TEACHERS’ CONCEPTIONS OF COMPETENCE BASED CURRICULUM AND
ITS IMPLEMENTATION CHALLENGES IN SELECTED SECONDARY
SCHOOLS IN ILALA MUNICIPALITY, DAR ES - SALAAM - TANZANIA

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A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
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The study aimed at exploring teacher's conceptions of competence-based curriculum (CBC) and the factors influencing its implementation in public secondary schools in Ilala Municipality Dar es Salaam. Specifically study explored teacher's conceptions of competence-based curriculum, assessed teachers' practices, examined teachers’ challenges and identified strategies used by teachers to address the challenges encountered in the implementation of competence-based curriculum. Case study design was employed, where five public secondary schools, namely Msimbazi, Benjamin Mkapa, Zawadi, Magoza, and Kimanga Secondary School were randomly sampled, and 50 teachers were purposively selected and participated in the face-to-face interviews, observations as well as focus group discussion. The collected data were subjected to thematic analysis, which involved transcription, coding, and constant comparison of emerged themes and subthemes. The findings showed that teachers were aware of the competence-based curriculum but had limited understanding of it, and the teachers’ classroom practices involved a mixture of competence and knowledge-based curricula. Furthermore, large and overcrowded classes, language barrier, insufficient number of science teachers and teaching/learning materials, lack of motivation, in-service training, study tour, and adequate physical facilities were major factors limiting implementation of CBC. The strategies to overcome the challenges included skipping some activities not possible in large and overcrowded classes, providing notes to students, opting to teachers centered approach instead, improvising teaching and learning materials and code-switching English and Kiswahili as language of instruction. The study concludes that teachers have limited conception on CBC, and inadequately implement the CBC in secondary schools. The study recommends that improvement of in services teachers training on CBC and provision of required resources for its proper implementation in secondary schools.
DECLARATION

I, GRACE MARCO SAWARE do hereby declare to the Senate of Sokoine University of Agriculture that this dissertation is my own original work done within the period of registration and that it has neither been submitted nor being concurrently submitted in any other institution.

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(MA Candidate)

The above declaration is confirmed by:

__________________________________________  ______________________________________
Dr. Hashim I. Mohamed                                         Date

(Supervisor)
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DEDICATION

This work is dedicated to my beloved parents, my lovely sister Lily and my precious daughter Sienna Edwin for their great support and encouragement when I was pursuing the Masters programme.
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<th>Full Form</th>
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<tr>
<td>BEST</td>
<td>Basic Educational Statistic Tanzania</td>
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<tr>
<td>BEST</td>
<td>Basic Education Statistics in Tanzania</td>
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<td>CBC</td>
<td>Competence Based Curriculum</td>
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<td>COSTECH</td>
<td>Tanzania Commission for Science and Technology</td>
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<td>ETP</td>
<td>Education and Training Policy</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>MoEC</td>
<td>Ministry of Education and Culture</td>
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<td>MoEVT</td>
<td>Ministry of Education and Vocational Training</td>
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<td>NBS</td>
<td>National Bureau of Statistics</td>
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<td>NECTA</td>
<td>National Examination Council of Tanzania</td>
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<td>PSLE</td>
<td>Primary School Leaving Examination</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<td>TIE</td>
<td>Tanzania Institute of Education</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Competence-Based Curriculum (CBC) has attracted huge research attention in educational sector in both developed and developing countries (Jin and Li, 2011; Luhambati, 2015; Makeleni, 2013; Nsengimana, Mugabo, Hiroaki, and Nkundabakura, 2020; Ornstein, 2011). Many scholars define competence-based curriculum in different ways. For example, Mulder (2004), associates competence-based curriculum with modular teaching, which grew out of dissatisfaction with programmes in post-secondary education where students could be trained. Elsewhere, Mrowicki (1986) defines competence-based curriculum as a component of essential skills, knowledge, attitudes, and behaviour for effective performance of a real-world task or activity. Furthermore, Makunja (2016) argues that competence-based curriculum is a positive step in raising education standard by addressing the challenges, which have to do with its implementation. Likewise, Thinktwice (2007), defines competence-based curriculum as a research-supported curriculum based on the primary goal of supporting the critical behaviours, which are needed for effective and superior individual and organizational performance of competence-based.

In 2005, Tanzania decided to venture into a competence-based curriculum after curriculum reforms, as the previous curriculum was content and knowledge based (Kafyulilo et al., 2012; Paulo and Tilya, 2014). The emphasis of the content and knowledge-based curriculum was instilling knowledge to the learner, rather than the learner engaging in a process of discovering knowledge (Mkimbili and Kitta, 2020). The
implementation of CBC in Tanzania has not been smooth for example, studies (e.g., Komba and Mwandanji, 2015; Paulo and Tilya, 2014) summarize the problems of competence-based curriculum as lack of sufficient training to pre-service teachers, teachers lack of knowledge about competence based-curriculum, poorly resourced learning environment, and inadequate understanding of pedagogy.

Secondary school classrooms are considered as critical space of implementing competence-based curriculum in Tanzania (Luhambati, 2015). In this curriculum approach, the teaching is more learners’ based and teachers are considered as facilitators of the learning process (Makunja, 2016).

Therefore, teachers’ conceptions of the competence-based curriculum become very important for effective implementation of the curriculum (Mulenga and Kabombwe, 2019). Other studies in Tanzania for example Muneja (2016) and Anderson (2017), have underscored that secondary school graduates have a critical skill gap of meeting the demands of job market because of inadequacies in the implementation of the curriculum in practice. Another study indicated that both teachers and curriculum developers lacked clarity of theory as well as practice of competence-based curriculum (Tilya and Mafumiko, 2010). Although teachers are central in the implementation of competence-based curriculum, some studies conducted in other countries which examined the curriculum reforms in promoting competence-based learning indicated inconsistent findings. For example, in China, it was found that teachers were not key implementers of the curriculum (Jin and Li, 2011). Similarly, Makeleni (2013) found that, teachers in South Africa were inadequately implementing outcome-based curriculum, due to many limiting factors related to financial support to teachers.
Despite these limitations, curriculum debates are ongoing phenomena in Tanzania and the role of teachers in the implementation of competence-based curriculum is constantly been examined (Komba and Mwandanji, 2015; Makunja, 2016). While studies indicate the deficiencies emanating from the graduates of the curriculum (e.g., Anderson, 2017), pre-service training of teachers (e.g., Kafyulilo et al., 2012), resources (e.g., Makeleni, 2013), and the curriculum itself (e.g., Luambati, 2013), the current research is necessary in understanding teachers’ conception of the competence-based curriculum and the factors limiting its implementation in secondary schools in Tanzania.

1.2 Statement of the Problem

At the time of writing this thesis it was about fifteen years since the inception of CBC in secondary schools, but there is no clear evidence of its appropriate implementation. Furthermore, CBC is implemented in all secondary schools in Tanzania however research studies indicate inconsistent, inadequate and deficiency in the implementation attributed pre-service teachers’ training and overall implementation of the curriculum (Komba and Nkumbi, 2008; Komba and Mwandanji, 2015; Luhambati, 2015; Makunja, 2016). Other studies that investigated competence-based curriculum teaching methods (Tilya, and Mafumiko, 2010; Muneja, 2016) indicated that there is low compatibility between teaching methods and competence-based curriculum implementation in secondary schools in Tanzania.

Studies indicate implementation challenges related to financial resources, ability of students’ joining secondary schools, students’ readiness to accept CBC and teachers preparations and lack of participation in curriculum design, classroom teaching-learning
recourses, and class size (Kafyulilo, Rugambuka and Moses, 2013; Makunja, 2016). In addition, many of these researchers have often relied on output of the curriculum such as students’ performance or have relied on simple and standard survey methods mainly responses from students and analysis of academic performance (Komba et al., 2012; Joel, 2015).

Teachers are the main implementers of the curriculum, and are currently facing various challenges related to the preparation and recruitment (Kafyulilo et al., 2012; Luhambati, 2013). Limited studies have focused on teachers who are the main facilitators of the learning process (Mulenga and Kabombwe, 2019) and thus teachers’ conception of the competence-based curriculum is critical in the implementation of the curriculum. For successful implementation of CBC, a teacher is required to possess subject knowledge, pedagogic experience and practical skills (Kafyulilo, Rugambuka, and Moses, 2013). Comprehensive understanding of the competence-based curriculum is necessary in enabling teachers implement the curriculum effectively and in designing effective strategies of dealing with the challenges that arise due to various reasons. Therefore, the present study investigates the implementation of competence-based curriculum in secondary schools through examining teachers’ conceptions of the curriculum and the strategies in addressing the challenges during implementation.

1.3 Justification of the Problem

Classroom practices have increasingly been gaining researchers’ attention because of the continuous changing paradigm of pedagogical practice with a view of addressing the ever-changing challenges of human development globally (Poulou et al., 2019; Mkimbili and Kitta, 2020). Researchers in this area have often focused on student’s perception of
the competence-based curriculum rather than on examining the actual implementation of the curriculum. Many of these researches have used standard survey method mainly questionnaire to gain insight on how students perceive the competence-based curriculum as it is implemented in their classrooms. For educational curriculum developer such research is of limited help to a teacher as the main facilitator in implementing CBC in the teaching and learning process.

The study provided detailed descriptions and analysis of the implementation of competency-based curriculum in secondary schools and examined the conception of teachers about this newly introduced approach in secondary schools. The understanding of the implementation of the curriculum in secondary school is envisaged to improve teachers’ implementation of the competence-based curriculum.

Moreover, the study findings are also envisaged to contribute to the continued reforms on educational training policy and implementation of such reforms in making Tanzania attain excellent education standards (MoEC, 1995). This would be possible through exploring new perspectives on how to implement the CBC curriculum and thereby enable the country produce skilled workforce that would steer the country into a middle-income economy.

Furthermore, the public, which includes parents, civil society organizations, non-governmental organizations, faith-based organizations, and the like are expected to be well informed on teachers' conceptions of the competence-based curriculum implementation process and challenges faced during the implementation process. This
understanding is expected to stimulate further debate and discussion about the curriculum implementation and the state of our education in Tanzania.

