with the findings of Kakooza (2015) who established that there were challenges in implementing the revised curriculum in securing lecturer buy-ins, lack of communication between lecturers, lack of provision of timely and regular feedback, among others, posed a challenge towards effective implementation of the revised curriculum. When this happens, it means that it will be difficult to tell how the learners are progressing in their education, which may also compromise the quality of education.

The two-tier system was designed for implementing the 2013 Revised Curriculum, because not every learner succeeds in academics or excels to the level of obtaining degrees and those who would drop out before completion of their education would be able to sustain them using the skills they will have acquired at that level. These would be embraced by the vocational pathway which offers hands-on experience, but time is a problem. Much of the learning time is dedicated to learning theory concepts than practical skills. As such, there seem to be no enough time for practice on the part of the learners. The other career pathway is the academic career pathway. This is for learners who can assimilate content, thereby helping them acquire knowledge and skills so that they can benefit in that manner (ZECF, 2015). There is a good balance of knowledge and skills in the revised curriculum so that learners can benefit from both, if they

continue with their education to the end. However, what matters is how effectively the revised curriculum is implemented if the desired results are to be attained so that defined competences can be successfully acquired by the learners.

5.5 Suggested ways of addressing the Challenges

Policy making is a very important part in trying to make changes in society and the government of the Republic of Zambia, through the Ministry of General Education, has done very well in this area, especially in the designing of the 2013 ZECF, but the gaps are on the implementation part due to lack of infrastructure, among others. For example, learners may want to learn practical subjects, but these subjects may not be offered in certain institutions because of a particular career pathway that the school might have chosen. There is need for clarity on this misconception in order to allow education institutions that have all it takes to implement more than one career pathway to do so to the benefit of the learners.

Apart from that, there is need for the government to increase the provision of appropriate facilities, equipment, materials and resources needed for implementing the revised curriculum effectively. However, it is unfortunate that some schools have even abandoned subjects like Art and Design; Home Economics and Music because they perceive these subjects as being expensive to handle. Producing teachers with skills that will not be used to teach in schools can be a worst of time and resources on the part of government. One lecturer suggested that one way to effectively implement the revised curriculum was by trending some milestones, but networking needed to be enhanced and collaboration between lecturers was important.

It should also be born into the minds of students for them to show comprehension of concepts despite them getting some skills in their area of specialization. Therefore, there is need to overhaul the entire mind set so as to promote inclusive special education because this is one of the crosscutting issues that came with the revision of the 2013 secondary school teacher education curriculum. Those in science for instance, should be seen to prepare their students so that if they are doing experiments, they should be aware that there are some learners who may be asthmatic and others may have other health complications so that they are handled accordingly. For example, if it is in physical Education, there is need to know that some learners may have physical challenges and so they should be handled as such. Even in Mathematics there are those

who are dyscalculia, what is it that the teachers are doing to help them? There are also students that are dysgraphia and dyslexic and hence they need special attention, and so if everyone gets involved, it will help to successfully implement the two-tier curriculum, which has some good elements.

In addition, an analysis of the schools the students go to teach upon graduation, indicate that the government has done a lot of disservice in schools because after training students, when the teachers get to schools to teach, they discover that some subjects are no longer being taught in certain schools. It leaves one to wonder what the purpose of education is. The 2013 Revised Secondary School Teacher Education Curriculum was designed to be aligned to the school curriculum quite alright, but currently certain secondary schools have closed out some sections or departments as mentioned earlier and no one seem to see this lapse. It should have been left open to all schools that had the infrastructure and resources to continue offering all the subjects as opposed to what is obtaining in schools. It was further suggested That although the implementation of the curriculum rest on the government, which has the vision for the country and gives direction as to where the education system should go, there was need to involve the implementers more in the reviewing and redesigning of the curriculum than leaving it all entirely to CDC.