1.4 Objectives of the Study

1.4.1 General objectives

The overall objective for this study was to investigate teachers’ conceptions of competence-based curriculum, its implementation and the challenges encountered by teachers in public Secondary Schools in Ilala Municipality, Dar es- Salaam.

1.4.2 Specific objectives

Specifically, this study aimed to achieve the following specific objectives:

i. To determine teachers’ conceptions of competence-based curriculum.

ii. To examine teachers' practices in the implementation of competence-based curriculum.

iii. To examine teachers’ challenges in implementing competence-based curriculum.

iv. To identify strategies used by teachers to address the challenges encountered in the implementation of competence-based curriculum.

1.5 Research Questions

i. What do teachers conceive competence-based curriculum?

ii. How do teachers implement competence-based curriculum in secondary school?

iii. What challenges do secondary school teachers face in implementing competence-based curriculum?

iv. How do secondary school teachers respond to the challenges faced in the implementation of competence-based curriculum?
1.6 Limitations of the Study

The study depended on the responses of the participant and it was assumed that each main question and follow up question were answered honestly. As the researcher may not always be able to control attitudes and perception of respondents which would likely affect research findings some respondents might have given socially accepted answers to avoid offending the researcher or exposing the weaknesses of the school in the implementation of CBC. However, the researcher established trust and ensured confidentiality by concealing the identity of the respondent for free expression. As a result, the majority of them participated willingly and provided honest responses in the study. Inevitably, these limitations did not affect the conduct of the study or its conclusion. The study was conducted in five secondary schools in one municipality. Thus the findings are limited to these schools and similar schools with similar characteristics and therefore application of the findings in other schools not similar to these must be taken with care.

1.7 Delimitation of the Study

This study could have been done anywhere CBC is implemented but it was confined in the five secondary schools in Ilala Municipality Dar es Salaam region and used interview observation and focus group discussion. Therefore, the findings and conclusions are delimited to the study area and other areas with similar characteristics. Although there is resemblance in implementation of CBC in schools, there is substantial difference in implementation of CBC among schools depending on the factors identified in this study and thus the interpretation of the findings regarding conception of teachers and implementation of CBC should be taken with care. The present study delimited itself
only to the teachers’ conceptions, challenges and strategies in the implementation of CBC.
CHAPTER TWO

2.0 LITERATURE REVIEW

This chapter reviews recent and relevant literature regarding CBC in secondary schools in Tanzania. Furthermore, the chapter provides basic explanations of the meaning of concepts in curriculum and teaching tracking the changes of teaching and curriculum from tradition to modern approaches in Tanzania. In addition, the status of CBC in secondary schools is revealed. The chapter also presents teaching and learning approaches under CBC in Tanzania and thus traces the curriculum shift from knowledge to competence based curriculum.

2.1 Definition of Key Concepts

2.1.1 Constructivism

Constructivism is a form of instruction, associated today with the performance curriculum, in which learners are taught to construct their own understandings and application of concepts and materials they are studying (Kumar, 2019; Morshead, 1995). In this study, constructivism refers to the form of instruction taught in Tanzania at ordinary level of secondary school education where learners are encouraged to construct and apply knowledge.

2.1.2 Competence-based curriculum

Competence-based curriculum refers to systems of instruction, assessment, grading, and academic reporting that are based on students demonstrating that they have learned the knowledge and skills they are expected to learn as they progress through their education (Educational Reform, 2018). The CBC is a newly introduced curriculum in Tanzania,
which was designed by Tanzania Institute of education and introduced in schools in 2005 (TIE, 2010). In this regard, secondary schools were directed to implement this curriculum, which is learner- centered in nature. In this study, competence based curriculum refers to the official secondary school course syllabus, which was introduced in 2005. In this study the focus will be on the conceptions of the entire curriculum, instructional planning, teaching methods, assessment, resources, monitoring and evaluation of Competence Based Curriculum.

2.2 Teaching and Learning

2.2.1 Teaching approaches

Harding (2001) broadly uses the term teaching to mean the giving of a lesson or transmitting knowledge, instructing or facilitating learning, and educating. Teaching is often based into two approaches namely teacher-centred or learner-centred. While each has its merits and demerits, in order for the teacher to be successful in imparting knowledge or creating knowledge in the process of learning, the teacher has to be competent in the approach in use.

Teaching refers to the empowerment of students to make them learn better and to be able to use the knowledge they get in real life situation. In teaching process, the knowledge is either transmitted or facilitated by the teacher through knowledge transmission (Barret, 2003; Kane, 2004; Schultz, 2019). Furthermore, teaching is also viewed as empowering learners to be able to use the acquired knowledge in the real-life situation (Kusumawardhani et al., 2019; Pea, 2020). In practice, in the process of learning, additional knowledge and construction of knowledge are not considered in isolation,
rather they occur together as getting knowledge leads to empowerment, and learner can use knowledge to cope with different situations (Mosha, 2006).

Participatory teaching is a teaching technique or approach which involves active learning where students develop various thinking skills such as creative, critical, analytical, and reflective thinking (TIE, 2010). For this study, participatory teaching refers to the teaching and learning methods that facilitate students’ participation in the study process. In this study, therefore for the learning to be complete, students must talk about what they are learning, write about it, relate it to the past experiences, and apply it in their daily life. Participation; During teaching-learning process, participation is the process of providing students with the opportunity of taking more interactive relationship with the subject matter of the lesson (Osaki and Agu, 2002).

Facilitator: Is a person who is resourceful and who actively guides students to learn to develop their competences and application of knowledge and skills using experimental and interactive learning technique (Mushi, 2004). In the content of CBC, teachers are considered as facilitators by creating conductive learning process.

2.2.2 Learning process

Learning is a psychological term and is defined differently by different scholars. For example, Omari (2003) defines learning as a process that causes change in behaviour or performance due to practices or experience. Thus, learning is not a passive process where students or learners must talk and write about what they are learning and at the end relate to the past experience and apply it to their daily lives (Bownell and Eison, 1991; Tejeda-Delgado and Lucido, 2019).
There is formal and informal learning (Nygren *et al.*, 2019). Formal learning is guided by curriculum; it is often organized in a school system in a classroom with a syllabus and with teachers, learners, and learning materials (Henck, 2018). Informal learning refers to the learning outside the classroom in a school system and often it occurs in the society in general (Greer, 2018). In the formal learning, there are competences such as knowledge, skills, and attitude, which are defined in the curriculum and syllabuses. In the informal learning on the other hand, people learn facts, music, dances, marriage system, agrarian products, and livestock rearing through oral and practical activities by imitation and drills (Weimer, 2002).

Competence based curriculum, to large extent, determines the way information is delivered to learners and this guarantees quality learning. CBC enables students to have the opportunities of sharing ideas with others and this is effective learning that leads to acquisition of competences and skills (TIE, 2010). CBC is based on social constructivism framework that emphasizes on the use of liberating pedagogy and learners centred approach (Koda, 2007). Scholars in education (Selly, 1999; Burules, 2000; Barret, 2003) indicate that students learn best when they are actively involved in the learning process. Such scholars support the social constructivism as a theory of learning that promotes students meaningful learning.

### 2.3 The 2005 Competence-based Curriculum

The competence-based approach results from pedagogical research in western countries in 17 century leading to curriculum reforms in the educational process. The pioneers in these reforms include Froebel, Dalton, Montessori, and Piaget who succeeded in permeating the concept of learners’ centred approach (Omar, 2004). Central to this
approach is the fact that teachers should be equipped and facilitated to engage students actively in a domestic way in the learning activities. The support should involve teaching materials, teaching environment, and technique that stimulate participatory approach (Khursheed, 2000). Thus, the participatory approach, which is the central tenet of competence-based curriculum, emerged from humanistic psychology that focused on good relationship between teachers and students and between teachers and the environment (Omar, 2004).

In the CBC, the role of a teacher is to design the learning activities and the tasks, and guide learners into exploring and developing knowledge, skills, attitude, and the thinking required in school (Osaki, 2000, Krusheed, 2002 and Mushi, 2004). Thus, students interact with learning materials, the subject content, and other students under the help of a teacher. In this curriculum, students are involved actively in reading books, doing experiments, dramatizing in groups and solving problems. This teacher’s responsibility under CBC is to design and prepare quizzes, assignments, instruments for experiment, books for reading, and things for learners to observe, topics for debates, and projects to be accomplished under CBC. Therefore, it is vital that the class has adequate learning materials, appropriate class size, acceptable teaching load, and teacher’s competence.

The process of curriculum shift from traditional to competence based in 2000 was the most important innovation of teacher’s education curriculum in Tanzania. The current curriculum encourages the use of participatory approach in which the learner is central in the learning process. The curriculum for teacher education comprises aspects such as principles of education psychology, research methods in education, teaching methods and
curriculum, and teaching (MoEC, 2000). Thus, the curriculum introduces the teachers to
-teaching methods that are competence and participatory in nature.

Supportive environment for implementation of CBC

For effective implementation of CBC, teaching/learning materials that include printed
-materials (textbook, teachers guide, manuals, handbooks, and modules) and non-textual
-materials (such as laboratory apparatus equipment and chemicals) are essential. Although
textbooks play a great role in facilitating the teaching process; studies indicate that
majority of schools have shortage of and outdate teaching materials such as textbooks
(Makunja, 2016; Nyoni, 2018). Some studies show that some schools have no library,
workshop machinery, and laboratory and when present they lack adequate apparatus or
chemicals (Mosha, 2004).

As quality of education depends on the quality of teaching, any curriculum that
emphasizes on active participation of learners is deemed to a successful (Omari, 2008).
However, in regular secondary schools in Tanzania, the classes are overcrowded, and
teaching and learning materials are scarce. Large classes inhibit effective implementation
of CBC as it limits regular in-depth discussion and timely and frequent feedback as well
-as active problem solving (Bernet, 1996; Billington, 1997; and Davies, 2000). Therefore,
conducive teaching learning environment, availability of teaching learning materials,
appropriate class size and teaching load, and parents support are essential in the
implementation of CBC in secondary schools.
2.4 Education and Training Policy of 2014

The aim of the policy is to ensure that the country moves into a middle-income economy by 2025 (URT, 2014). Therefore, the policy replaces the Education and Training Policy of 1995, which prevailed for approximately 20 years. However, the current has not replaced the contents of the 2005 curriculum; instead, it has enhanced them by promoting competence based learning. It is noteworthy that the document says that the education, which had been given previously was more knowledge based than competence-based. Therefore, the policy underscores the hypothesis that, the educated Tanzanian is the one who has knowledge, skills, competences, and positive perspectives towards the best interest of the nation. Therefore, this policy is relevant to the study as it promotes competence-based learning.

2.5 Empirical Studies

This section presents curriculum empirical studies from East African countries, which shade light to Tanzania curriculum practices and challenges. Some of these studies is by Orodho et al., 2013), who examined curriculum in Kenya and encountered the following challenges affecting curriculum implementation; inadequate teachers with inadequate teaching materials, insufficient focus on the learner, lack of motivation among teachers, insufficient teaching facilities, and insufficient instructional resources.

Similarly, Sikoyo (2010) conducted a study in Uganda on the contextual challenges of implementing learner-centred pedagogy. The findings indicate that, teaching had quite varied understanding of the curriculum that affected the implementation as well. Bizimana and Orodho (2014), carried out a study on curriculum implementation in Rwanda and revealed that curriculum implementation, was affected by lack of effective
teaching methods as well as resources. Therefore, these empirical studies indicate challenges caused by lack of teaching facilities, human resources and ineffective teaching methods and teachers conception of the curriculum had not received adequate attention.

Likewise in Tanzania, Makunja (2016), reported challenges facing curriculum implementation including: lack of sufficient in-service training to teachers on CBC; insufficient teaching and learning resources, overcrowded classrooms, low ability of students to join secondary schools, and students’ readiness to accept CBC. However, in the case of Tanzania, Komba and Mwandaji (2015), reported that the majority (86%) of the interviewed teachers did not have proper understanding of the objectives of competence-based curriculum. In addition, the majority (78%) of the reviewed lesson plans did not reflect the qualities of a competence-based lesson plan.

Moreover, the involvement of students in classroom activities by the teachers who were observed was very low. Lastly, teachers practiced formative students’ assessments in less than 50 percent of the observed classroom sessions. While the findings in Tanzania appear to be plausible, the teacher’s conception of the competence-based curriculum need further research attention. This is because teachers are the main implementers of the curriculum and their proper conception of the curriculum is a key in successful implementation (TIE, 2010).

A recent study done by Muneja (2016), reported that teachers were experiencing multiple challenges, the key ones being lack of participation in curriculum design and implementation; lack of quality textbooks and lack of motivation of implementing the competence-based curriculum.
In addition, the same study indicated that teachers had limited understanding of the curriculum. This latter empirical finding is important as teacher’s conception of the curriculum influence its implementation and formulation of strategies to address the challenges (Figure 1).

The review of literature indicates that the CBC is a newly introduced curriculum in secondary schools since 2005. This is learner centred and participatory approach in which teachers are equipped and facilitated to engage students actively in a domestic way in the learning activities. For effective implementation of CBC it is vital therefore that the class has adequate learning materials, appropriate class size, acceptable teaching load and teacher’s competence (TIE, 2010).

Literature indicates that some schools have inadequate teaching /learning facilities and classes are overcrowded (Mwandanji 2015; Makunja 2016). Literature further indicate that teacher’s lack of participation in curriculum design hinder effective implementation (Muneja, 2016). Thus, in CBC the role of a teacher is to design the learning activities and the tasks and guide learners into exploring knowledge, skills, attitude and the thinking required in school. Due to this fact there is need of studying teacher’s conceptions and strategies for addressing challenges facing the implementation of the curriculum. This is because teachers are main implementers of the curriculum and their conception of the curriculum is key in successful implementation.

Furthermore, as teachers were required to implement the curriculum under the circumstances in their schools in terms of facilities and human resources, varied implementation strategies are evident. Thus, the present study gathered information on the
implementation of CBC by examining teachers’ conception of the CBC and the strategies used to implement the curriculum in secondary schools under existing teaching and learning environment.

Thus, literature review in this study indicated that implementation of CBC in secondary schools require proper conception of the approach as well as conducive teaching and learning environment. Literature also indicated that implementation in various schools have elucidated challenges in the implementation. Thus, one of the research gap that the present study aimed to fill was lack of robust empirical studies that examine the teacher’s conception of the curriculum and the strategies to address the challenges already exhaustively revealed by previous studies.

2.6 Theoretical Underpinnings

The theoretical framework grounds a research firmly in theoretical constructs. The overall aim of the theoretical framework is to make research findings acceptable to the theoretical constructs in the research field and ensures generalizability. It also enhances the empiricism and rigor and gives life to a research (Imenda, 2014). Constructivism theory which was put forward by Piaget, Dewey, and Vygotsky among others who were largely psychologists (Hein, 1991) guided the study.

The history of Constructivism theory can be traced in the beginning of 19th century when there was a large push to understand human mind (Driscoll, 2005). According to Elliot et al. (2000), constructivism is an approach to learning that holds that people actively construct or make their own knowledge and that reality is determined by the experiences of the learner. It is a concept, which is influenced by many disciplines such as education,
psychology, and sociology. The theory as applied in education according to Ornstein (2011) entails seven core principles. By, first, the curriculum begins with the parts of a whole, emphasizes on basic skills and big concepts, beginning with the whole and expanding to include the parts. Secondly, the pursuit of student questions and interests is valued; this means the student is encouraged to construct knowledge instead of being like a ‘bank account’ always waiting for ‘deposits’ to be withdrawn. Thirdly, materials include primary sources of material and manipulative materials, not only textbooks. Fourthly, learning is interactive, building on what the student already knows, not just a matter of repetition. Fifthly, teachers have a dialogue with students, helping students construct their own knowledge. Sixthly, teacher's role is interactive, rooted in negotiation. Seventhly, assessment includes student works, observations, and points of view, as well as tests. In this regard the process is as important as the product.

Although constructivism theory has been very useful in education, Mayer (2004) argues that not all teaching techniques based on constructivism are efficient or effective for all learners, suggesting that, many educators misapply constructivism to use teaching techniques that require learners to be behaviourally active. He describes this inappropriate use of constructivism as the "constructivist teaching fallacy." Although Mayer (2004) has critiqued constructivism ineffectiveness, this theory has been used in varied places around the world (Morshead, 1995; Mulder, 2004; Jin et al., 2011) and useful in the present study in examining teacher conception of CBC and its implementation in secondary school.

2.7 Conceptual Framework

A conceptual framework explains the natural progression of the phenomenon to be studied (Camp, 2001). In this study it linked the concepts, empirical research on
curriculum and the constructivism theory used in promoting and systemizing the understanding of the implementation of CBC in secondary schools. Therefore, the conceptual framework (Figure 1) presents an integrated way of looking at a competence based curriculum and provides the explanation on its implementation in secondary schools (Liehr and Smith, 1999).

In this, it is assumed that if teachers have the right conceptions about competence-based curriculum they are likely to adopt appropriate strategies for implementing competence-based curriculum based on the teaching and learning environment such as teacher-student ratio, physical facilities and teaching and learning materials (Figure 1). Teachers background variables such as teachers’ qualification facilitate implementation of CBC depending on the other factors such as availability of teaching and learning materials and student–teacher ratio. Therefore, the conceptual framework imply that when teachers have appropriate conception of CBC coupled with adequate experience and qualification the teacher is likely to effectively implement CBC provided other factors such as teaching/learning facilities and teacher-student ratio is in place. The concepts under this framework can be presented diagrammatically as follows.
Implementation of competence-based curriculum

Teachers' Background variables
- Working experience, Qualifications

Other factors
- School leadership characteristics
- Teachers-student ratio
- Teaching and learning materials
- Physical facilities
- Teaching load

Teachers' Conception of CBC on
- The use of learners centered approach
- The use and interaction to teaching & learning materials
- Teaching & learning methods
- Assessment methods of students’ achievements

Figure 1: Conceptual framework for the study on teachers’ conceptions of competence-based curriculum and its implementation challenges in public secondary schools

Source: Researcher’s own construction, 2018
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology with sub-sections namely: research approach, description of the study area, research design, sample size, and sampling procedures, population of the study, methods of data collection, data analysis, and ethical consideration.

3.2 Description of the Study Area

The study was carried out in Ilala Municipality, Dar es Salaam Region. According to the recent Tanzania Population and Housing census of 2012, the total population of the Ilala Municipality is 1,195,936 people, whereby 581,184 were males and 614,752 were females (NBS, 2015). Ilala Municipality has an area of 210 square km, and lies between Longitude 39° and 40° east, and between 6° and 7° south of the Equator. On the Eastern part, it borders Indian Ocean for 10 km. On its Southern part it borders Temeke Municipality, while in the western part it borders Kisarawe District and in northern part it borders Kinondoni Municipality. The municipality is divided into 37 wards. This study was conducted on four of the wards namely: Gerezani, Kimanga, Segerea and Tabata.

It is acknowledged that all secondary schools in Tanzania implement CBC, however findings show that majority of secondary school teachers are not implementing the revised competence-based curriculum as directed in the formal policy documents such as, syllabus and curriculum frameworks (Shemwelekwa, 2008; Banda, 2011; TIE, 2011; Timothy, 2011). The Ilala Municipality was selected as study area because it is one of the
urban areas in the Dar es Salaam city, with well-established secondary schools and easily accessible, hence guarantee data availability. The researcher being conversant with the area and established contacts in the area assisted in the timely and efficient data collection process.