As mentioned earlier by some participants that CDC did not design this 2013 Revised Secondary School Education Curriculum in a vacuum, they worked with the educators and consulted them; and that is how the gap between the teacher education and secondary school curricular was identified. However, examining participants' responses on challenges faced by lecturers in the implementation of the said curriculum, it clear that there was not much involvement of the implementers in curriculum designing process and formulation of implementation strategies. Therefore, there is need for more participation of curriculum implementers, in this case the lecturers, in all the stages of curriculum development process, especially in the planning of the implementation strategies.

5.6 Summary

The findings of this study have been discussed in this chapter, based on the themes that emerged from the findings of the study in relation to the objectives and the theoretical framework. Therefore, in the next chapter, the conclusions of the study and some recommendations will be presented in line with the findings of the study.

CHAPTER SIX: CONCLUSION AND RECOMMENDATION

6.1 Overview

A summary of the main research findings as answers to the research questions has been presented in this chapter. Further, the recommendations and some suggestions on areas for future research of this study have been presented. As a remainder to the reader, the main purpose of this study was to investigate the implementation of the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education. The research objectives of this study were limited to assessing how lecturers were prepared, determining the availability of appropriate facilities and equipment and establishing the challenges encountered by teacher educators in implementing the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education in Zambia.

6.2 Conclusions

In line with the study objectives which were reflected in the research questions, the following conclusions were made:

The findings of the study established that lecturers were not adequately prepared to implement the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College Education, since very few of them were involved in the national orientation workshop for the implementation of the revised curriculum. Some lecturers argued that the orientation for implementation of the revised curriculum that was done at college level was only in form of announcements. Whatever those who attended the workshop learned, they came to share with the rest only over tea break. The lecturers also pointed out that they had visits from Teacher Education and Specialised Services, Curriculum Development Centre and Provincial Education Office to talk about the revised curriculum, but it was just in form of announcements. Therefore, this did not give lecturers adequate time to get grounded into the new concepts and pedagogical content knowledge that came with the changes in the curriculum that was to be implemented.

With regard to the availability of appropriate facilities and equipment for effective implementation of the revised curriculum, the study established that in most courses, especially the newly introduced teaching courses such as Special Education, Music, Entrepreneurship, Art and Design, there was lack of appropriate facilities, equipment and materials, which posed challenges to effectively implement the revised curriculum at MUCE.

The study also established that most of the challenges the lecturers encountered in the implementation of the revised curriculum were a result of their lack of participation in the orientation programmes, which could have been avoided if lecturers were thoroughly prepared. The respondents attributed the other challenges to lack of adequate resources in terms of qualified teaching staff, appropriate facilities, equipment and materials. Therefore, there was need to address the challenges if the revised curriculum was to be effectively implemented.

6.3 Recommendations

In line with the conclusions drawn based on the findings of the study, the following recommendations were made:

1. The Ministry of General Education should involve various stakeholders and interest groups, especially the lecturers who are the implementers in the process of developing the secondary school teacher education curriculum, in order to avoid chances of resistance to change. This will cultivate a sense of ownership in the implementers.
2. It is important that the Ministry of General Education supports the implementers and developers of the curriculum to revise and implement the secondary school teacher education curriculum prior to the school curriculum so that the teachers could acquire the requisite knowledge and skill for effectively implementing the revised secondary school curriculum.
3. The study revealed that there was lack of adequate qualified teaching staff to handle students especially in the newly introduced teaching courses such as Entrepreneurship, Special Education, Information Communication and Technology, Curriculum Studies and Assessment at Mufulira College of Education. Therefore, the college management should

encourage and support lecturers to upgrade their qualifications through further studies in order to improve on staffing levels

4. The government should invest more in education in order to provide the needed resources for effective implementation of the revised curriculum. However, there is need for the lecturers to supplement what the government is doing by producing more materials for teaching and learning, such as books, modules and journals to help in effectively implementing the revised curriculum.
5. Curriculum developers and policy-makers should increase time allocation for teaching courses that are still facing the challenges of curriculum overload, challenge such as entrepreneurship, special education, Art and Design or to completely overhaul the syllabi and adjust it to suite current trends since the respondents felt that not much seemed to have been done during the 2013 revision process. Indications by respondents were that content was still the same as before, except the integration of subjects into teaching areas.