3.3 Study Design

This study employed a descriptive case study design, which falls under the large umbrella of qualitative approach (Cresswell, 2003). The case study design was most appropriate because the data were obtained through extensive observations, focus group discussions and interviews of teachers on the understanding and implementation on CBC in secondary schools. The design facilitated generation of quality and detailed information from teachers implementing CBC in secondary schools.

3.4 Study Population

The population for this study constituted all teachers in public secondary schools in Ilala Municipality, in Dar es Salaam Region. Because all these teachers were implementing CBC in secondary schools, they constituted a study population from which a representative sample was selected.

3.5 Sampling Procedures and Techniques

The study area was selected purposively due to accessibility and availability of data as Ilala Municipality has adequate number of public secondary schools. According the BEST (2016), Ilala Municipality has 290 secondary schools. According to the directives of the government, (TIE, 2005), implementation of CBC is required in all secondary schools in Tanzania Mainland and therefore five secondary schools in the Ilala
Municipality were selected randomly using table of random numbers to participate in the present study. The secondary schools were Msimbazi Secondary School, Benjamin Mkapa Secondary School, Zawadi Secondary School, Magoza Secondary School, and Kimanga Secondary School.

3.6 Sample Size

The participants in the present study were 50 secondary school teachers (20 males and 30 females) who were teaching different subjects under the competence-based curriculum in five secondary schools in Ilala Municipality. From each of the five schools, 10 teachers were selected purposively making a total of 50 participants, in consideration of the subjects they are teaching and their teaching experience. According to Saunders et al. (2009), for a qualitative study, a sampling intensity of 30 respondents, which is commonly used in social science studies, is regarded as a reasonable sample size, and statistically large enough to make scientific conclusions. Due to the design of the study in which five schools were involved and teachers teaching both science and arts subjects were involved the sample of the present study reached 50 respondents, whereby ten teachers were teaching science subjects and 40 were teaching Arts subjects (Geography, History, Languages and Civics).

3.7 Data Collection Methods and Instruments

In this study, the researcher used the most common method of data collection in qualitative research namely interviews, observations, and focus group discussions.

3.7.1 Interviews

The face-to-face in-depth interviews were conducted with 20 teachers. In which written questions developed from the curriculum and theory, interview guide was used (Appendix
1). The information from teachers was collected using a voice recorder. The clarity of the questions were validated by using a voice recorder to one of the teacher who was not involved in the study. Each single interview session took between 20 to 30 minutes. Semi-structured interview was selected because of the intense information about CBC and scrutiny of the teachers to gain their conceptions and practices on CBC. This approach allowed flexibility while keeping the interview focused. The teachers were asked the same questions but the order of the questions, the exact wording and the type of follow-up questions varied considerably.

3.7.2 Observations
The study used observation in which the researcher spent a prolonged time in classrooms taking notes while teachers were teaching different subjects under CBC. The observation was done to 10 teachers, using observation guide (Appendix 2).

3.7.3 Focus group discussions
The study employed focus group discussions which comprised of interviewing four small groups, whereby each group had five teachers. This technique was effective because the researcher was able to gather information about competence based curriculum from the five teachers in one session. Teachers teaching science and arts subjects each category formed two focus groups separately. This technique was very useful as teachers provided check and balance on each other regarding challenges they face during implementing their CBC, also the technique assisted the researcher to collect a lot of information within a short period of time.
3.8 Data Analysis

This study involved qualitative data, the findings from the field were therefore analysed qualitatively. Thematic analysis was used on the data collected through interviews, observations and FGD. Data analysis involved making sense of the text and moving deeper into understanding and interpreting of large meaning of data (Creswell, 2009). These procedures lead to classification of data and presentation of themes that relates to each other through interpretation of data. Six stages of thematic analysis proposed by Braun and Clarke (2006), was followed by the researcher during the analysis. These involved familiarization with data, the researcher engaging in reading and re-reading thoroughly the transcription of data and noting down the initial ideas. This was followed by generating initial codes and the researcher engage with coding interesting features of data in a systematic fashion by putting labels on the data relevant to each code. The themes were reviewed as next stage in which the researcher checked if the themes worked in relation to the codes extracts. Defining and naming according to the message they have was the last stage before producing the report, this process involved writing analysis using matrices. Thus, findings in the study contain direct quotes from the participants that provide rich illustration of the study theme. Moreover, descriptive statistical analyses were used on some data and presented as frequencies and percentages.
CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Overview
This chapter presents the findings of the teachers’ conceptions of CBC, teachers’ practices in implementing CBC, the challenges hinder the implementation of CBC in public secondary schools and how do teachers overcome challenges in Ilala Municipality, Dar es Salaam.

4.2 Demographic Information of Participants

4.2.1 Age of respondents
Age distribution of respondents who engaged in this study varied from 21 to 42 and above (Table 1). Majority 56% of respondents were within 34-41 age followed by 32% with the age between 42 and above there after those with age of 21-33 were 12%.

4.2.2 Gender of respondents
Gender is an important demographic variable in education sector, Therefore the study was cognizant of the variable in order to ensure the exact realities are represented. According to Table 1, it indicates the great number of female respondents was 60 % and males were 40%, showing that relatively few males join teaching profession and therefore majority of the participants in the study are females. Therefore, the proportion of males to females in this study reflected the trend in the teaching profession which is currently dominated by females.
4.2.3 Education level of respondents
The participants were mostly holders of bachelor degree 64%, followed closely by master’s degree and above, diploma 24% there were also individuals with diploma 12%. It is consistent that there is greater number of bachelor degree holders because the government is implementing plan of phasing out diploma holders as secondary school teachers. Studies show that professional qualifications have implication in teaching, for example Barret (2003) argued that capability of teaching force was indicated by the teacher’s qualifications. However, the findings in this study indicated that teachers regardless of their teaching qualifications were not implementing CBC as required. Therefore, it was difficult to associate nonuse of the CBC approach with qualifications because it is recognized that other factors like class size, teaching load teaching/learning materials may play a major role.

4.2.4 Work experience of respondents
It was important to assess the working experience of the teachers in order to determine whether it influenced the implementation of CBC in secondary schools, From the findings majority 36% of teachers had working experience of above six to ten years followed by those with experience of above 16 years (32%) then teachers with experience of 11 to 15 years and finally a smaller number of those who have worked within five years and below (12%). Likewise, previous study (Applegate, 1987) indicates that the effectiveness of a teacher is influenced by the teaching experience. The findings in this study however indicated that the working experience by itself was not important determinant in the use of CBC in secondary school. This finding is consistent with the conceptual framework shown in Figure 1 which indicates that teachers’ background variables such as teaching
experience indirectly affect curriculum implementation depending on other variables such as teaching and learning materials and teacher-student ratio.

Table 1: Distribution of respondents by demographic information

<table>
<thead>
<tr>
<th>Variable</th>
<th>Categories</th>
<th>Frequency</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td>Age</td>
<td>21-33</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>34-41</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>Above 42</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>Work experience</td>
<td>Below 5 years</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>6-10 years</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>11-15 years</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Above 16 years</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>Education level</td>
<td>Diploma</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Degree</td>
<td>32</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Post graduate diploma</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Masters and above</td>
<td>12</td>
<td>24</td>
</tr>
</tbody>
</table>

4.3 Presentation and Discussion of the research Findings based on the Objectives

The aim of the study was to investigate teacher’s conception of CBC and its implementation challenges in public secondary schools. Four specific objectives guided the study and were as follows. Firstly, determined teachers’ conception of the competence based curriculum, secondly, examined teachers’ practices in the implementation of competence based curriculum; thirdly, assessed teachers’ challenges in implementing competence based curriculum and lastly, identified strategies used by teachers to address the challenges in the implementation of competence based curriculum in secondary schools.
Four major themes emerged from the responses of the teachers paralleling the research objectives and are presented in Table 2.

The first theme, namely conceptions of the curriculum (CBC), emerged from the first objective regarding teachers’ conception of the competence based curriculum. The objective of this theme was to find out how the participants conceived or understood the CBC. It was assumed that the right conception of CBC is directly related to proper curriculum implementation according to the guidelines contained in the curriculum for ordinary level secondary education (TIE, 2010). From this theme, four subthemes emerged which awareness, understanding, are teaching/learning methods, and appropriateness (Table 2).

The second theme, practices, emerged from the second research objective regarding teachers’ practices in the implementation of competence based curriculum. This theme was important because it helped to correlate the conception with the actual practices of curriculum implementation. From this theme, three sub-themes emerged which are teaching/learning approach, and assessment approach.

Another theme identified were challenges and it emerged from the third research objective regarding teachers’ challenges on implementing competence-based curriculum. In essence, this was the backbone of the study. Its aim was to find areas that could be improved in the CBC by teachers and the Government of Tanzania. The last theme in the study was strategies used by teachers in addressing the challenges of competence based curriculum implementation emanating from the fourth objective.
The various sub-themes were discussed in detail in the following sections:

**Table 2: Themes and Subthemes**

<table>
<thead>
<tr>
<th>Major Theme</th>
<th>Sub-theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers conceptions</td>
<td>Awareness</td>
</tr>
<tr>
<td></td>
<td>Understanding</td>
</tr>
<tr>
<td></td>
<td>Teaching/learning and assessment methods</td>
</tr>
<tr>
<td>Teachers practices</td>
<td>Teaching/learning method</td>
</tr>
<tr>
<td></td>
<td>Assessment of students achievements</td>
</tr>
<tr>
<td>Implementation challenges</td>
<td>Insufficient Teaching /learning materials</td>
</tr>
<tr>
<td></td>
<td>Overcrowded in the classes</td>
</tr>
<tr>
<td></td>
<td>Lack of motivation to teachers</td>
</tr>
<tr>
<td></td>
<td>Lack of science teachers</td>
</tr>
<tr>
<td></td>
<td>Lack of in-service training</td>
</tr>
<tr>
<td></td>
<td>Lack of support from parents</td>
</tr>
<tr>
<td></td>
<td>Lack of study tours</td>
</tr>
<tr>
<td></td>
<td>Language of instruction</td>
</tr>
<tr>
<td></td>
<td>Low ability of student joining secondary education</td>
</tr>
<tr>
<td></td>
<td>Inadequate physical facilities</td>
</tr>
<tr>
<td>Strategies used by teachers to</td>
<td>Handling Large classes</td>
</tr>
<tr>
<td>overcome the challenges</td>
<td>Reduction of teaching load by providing notes to</td>
</tr>
<tr>
<td></td>
<td>students</td>
</tr>
<tr>
<td></td>
<td>Shifting to knowledge teaching approach</td>
</tr>
<tr>
<td></td>
<td>Facilitating availability of teaching/learning</td>
</tr>
<tr>
<td></td>
<td>materials</td>
</tr>
<tr>
<td></td>
<td>The use of code-switching during learning</td>
</tr>
<tr>
<td></td>
<td>Combining two streams in one class</td>
</tr>
<tr>
<td></td>
<td>Reduction of some activities in learning process</td>
</tr>
</tbody>
</table>

**4.4 Teachers’ Conceptions of Competence-Based Curriculum**

Based on the curriculum for ordinary level secondary education (TIE, 2010) responses on conception of CBC from the teachers that were consistent and those which were
inconsistent with the guidelines were tallied in terms of frequency and percentage and presented in Table 3.