6.4 Proposed areas for Future Research

This study was only conducted at Mufulira College of Education, there is need to carry out a more comprehensive study that would involve more than one college, but include other colleges of education such as David Livingstone College of Education, Malcolm Moffatt College of Education, so that a larger sample of participants could be employed. Similar studies could also be done at universities such as the University of Zambia or Kwame Nkrumah.

In this study, the respondents felt that the only way to achieve effective implementation of the revised curriculum was by addressing the challenges and turning them into opportunities. In view of the analysis of information obtained through the interviews and observations, as well as the conclusion drawn from the findings of this study, the researcher recommends that there is need to develop a model for effective curriculum implementation at MUCE.

Since this study could not focus on the implementation of one specific study area, studies on the implementation of the 2013 Revised Secondary School Teacher Education Curriculum for specific subjects could be conducted.

By extension, studies could also be done to examine the ‘products’ who are the graduate teachers that have gone through the 2013 Revised Secondary School Teacher Education Curriculum at Mufulira College of Education in order to determine the effectiveness of the implementation of the said curriculum in comparison to the teachers who graduated before 2013.

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APPENDICES

Appendix I: Letter of Consent for Participants

Dear Participant,

I am a student at the University of Zambia reading for Master of Education in Curriculum Studies. This research is a major requirement for me to complete the programme.

The focus of this study is to investigate the effectiveness of the implementation of the 2013 revised teacher education curriculum for sustainability at Mufulira College of Education.

The data that shall be collected from this research will be treated with confidentiality. Your rights will be respected and protected.

Finally, you are requested to sign this form to indicate that you volunteered to participate in this exercise.

I have read and understood this document. I therefore agree to participate in this discussion.

Signature:

Title:

Appendix II: Interview Guide for the Assistant Director (Pre-Service) and the Principal Education Officer

My names are Charity Bowa Luhanga, a student from the University of Zambia. I am here to collect information for my study on implementation of the 2013 revised secondary teacher education curriculum. I have specifically come to you because you are more knowledgeable about what is obtaining. Therefore, i am humbly requesting you to share with me your views and experiences about the topic under study. Be assured that whatever information you are going to share with me will be treated with utmost confidentiality and that it will only be used for study purposes. Apart from taking notes as we discuss, I would like to ask for your permission to record the conversation in order for me to avoid missing out important points that you will share with me.

Preparation of lecturers for implementing the 2013 revised secondary teacher education curriculum

1. How were lecturers prepared for the implementation of the 2013 Revised Secondary School Teacher Education Curriculum?
2. What strategies have been developed to improve the implementation of secondary teacher education curriculum for quality education delivery in Zambia?
3. What are the successes of the 2013 revised teacher education curriculum?

Challenges if any in the implementation of the 2013 revised secondary teacher education curriculum

1. What are the challenges in the implementation the 2013 revised secondary school teacher education curriculum?
2. Which areas of the curriculum implementation process needs improvement for effective implementation of the 2013 revised secondary teacher education curriculum?

END OF INTERVIEW, THANKS YOU VERY MUCH FOR YOUR TIME.

Appendix III: Interview Guide for the Principal for Mufulira College of Education

My names are Charity Bowa Luhanga, a student from the University of Zambia. I am here to collect information for my study on implementation of the 2013 revised secondary teacher education curriculum. I have specifically come to you because you are more knowledgeable about what is obtaining. Therefore, i am humbly requesting you to share with me your views and experiences about the topic under study. Be assured that whatever information you are going to share with me will be treated with utmost confidentiality and that it will only be used for study purposes. Apart from taking notes as we discuss, I would like to ask for your permission to record the conversation in order for me to avoid missing out important points that you will share with me.