Table 3: Types and frequency of right and wrong conception of teachers about CBC

<table>
<thead>
<tr>
<th>Teachers’ responses on conception of CBC</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teachers right/proper conception of CBC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participatory learning approach</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>Student centred approach</td>
<td>3</td>
<td>37.5</td>
</tr>
<tr>
<td>Teachers act as facilitators</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>Inclusive learning and skilful students after completion of their studies</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td><strong>Teacher’s wrong/improper conception of CBC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is a curriculum to guide the teachers in teaching</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>It is the involvement of students in learning and teaching process. In this process, the teacher is a source of knowledge and students are expected to be learners</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>Curriculum to be followed during preparing scheme and lesson</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>Guideline for teaching and learning</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>It is curriculum that is to be known by students and teachers</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>It is a curriculum that require students to search for materials for themselves without guidance of a teacher</td>
<td>2</td>
<td>16.6</td>
</tr>
<tr>
<td>It is skill in teaching, i.e., oral comprehension, reading, understanding, and writing.</td>
<td>1</td>
<td>8.3</td>
</tr>
<tr>
<td>No idea about CBC</td>
<td>4</td>
<td>33.3</td>
</tr>
<tr>
<td><strong>Sub total</strong></td>
<td>12</td>
<td>60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: percentages were rounded, N=20

As noted in Table 3, about 20 narratives were analysed and 8 of these narratives 40% described rightly the competency-based curriculum and 12 narratives 60% wrongly described competence-based curriculum. For example, 8 narratives, of all the response contained right/proper conception of CBC as a participatory learning approach, teacher act as facilitator, Inclusive learning and skilful students after completion of their studies. While 4 teachers who accounted for made up 8.33% of all the responses had no idea if CBC existed and 26.6% of teachers wrongly conceived CBC. The significant finding in
this sub-theme was that majority (60%) of the respondents are not knowledgeable on CBC.

The conception is more expressed in terms of knowledge encompassing awareness and understanding of CBC. However, in terms of skills, it was clear that teachers did not know the components of CBC and were honest to say that they were not sure of whether they were implementing it due to challenges such as teaching environment, lack of teaching and learning resources, and the presence of big classes averaging 85 students per class. This finding is consistent with the finding in a study by Komba and Sigala (2015) who revealed that secondary school teachers did not understand well the Big Results Now (BRN) initiative, which was intended to boost CBC conception and implementation. Moreover, Komba and Mwandanji (2015), in their study that was conducted in 13 secondary schools in Mbeya, found out that 86 percent of 186 participants did not have proper understanding or conception of the objectives of competence based curriculum.

In another study Joel (2017), established that not only teachers but also students in Mvomero District, Morogoro did not have adequate conception of CBC. Based on these observations the current study gathers that, the implementation of CBC will not be efficient when majority of teachers who are essentially the main implementers have improper or wrong conception of CBC. The next section explores other sub-themes namely awareness and understanding on CBC as well as learning and assessment methods.

4.4.1 Awareness on competency based curriculum

The subtheme awareness was the second to emerge during participants’ interview; it was evident that three-fourth of participants regardless of their work experience indicated to
have been aware of competence-based curriculum. For instance, one experienced teacher from school A teaching Physics shared his awareness of the CBC by saying: “I have heard about CBC and I have been told to use it while teaching Physics subject.” Similarly a young teacher from school C, who was teaching arts subject, corroborated this awareness of CBC that:

CBC is a common song here in our school and in any meeting we remind ourselves that the curriculum is competence-based. Thus, every teacher is supposed to ensure that the modality of teaching follows the approach so that our students are equipped with the proper knowledge and skills after finishing secondary education.

This finding implies that teachers were aware of the CBC regardless of work experience. According to the curriculum for ordinary level secondary education (TIE, 2010) teacher’s qualification as a requirement for implementation of the curriculum include awareness of the current curriculum. This high awareness of CBC is the right step in the implementation of this newly introduced curriculum in secondary schools. Consistent with conceptual framework as indicated in figure 1 awareness which is part of the conception of the curriculum influence implementation of CBC in secondary schools.

4.4.2 Understanding on competence based curriculum

This was another sub-theme, which emerged under the major theme of conceptions. After exploring the awareness of CBC, it was necessary to assess the teachers’ understanding of the curriculum. Few participants showed to have some level of understanding on competence-based curriculum by using words and phrases such as participatory learning, student centred approach, skilful students after the completion of
their studies; teachers act as facilitators. For example, participant from school D stated clearly his understanding of CBC, ‘the curriculum prepares the student to be competent after school completion. Another teacher teaching Mathematics from school C described CBC as a learner centred approach where the learner is supposed to be assisted to teach him herself. On the same note, participant P16F concurred, ‘This is a full participation of students in learning and teaching. Another participant gave elaborate understanding of CBC, ‘It is the involvement of students in learning and teaching process. In this process, the teacher is a facilitator; the student is expected to be self-directed. ‘Nevertheless majority showed limited understanding of the concept of competence based curriculum. For example, during interview one teacher teaching Chemistry from school D said;

"I understand competence based curriculum as new curriculum that guide teachers in teaching the subjects. However, this has been a new approach to guide teachers lead students to better learning in secondary schools, to me this has been the best approach though there are some weakness in its the implementation."

On the other hand, another participant from school E indicated lack of understanding in such a level that she could not tell what CBC is. “My dear, to be frank I don’t understand it but please can you explain a bit may be I will remember” Similar responses were received from other teachers. For example, one teacher from school A said, “CBC is a skill in teaching so that students improve reading, writing speaking and oral comprehension”. Though few indicated to lack adequate understanding, this reality may have far-reaching impact as they engage students in a daily school life. The impact of minimum understanding of CBC is often reflected in the classroom teaching practice. Because understanding is part of the input, which is directly, related to the output. As
other studies (e.g. Komba and Mwandanji, 2015; Komba and Sigala, 2015; Joel, 2017) have indicated that it is convenient that teachers who are the main implementers of the curriculum become cognisant with basic understanding of CBC. Thereafter teacher’s understanding of teaching and learning methods was also assessed.

### 4.4.3 Teaching/learning and assessment methods

After assessing the teachers’ awareness and understanding of the CBC, it was vital to investigate teachers’ ability to identify the teaching/learning and assessment methods. The researcher coded and tabulated the teaching/learning methods described by the teachers and computed the percentage of the identified teaching/learning methods. It was noted that majority of teachers were not able to identify the key teaching/learning methods such as classroom based problem solving and enquiry, group work to produce presentations and assignments, practice of technical or laboratory skills and conducting searches for relevant materials in the library and online (Table 3). Nevertheless, some teachers were able to identify and explain the teaching and learning methods such as debates and group discussions and providing notes for teaching.

<table>
<thead>
<tr>
<th>Teaching /Learning methods</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom based problem solving and enquiry</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Demonstrations.</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Providing notes for teaching.</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Summarizing readings.</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Practice of technical or laboratory skills.</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Debates, group discussions.</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Group work to co-produce reports and presentations</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Conducting searches for relevant materials in the library and online.</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Having assessed the teaching/learning methods, the researcher examined the assessment methods used by secondary school teachers. Table 4 indicates the types and frequency of the assessment methods used by teachers.

Table 5: Assessment methods used by teachers

<table>
<thead>
<tr>
<th>Assessment methods</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolios.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rating scales and rubrics</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Oral presentations</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Practical tasks to demonstrate performance skills</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Project work</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Written essays or reports</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Portfolios.</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rating scales and rubrics</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Oral presentations</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Practical tasks to demonstrate performance skills</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Project work</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Written essays or reports</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Analysis, for example of texts</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Checklists</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Home work</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

The findings indicate that majority of teachers assessed students using oral presentations and homework. However, few teachers were able to identify methods of assessment such as practical tasks to demonstrate performance skills, writing essay and analysis of texts (Table 5). Surprisingly, the assessments methods such as portfolio, rating scale and rubrics; project work and check list were not identified by any teacher. Therefore based on the findings under the subtheme of teaching/learning and assessment methods, it was evident that majority of teachers could not identify the major teaching/learning methods advocated in the CBC curriculum.

Generally, the findings from this study indicate that majority of teachers were not adequately able to identify the major teaching /learning methods. This is consistent with
the results in the previous studies on competence-based curriculum (Shemweleleka, 2008; Banda, 2011; Timothy, 2011) which showed that majority of secondary school teachers were not implementing the revised competence-based curriculum as stipulated in the syllabus and curriculum frameworks. This supported by the findings in the present study on the awareness and understanding components presented in the previous sections. In view of the present findings, it is evident that CBC was not effectively implemented in secondary schools and thus students were not actively involved in creating meaning and knowledge of what they were supposed to learn. The findings imply that the teachers were the sole transmitter of knowledge and this was contrary to the guidelines in the implementation of CBC (TIE, 2010), whose emphasis is on students being involved through role-play, group work, demonstration, and discussion. Furthermore, previous studies have indicated that for effective learning, students must be involved in the learning process (McDonald, 2005).