Lecturer preparation for implementing the 2013 revised secondary teacher education curriculum

1. For how long have you been principal for this college?
2. How were your lecturers prepared for implementing the 2013 revised secondary teacher education curriculum?
3. What measures have you put in place for effectively implementing the 2013 revised teacher education curriculum at MUCE?

Facilities and Equipment (teaching and learning materials)

4. generally, comment on facilities and learning and teaching materials do you have available in the college to effectively implement the 2013 revised secondary teacher education curriculum

Challenges if any in the implementation of the 2013 revised secondary teacher education curriculum

5. Generally, what challenges are you encountering in the implementation of the 2013 revised secondary school teacher education curriculum at MUCE?
6. In your opinion, how can these challenges can be addressed?
7. What are the successes in implementing the 2013 Revised Secondary Teacher Education Curriculum at MUCE, so far?

END OF INTERVIEW, THANKS YOU VERY MUCH FOR YOUR TIME.

Appendix IV: Interview Guide for the Heads of Department at Mufulira College of Education

My names are Charity Bowa Luhanga, a student from the University of Zambia. I am here to collect information for my study on implementation of the 2013 revised secondary teacher education curriculum. I have specifically come to you because you are more knowledgeable about what is obtaining. Therefore, i am humbly requesting you to share with me your views and experiences about the topic under study. Be assured that whatever information you are going to share with me will be treated with utmost confidentiality and that it will only be used for study purposes. Apart from taking notes as we discuss, I would like to ask for your permission to record the conversation in order for me to avoid missing out important points that you will share with me.

Preparation of lecturers for implementing the 2013 revised secondary teacher education curriculum

1. How long have you been a Head of Department in your subject area?
2. As a department, how did you prepare the lecturers before embarking on the implementation of the 2013 revised secondary teacher education curriculum?
3. What measures have you put in place to ensure that effective learning is taking place in your department?

Facilities and Equipment (teaching and learning materials)

4. Generally, comment on the availability of appropriate facilities and equipment that have in your department for effective implementation of the 2013 secondary revised teacher education curriculum as a department?
5. What is your opinion on the teaching and learning materials that you are using for implementing the 2013 revised secondary teacher education?
6. What complaints, if any do lecturers bring to your attention about the learning and teaching materials, they are using to implement the 2013 revised secondary teacher education curriculum?
7. In your opinion, how best should these learning and teaching materials be produced?

Challenges, if any, in the implementation of the 2013 revised secondary teacher education curriculum?

8. Generally, what is your comment on the challenges you encounter in the implementation of the 2013 Revised Secondary Teacher Education Curriculum as a department?
9. In your view, how can these challenges be addressed?
10. How can the implementation of the revised secondary teacher education curriculum be improved?

END OF INTERVIEW, THANKS YOU VERY MUCH FOR YOUR TIME.

Appendix V: Interview Guide for lecturers at Mufulira College of Education

My names are Charity Bowa Luhanga, a student from the University of Zambia. I am here to collect information for my study on implementation of the 2013 revised secondary teacher education curriculum. I have specifically come to you because you are more knowledgeable about what is obtaining. Therefore, i am humbly requesting you to share with me your views and experiences about the topic under study. Be assured that whatever information you are going to share with me will be treated with utmost confidentiality and that it will only be used for study purposes. Apart from taking notes as we discuss, I would like to ask for your permission to record the conversation in order for me to avoid missing out important points that you will share with me.

Preparation of lecturers for implementing the 2013 revised secondary teacher education curriculum

1. How were you prepared to implement the 2013 revised secondary teacher education curriculum as teacher educators?
2. How often do you meet as lecturers to discuss the 2013 revised secondary teacher education curriculum matters?
3. What curriculum implementation strategies has MUCE adopted to effectively implement the 2013 revised secondary teacher education curriculum?