4.5 Teachers' Practices of the Implementation of Competence Based Curriculum

The second objective of the study examined teachers’ practices in the implementation of CBC. Two themes emerged from the data through observations of the teaching/learning practices. Moreover, through documentary review of the assessments given by teachers, the researcher gathered information on how the curriculum is implemented in terms of assessment. Generally, the findings indicate that, in view of these dimensions, there was poor implementation of the CBC in secondary schools. The details of the findings are discussed using two subthemes namely teaching/learning approach, and assessment methods, which are used by teachers in secondary public schools.
4.5.1 Teaching/learning methods

It was important to investigate how the CBC is implemented in the classroom. The researcher using observation check list (Appendix 2) observed teachers teaching different subjects and the findings are presented in Table 6.

Ten teachers were observed, and the findings indicate that most teachers were not using participatory approaches in teaching as required by competence-based curriculum. For example, only 10% of teachers were satisfactorily using classroom-based problem solving, demonstration and classroom-based enquiry (Table 6). Furthermore, only 30% of teachers were conducting searches for relevant materials in the library and online. The findings indicate that practice of technical skills and laboratory skills by teachers were done only at 40% level. Group work to do assignments was implemented by only 40% while group work to make presentation was implemented by 70% of teachers. This indicates that most teachers use group presentation as a major way of implementing participatory approach in CBC. However, group discussion in the teaching learning process were rarely used (Table 6). While summarizing readings was implemented by only 30% of teachers, posing problems and solving those set by the teacher were implemented by less than 50% of teachers. It is alarming to note that none of the teachers under study analysed case studies as a method of teaching.

The findings indicate that most of the teachers largely used traditional methods of teaching comprising mostly of providing notes (70%), teacher monitoring and correcting students utterance, and evaluating students learning (each 80%). Likewise, majority of teachers preferred student working alone (80%) instead of the participatory methods such as group work. These findings are not consistent with the curriculum of 2005 which
emphasizes that CBC must include; “discussion, role play, demonstrations, debates, practices of technical or laboratory skills (TIE, 2010).

4.5.2 Assessment methods used by teachers during classroom observation

This was the second subtheme emerging from practices. The study found that, it was necessary to evaluate the assessment of the curriculum, which is part of the implementation of any curriculum. The findings through observations and documentary review methods indicate that all teachers in the study use quizzes, oral questions, tests, and final examinations as a means of assessment. Furthermore, it was indicated that, teachers provide homework to assess their students if they understand the topic. Thus, the method was reported to be useful to teachers in making assessment regarding to their particular class in their respective subjects.

In the same way, findings obtained through documentary reviews relearned that, assessment methods indicated in the curriculum are formative and summative assessment which in deed provides teachers with relevant understanding regarding teaching and learning process of teachers and students. However, it was also indicated that, summative assessments provide teachers with all important criteria which makes them improve and change their mode of teaching. The study findings are supported by Mtitu (2014) who maintained that, while other teachers found to master their subject that is reflected in their ability to archive the implementation of CBC, yet other teachers who were insufficient in their subject did not archive CBC.
### Table 6: Classroom observations on teaching and learning methods

<table>
<thead>
<tr>
<th>Item</th>
<th>ND</th>
<th>PD</th>
<th>D</th>
<th>MD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom based problem solving</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>80%</td>
<td></td>
<td>10%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>Classroom based enquiry</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td>30%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Demonstrations</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>70%</td>
<td></td>
<td>20%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>Conducting searches for relevant materials in the library</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>60%</td>
<td></td>
<td>10%</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>Conducting searches for relevant materials on line</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>100%</td>
<td></td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Summarizing readings</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>50%</td>
<td></td>
<td>20%</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>Posing problems</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>40%</td>
<td>40%</td>
<td>10%</td>
</tr>
<tr>
<td>Solving problems set by the teacher</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td>40%</td>
<td>30%</td>
<td>10%</td>
</tr>
<tr>
<td>Practice of technical skills</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td>40%</td>
<td>30%</td>
<td>10%</td>
</tr>
<tr>
<td>Practice of laboratory skills</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>60%</td>
<td></td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Debates,</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>100%</td>
<td></td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Group discussions</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td>50%</td>
<td>30%</td>
<td>0%</td>
</tr>
<tr>
<td>Group work to do assignments</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>50%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Group work to make presentation</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>20%</td>
<td>50%</td>
<td>20%</td>
</tr>
<tr>
<td>Analyzing case studies</td>
<td>9</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>90%</td>
<td></td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Providing notes</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>20%</td>
<td>60%</td>
<td>10%</td>
</tr>
<tr>
<td>Teacher talks; Student listen</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>60%</td>
<td>2%</td>
<td>10%</td>
</tr>
<tr>
<td>Student work alone</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>10%</td>
<td>20%</td>
<td>60%</td>
</tr>
<tr>
<td>Teacher monitors and corrects students utterance</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td>10%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Teacher evaluate students learning</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td>10%</td>
<td>20%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Note: ND= Not Done; PD Partially, Done= D =Done; MD=Mostly Done
4.6 Challenges Facing Teachers on Implementing Competence Based Curriculum

The third objective examined challenges teachers face during teaching and learning under the CBC. This objective was important in order to discover the factors limiting the implementation of CBC. The data were gathered through focus group discussion in which five groups of four teachers were formed. Several challenges emerged from the teachers’ responses. The challenges included; Overcrowded classroom, inadequate Teaching/learning materials, (Textbooks Syllabuses Reference books, charts and maps, library apparatus writing books ICT and other electronic materials prototypes), language of instruction, shortage of physical facilities such as classroom, libraries, laboratories low ability of students joining secondary school, unsupportive classroom environment, teaching load, poor motivation to teachers, lack of science teachers, lack of support from parents, lack of study tour, lack of teacher’s in-service training. These challenges as discussed in section 4.5.1.

4.6.1 Overcrowded classes

All teachers in the sampled schools (100%) indicated that one of the big challenges is the teacher-student ratio. On average, many teachers’ in-group discussions indicated to have large classes with between 50 to 80 students per class. For instance, during focus group discussion with teachers from school A one of the teachers reported the following:

“In my class there are 70 students and I am the only teacher for chemistry. Therefore, having such number of students in a single class is almost challenging making it contrary with the national teachers’ students’ ratio of 40. This makes it difficult for a teacher to teach and make sure that all students participate in learning.”
In the same way, another female teacher from school C reported the following during FGD:

*I am a Biology teacher the challenge I am facing in this school is large classes, on average, there are over sixty-five students per class in each stream. For instance, most classes had large numbers than the normal capacity as in some classes students had to sit near the blackboard in such a way that teachers had no even place to pass when teaching.*

The analysis of all the responses in the group discussions and participant observation indicated that the average teacher–student ratio was 1:58. This was in contrast to the guidelines of competence based curriculum (TIE, 2010). The study findings are supported by findings on a study done in Tanzania by Shemwelekwa (2008) who showed that, a teacher-student ratio in most community secondary schools was as high as 1: 68. In another study Timothy (2011) indicated a high teacher-student ratio especially in Physics subject. In this regard, the high teacher student ratio is a major a factor of hindering effective implementation of CBC in terms of use of a variety of assessment procedures. Teachers were unable to provide assessment tasks at the required frequencies using the advocated assessment methods (Shemwelekwa, 2008; Timothy, 2011). Consistent with the present study, previous study indicated that in relation to teaching strategies, most teachers used the lecture and question and answer methods owing to large class size (Shwandi, 2017).

Furthermore, it was found that, teaching load was the challenge in the implementation of CBC during group discussion sessions. One of the teachers in focus group discussion from school D clarified the following:
“I am teaching Mathematics from Form 2 to Form Four in all the streams...so in a week I usually teach up to 40 periods. There is a big challenge of teachers especially science teachers as you find only four teachers for the entire school. Also, there is also a limited number of teachers specifically science subjects teachers, example in my school I am the only Mathematics teacher.”

Another teacher teaching English in school C reported a similar challenge during group discussions and had this to say:

“Teaching load is a challenge to most of us as there are few teachers. Students have to be taught. On average for me I teach 38-40 periods per week.” Therefore, having few numbers of science teachers have greatly affected the use competence based approaches which lead us to results on teacher’s centred learning.”

In the same way, during focus group discussion from schools A, B, and E similar challenges on teaching load were reported. Having high teaching load is in contrast to the guidelines of the implementation of CBC as indicated in the curriculum for ordinary level secondary school education (TIE, 2010). The guideline stipulates that the maximum periods per week should be 28 per teacher. Therefore, these challenges limit smooth implementation of CBC in secondary schools in Tanzania.

4.6.2 Lack of motivation among teachers

The findings in the present study indicate that, teachers were not motivated to teach in secondary school because of various reasons. Majority of the reasons are related to teaching load and large classes. Other indicator of lack of motivation were teaching environment and not providing teachers with annual increments for a couple years.
During focus group discussion from school D, one of the teachers had the following to say:

“Our school has no teacher’s offices and all teachers are accommodated in one class we call staff room... This renders teachers unable to prepare well and to have tranquillity when preparing teaching notes, this makes me lose my motivation in teaching”

Similarly, during focus group discussion one of the teachers from school B said:

“I am not motivated to teach as in this case it is sometime very difficult to work effectively and efficiently since motivation to work is very significant. I feel like not bothering because of not being promoted, recognized, and appreciated and not even given allowances. So I don’t see why I have to straggle for making teaching and learning material for CBC”.

In general, it was found that, teachers are less motivated with teaching as one of the challenges being lack of training and incentives packages’ as it happens that teachers spend their private time with no recognition which to large extent de motivate them. In that regard, most of the teachers were of the views that there is a need of motivating them through provision of professional development as well as incentives.

In this respect, there are issues of apparent lack of institutional responsibility of encouraging teachers to be proactive, innovative in information search, and self-learning. One would not expect an ICT teacher to bring up the issue of training at this era of information explosion. The teacher simply needs to know the right sources of information. Here, he/she would definitely be able to access whatever information he/she
requires including any advancement in ICT technologies to help him/her during teaching and thus gong abreast with current knowledge in their discipline, including following the CBC approach in teaching ICT and other subjects. Learning how to learn is perhaps another gap where teachers do not seem to be aware of. Previous studies have indicated that one of the challenges facing teachers which directly affect implementation of the curriculum is lack of motivation. For example Tambwe (2017) while studying Challenges facing implementation of Competency Based Education and Training (CBET) system in Tanzanian Technical Institutions reveal lack of motivation to some teachers due to unfavourable working conditions, and low students’ cooperation attitude. Another study has indicated teacher’s motivation to impact academic performance in secondary schools (Rugarabamu, 2018).

4.6.3 Lack of science teachers

It was reported that, in most schools there is a serious problem of science subject teachers as there are subjects that have no teachers at all. As a result, some subjects that are advocated in the curriculum are not taught as indicated. The following was reported by one of the teachers from school A during focus group discussion:

“There is a big challenge of teachers especially science teachers as you find only three teaches for the whole schools, for example, my school has only one Mathematics teacher. However, in my school we don’t have a Biology teacher at all what we do is that one who teaches Chemistry subject assists in teaching Biology as well.”

Limitation of science teachers has greatly affected the implementation of CBC, which requires teachers to embark on teachers’ centred learning. This is evidenced by the fact
that a single science subject teacher has to teach from form one to form four. Thus, with the use of CBC approach it is difficult for a teacher to finish the syllabus on time, Furthermore, according to Anangisye and Barret (2007), CBC is faced with different challenges including the disdained responsibility, lack of teachers' motivation, lack of organization support, teachers’ moral problem or professional misconduct and inadequate opportunity to access CBC. The findings is consistent with previous study conducted in Arusha Region indicate scarcity of science teachers in public community secondary schools which affect implementation of the science subjects syllabuses (Lyimo et al., 2017a).

4.6.4 Lack of in-service training

In similar discussion, lack of in-service training to all subjects was cited as a challenge. As a result, teachers lacked important skills on how to perform their tasks effectively and efficiently and to the fullest. In this regard, during FDG from school C the following was reported:-

“This thing called in-service-training is not common these days, I have been teaching English subject for about seven years now and have not attended any in-service training...and I think nobody in our school has attended in recent years.”

Conversely, another teacher from school D reported the following:

“Regarding professional development particularly in service training, we normally don’t attend seminars and other in-service trainings, which are supported by the Ministry of Education but again due to lack of funds, lack of materials and government support. None of these has been provided frequently, the seminars that we normally attend are invigilation for examination.
The findings signify the fact that, majority of teachers in the sampled schools lacked in-service training. As a result, most of them lacked appropriate knowledge on CBC and according to the conceptual framework (Figure 1) impact the implementation of competence based curriculum. Furthermore, previous studies (Orodho et al., 2013), indicated that lack of in-service training is challenge affecting curriculum implementation. Another study by Michael (2017), while assessing the effect of in-service trainers on teacher’s performance in secondary school indicated teachers strongly desire to receive training on curriculum, ICT and school management.

4.6.5 **Low ability of student joining secondary education**

Poor student entrance qualifications were noted as a challenge whereby majority of students begin secondary education without adequate abilities. Through group discussion in school A it was revealed that majority of students were unable to master the basic concepts in many subjects, which were supposed to be mastered in primary school. For example, one teacher from school B said:

> “Students in my class especially form one cannot read a sentence correctly and others cannot make divisions and fractions in Mathematics as today even form three students cannot read and write properly, they make many grammatical mistakes and are unable to make arguments”

The study findings are supported by Makunja (2016), who among other findings it is reported low ability of students joining secondary schools is among the challenges facing education delivery. Others challenges included lack of sufficient in-service training on CBC to teachers, in-sufficient teaching and learning resources, overcrowded classrooms, students’ readiness to accept CBC.
4.6.6 Lack of parental support

Some teachers indicated lack of parents’ support as a challenge against implementing CBC. It was revealed that teachers usually do not get cooperation of parents in terms of completing assignments and supporting materials for homework. For example, one teacher in a group discussion in school E had this to say;

”Some parents do not buy any materials like books or project papers because it is known that “free education” and therefore students do not complete assignments”

Another teacher in a group discussion in school C said:

“Some students do not attend class regularly and some students come in the morning and leave before school hours and when parents are required to cooperate they say it is teacher’s responsibility”

The present findings which indicate lack of parental support is consistent with previous study on parental involvement in academic activities indicated that 67% of parents of registered students were not effectively involved in their children’s’ academic activities such as guiding homework completion, tracking students attendance and volunteering in school activities (Nyembeke, 2016).

4.6.7 Lack of facilitation for study tour

Almost all of the participants indicated that lack of study tour in different subjects as a challenge in the implementation of the CBC. It was also reported that, study tours make students have practical experience of what they are leaning in the classroom. One of the Geography teacher in school C indicated this challenge in this way:
“When we teach some topics such as mountains and rivers and national parks it would have been very good if students have study tour.... The challenge in our school is that we don’t have study tour because of lack of funds and parents will not contribute towards study tour due to free education”

It was similarly experienced as a challenge in all other groups discussion; in other schools one teacher in school D indicated:

“In our school we don’t have IT laboratory and therefore we cannot teach and demonstrate issues related to computer or internet. If we had the opportunity of going for a study tour to places such as COSTECH, University or other places students could see the real things we teach theoretically by drawing on the blackboard”

Therefore, it was indicated that, facilitation to study tour had positive impacts towards CBC since it within this technique students become source of information and in particular they participate effectively and efficiently during teaching and learning in their respective schools. However, it was further indicated that facilitation to study tour assists learners to gain deeper understanding and become more competent with their teaching since through study tour they get new experience through practical and physical visits in various places for the main aim of improving not only teaching but also learning.

4.6.8 Inadequate teaching/learning materials

In the present study, teaching and learning materials were cited by all the respondents as an obstacle in implementing CBC. Majority of teachers indicated lack of the necessary materials and others indicated shortage of the materials. The materials that were mostly
cited as lacking were textbooks, syllabuses, reference books, charts, and maps. Other materials that were cited as a challenge were library apparatus, prototypes, writing books, ICT and other electronics materials. For example in one school E, it one teacher revealed:

“In our school, we encounter various challenges such as shortage of teaching and learning materials such as textbooks in such a way that a group of students share one book which makes learning very challenging we don’t have libraries for student to read. However, students are not interested in borrowing books; they don’t have the culture of reading.”

The point on lack of reading culture among students is interesting; however it is worth reflecting that reading culture is not an innate trait, students are not born with reading culture for them bring to school. To the contrary, reading culture is cultivated among students through the creation of enabling environment for them to read. It is not just about how to read, but what to read and when to read it. If most schools do not have reading matters, either for schools subjects or for other genres, it may be difficult to expect students to develop reading culture out of nowhere.

On a similar vein, another participant in another school A said:

"We have big number of students, we lack teaching and learning materials such as books and library and because, we have students with poor background it is challenging to get them up to the standard with such shortages of teaching/learning material.

The above challenges were consistent with the observation data, which were based on observation of teachers in the five schools. It was clear that classes were big, have an average of 65 students, while the standard number is 40. It was also found that, lack of
syllabus and teaching aids such as maps and charts were confirmed as challenges to CBC. To validate the study findings for example during focus group discussion, in one school a Geography teacher said, “It is challenging to teach Geography effectively. We lack readymade maps and charts and even when we want to draw the drawing pens and manila cards are not always available” However, during observation it was observed that, teachers were seen teaching with very little creativity in such a way that they failed even to construct local tools which would facilitate the entire process of teaching and learning in their particular schools. According the conceptual framework guiding the present study (Figure 1) teaching and learning materials directly influence implantation of CBC and thus the findings in this study showing improper implementation are consistent. Likewise study by Lyimo et al. (2017b) indicated that there is inadequate facilities such as textbooks, reference books, maps and globes due to increase of students in community schools which contribute to low achievement.

4.6.9 Language of instruction

Language of instruction was found to be another challenge in implementing CBC in secondary schools. In most cases the language was ungrammatically correct English, and often it was a mixed between English and Kiswahili. Through observation, it was noticed that students were unable to explain clearly their responses in English and often they end up switching to Kiswahili and mixed Kiswahili and English. Likewise, during focus group discussion language problem was cited as affecting implementation of CBC as one teacher in school B said:

“We are using English as medium of instruction in secondary school and all subjects except Kiswahili is taught in English... but the problem to our students they are not competent in English and I think some of the concepts they cannot
grasp them as intended...you could see in their exams and tests and even in the responses in classroom...I think the language is a big challenges than all other challenges“

The quote above signifies the fact that, students had problems with the mastering of English language which is the language of instruction in secondary schools. However, during observation it was observed that through teachers blame students of having low mastering of English language but indeed even teachers in most schools were seen had low mastering of English language. Previous study on exclusion through language and specifically examining reflection on classroom discourse in Tanzanian secondary schools indicated that use of English as medium of instruction in secondary schools is a barrier to learning and in forecasting classroom interaction (Vuzo, 2010). This finding is consistent with the present study in which language of instruction barrier contribute to majority of students been excluded in classroom dialogue.