Facilities and Equipment (teaching and learning materials)

4. What are your views on the availability of suitable facilities and teaching and learning materials needed for effective implementation of the 2013 revised secondary teacher education curriculum?
5. Generally comment on the supply and quality of the teaching and learning materials that you are using to effectively implement the 2013 revised secondary teacher education curriculum.

Challenges in the implementation of the 2013 revised secondary teacher education curriculum

6. In the implementation of the 2013 revised secondary teacher education curriculum, what are some of the challenges if any are you encountering in your subject area?
7. In your opinion, how can be these challenges being addressed?
8. How does the college management support teaching and learning in your lecture rooms?
9. How are the learners responding to the revised secondary teacher education curriculum?
10. What have been the main successes in the implementation of the 2013 revised secondary teacher education curriculum at MUCE?
11. How responsive is the 2013 revised secondary teacher education curriculum to the needs of the learners?
12. In your opinion how do you think the implementation of the revised secondary teacher education curriculum should be improved?

END OF INTERVIEW, THANKS YOU VERY MUCH FOR YOUR TIME.

Appendix VI: Focus Group Discussion Guide for Mufulira College of Education student Teachers

My names are Charity Bowa Luhanga, a student from the University of Zambia. I am here to collect information for my study on implementation of the 2013 revised secondary teacher education curriculum. I have specifically come to you because you are more knowledgeable about what is obtaining. Therefore, i am humbly requesting you to share with me your views and experiences about the topic under study. Be assured that whatever information you are going to share with me will be treated with utmost confidentiality and that it will only be used for study purposes. Apart from taking notes as we discuss, I would like to ask for your permission to record the conversation in order for me to avoid missing out important points that you will share with me.

Facilities and Equipment (teaching and learning materials)

1. What are your views on the availability of teaching and learning materials and facilities to cater for different subjects in your preparation as teachers?

Challenges in the in the implementation of the 2013 revised secondary teacher education curriculum

2. What are some of the challenges that you encounter if any in your day to day learning activities in your different subject areas?
3. How best do you think these challenges can be addressed?
4. How best do you think the 2013 revised teacher education curriculum should be implemented?
5. As a student in your area of specialization, what skills have you have acquired to solve the problems that the society may be facing?

END OF INTERVIEW, THANKS YOU VERY MUCH FOR YOUR TIME.

Appendix VII: Observation Check List

The availability of appropriate physical facilities will be indicated by Yes or No and where applicable, a scale rating of 1-3 will be used to show its condition. 1 stands for Poor, 2 for Needs Attention and 3 for Good

Category	Yes	No	1	2	3	Comments
A. Physical Facilities						
(i) Lecture /Tutorial Rooms						
a) Furniture						
b) Ventilation and lighting						
(ii) Special Rooms(H/E & Hospitality, Special Education, Art & Design)						
a) Equipment and utensils						
b) furniture						
c) ventilation and lighting						
d) water supply and sanitation						
e) safety						
(iii) ICT Room						
a) Equipment						
b) Ventilation and lighting						
c) safety						
(iv) Laboratory						
a) Apparatus						
b) Chemicals and materials						
c) Ventilation and lighting						
d) Water and sanitation						
(v) Workshops						
a) Equipment						

b) Materials						
c) Ventilation and lighting d) Safety						
(vi) Library (well stocked)						
a) space						
b) furniture						
c) ventilation and lighting						

Appendix VIII: Document Analysis Guide

- 1) aim at answering the research questions
 - a) confirm participants' responses with curriculum implementation documentation
 - b) establish lecturers' qualification and establishment at the time of starting to implement the 2013 revised secondary school teacher education curriculum
 - c) to find out how the two-tier system is being used in the implementation of the 2013 revised secondary teacher education curriculum