4.6.10 Inadequate physical facilities
This challenge was related to physical facilities such as libraries, classrooms, laboratories, and ICT facility rooms. It was found in all schools that physical facilities posed a challenge in the implementation of CBC. In most cases, classrooms were available but not adequate to accommodate the number of students and this led to overcrowding in classes. In some schools, two streams were sharing a class as their class was still in rehabilitation. Libraries and ICT rooms were not available in all the schools and teachers especially those teaching ICT identify this as a major challenge as one teacher in school C said:

“This is the “dotcom” age and students are supposed to learn ICT through computer and internet but in our school we don’t yet have a computer library or a computer room and this makes me very difficult to teach ICT effectively.”
In relation to laboratories, it was revealed that due to the campaign for laboratories in each school, some classrooms were set as laboratories but do not have the necessary equipment for conduct basic experiments. One teacher in school E had this to say:

*In our school, we don’t have laboratories and enough libraries for student to study. However, after the campaign for laboratories in each school one big classroom was transformed into a laboratory but the challenge is that there are no equipment and chemicals to conduct basic experiments and this is a challenge to us who are teaching sciences subjects.*

The findings in the present study indicate that the learning materials were are the major challenge, and in the majority of schools, the teacher had the textbook, and one or two students had a copy each, thus students would wait until the required information is written on the board. Large and overcrowded classes were a second major challenge. Thus, managing large classes was a challenge in the implementation of CBC. It is noteworthy that studies (Boniface, 2016) revealed that constraints in classroom practices make teachers unable to implement the required aspects of any curriculum and eventually making teachers register frustrations about the teaching profession. Similarly, Makunja (2016) observes that, the challenges related to lack of relevant teaching and learning resources widely reported in schools affect negatively the implementation of competence-based curriculum. On the other hand, Mgina and Lwehabura (2011), revealed challenges related to lack of libraries, information resources, and lack of competent librarians in the implementation of CBC. For example, the language challenge found the in the present study is consistent with what was reported in previous studies such as Komba, Kafanabo, Njabiri and Kira (2012), who found that Tanzania learners have a persistent problem not only in spoken English, but are lacking competences in written English language.
4.7 Strategies Used by Teachers to Overcome the Challenges and Implement CBC

This was the last research objective, which identified the strategies teachers used to overcome the challenges regarding the implementation of CBC. In this regard, the key focus was on the strategies used by teachers to address the challenges encountered in the implementation of competence-based curriculum. Through the analyses of the data following strategies were identified.

4.7.1 Handling large classes

For example, majority of teachers while responding to challenges of teacher-student ratio and lack of teaching materials indicated to have reverted and skipped some activities in the classes’ for instance oral presentations, group discussions even brainstorming students about previous lesson. One teacher from school B had this to say during the interview:

“To be sincere with this big class and lack of teaching learning facilities I found using the discussion groups and discovery learning not possible and I usually give lectures and write on the board students write notes which is the same way as the previous approach.”

The quotation above signifies the fact that, teachers use several alternative to make sure that they teach effective so as to help their learner capture diverse issues regarding what they are supposed to learn. However it was further found that, though there were congestion in classes but teachers tried at their level best to help students generate understanding.

During observation for instance, it was observed that, in the sampled schools there were big numbers of students than the accepted number set by the ministry of education
science and technology. For instance in one of the school there were more than 70 students which is against the education and training policy of 2014 which clarified the importance of having only 40 students per each class. Thus the study findings are supported by Mosha (2004) who emphasized that, for effective implementation of CBC, teaching/ learning materials that include printed materials (textbook, teachers guide, manuals, handbooks, and modules) and non-textual materials (such as laboratory apparatus equipment and chemicals) are essential. Although textbooks play a great role in facilitating the teaching process, studies indicates that majority of schools have shortage of and outdate teaching materials such as text books. Some studies show that some schools have no library, workshop machinery, and laboratory and when present they lack adequate apparatus or chemicals (Mosha, 2004).

### 4.7.2 Reduction of teaching load and providing notes to students

It was also found that, due to many periods that science teachers have, teachers opted for not teaching at all. In the same way some teachers particularly science subject teachers opted to merge two stream into one class and teach them. One teacher from school C had this to say:

> Using group discussion in my subject with these large classes and packed desks and chairs would consume about half of the time...therefore as an alternative I just provide notes so students can write and read.

Another teacher from school C have this to say:

> I teach form one to three, there is 12 stream how can I teach all stream? Sometimes I just combine them in one stream and teach them there are few who can understand the lesson.
In this regard, large classes in secondary schools lead to high teacher student ratio, which is quite different from students- teacher ratio proposed by (TIE, 2010) indicate that teacher student ratio for secondary school should be 1:40.

4.7.3 The shift to knowledge based as a Teaching/learning approach

It was found in other schools that the challenges were so serious that some teachers had no particular interest in discussing the strategies. For example, one teacher from school B reported the followings:

“The challenges related to the implementation of CBC in my subject are beyond my ability, because the things which are required to implement CBC effectively are such as having at most 40 students per class but here we have over 70 ... many students are sharing one book ...So I do what is possible which is to teach and give home work.”

Another participant from school D said:

“The challenges are beyond my capabilities and to be honest ‘Sometimes I use teacher centred approach most of the time so as to make sure that, students understand the lesson and I complete the syllabus, and I also move in accordance to the scheme of work’.”

During observation, it was revealed that majority of teachers were using teacher centred approach in most classes and when they tried to use competence-based approach, it became difficult and time consuming moving students into groups. The curriculum however recommend for the use of methods such as group discussions, case study, and or projects in the implementation of CBC (Kita, 2004).
The study findings indicate that teachers faced difficulties in managing large class sizes and this was therefore an obstacle in the implementation of CBC. It was further observed that in the overcrowded classes, sitting arrangement-hindered teacher’s use of CBC approach in terms of interacting with students and choice of teaching materials. Thus, forming small discussion groups and teachers moving around to supervise group work was difficult. Thus, teachers opted for lecture method that is not consistent with CBC approach. For an effective implementation of competence-based curriculum, previous studies indicate that quality education depends on quality and quantity of teaching materials available (Cooksey and Mmuya, 1997).

4.7.4 Facilitating availability of teaching/learning materials

Teaching and instructional resources that are effective in teaching competence-based curriculum include overhead projectors, computers audiotape filmstrips, videotapes, and discussions (Siggins, 1998). The findings through observations indicate that as a strategy of addressing lack of teaching learning materials, teachers used textbooks, chalk, and chalkboard, manila cards to teach most of the subjects. For instance, during focus group discussion with teachers the following were reported:

_There are so many other techniques that we use as a means to make sure that we tried at our level best to teach our students. For instance in our school, though we don’t have computers even overhead projectors but we normally use local methods to make sure that, things are moving and the total process of teaching and learning is simplified as much as we can._

The quotation above shows that, teachers are in a good position to make sure that, though they teach in a very difficult situation while lacking important equipment for facilitating
the entire process of teaching and learning, but they sometimes use local techniques to simplify the entire process of leaning. It was also found that, teachers were more creative in some schools which in deed enabled their teaching become more interesting understandable and attractive.

Thus, the strategy is in contrast with the guidelines for effective implementation of CBC and inconsistent with the conceptual framework in this study, indicating that adequate and relevant resources are necessary for the implementation of CBC. Thus, teacher’s strategy was in response to the shortage of adequate teaching resources. Findings in previous study show that students and book ratio was an important factor in effective implementation of CBC (Kita, 2004).

4.7.5 The use of code switching during teaching and learning

It was indicated that English as a medium of instruction in secondary school posed a challenge in the implementation of CBC. In this regard, it was observed that mostly students and sometime teachers were not competent in the use of the English language. As a strategy students responded in English at the beginning and when they face difficulty in expressing fluently they switch to Kiswahili. In addition, often a student can put a Kiswahili word in a sentence where it was difficult to get a proper English word. This observation was further substantiated through interview with one teacher from school D who said:

"You know although English is a language of teaching and learning in secondary school student are not using it anywhere else and also remember in primary school it is Kiswahili. Therefore, in subject, we mix, and students call it “Kiswangish.” For me it is important they understand the topic".
Therefore, it is noted that the CBC is not effectively implemented due to language challenge and teachers and students have opted for using both languages either interchangeably or in a mixed way. Previous studies on English as of language of instruction indicated that the language acts as a setback in learning process in Tanzanian secondary schools and tertiary institutions (Lupogo, 2014). This finding is consistent with present findings in which teachers overcome the setbacks by code-switching to Kiswahili language.

In summary, the chapter present and discuss findings related to teacher’s conception of the CBC, practices and challenges in the implementation of the curriculum and strategies used to overcome the challenges. Specifically, the findings showed that teachers were aware of the existence of competence-based curriculum, but majority of teachers (60 %) had inappropriate understanding of competence based curriculum. In terms of teachers’ classroom practices in the implementation of CBC, a mixture of competence and knowledge-based curricula was revealed. This was influenced by teacher’s conception and teaching and learning facilities as well as other factors such as teacher-student ratio and teaching load.

Furthermore, challenges facing teachers in secondary schools in the implementation of CBC included large and overcrowded classes, language barrier, insufficient number of science teachers and teaching/learning materials, lack of motivation, in-service training, study tour, and adequate physical facilities. With the challenges existing in secondary schools, teachers devised strategies to overcome the challenges which included skipping some activities not possible in large and overcrowded classes, providing notes to students, opting to teacher-cantered approach instead, improvising teaching and learning materials and code-switching English and Kiswahili as language of instruction during learning.
CHAPTER FIVE

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This chapter provides conclusions and recommendations for action and further research. Section one consists of the major conclusions related to the perceptions, practices, challenges in the implementation of CBC and strategies teachers use to overcome the challenges. Section two gives the recommendations for action as well as the future research direction. The study investigated teachers’ conceptions of competence based curriculum, its implementation in public secondary schools, and the challenges encountered by teachers and the strategies used by teachers to address the challenges.

The first objective of the study determined teachers’ conceptions of competence-based curriculum. Through thematic content analysis the findings indicated that majority of teachers were not knowledgeable on CBC in terms of understanding of the components of CBC although majority were aware of the existence of CBC. Furthermore, the finding indicated that majority of teachers were not adequately able to identify the key teaching/learning methods such as classroom-based problem solving and inquiry, group work to produce presentation and assignments, practice of technical and laboratory skills and conducting searches for relevant materials in the library.

Nevertheless minority of teachers were able to identify and explain the teaching and learning methods such as debates and group discussions. Therefore the study concludes that teacher’s conceptions of the CBC is limited in terms of understanding of Teaching/learning and assessment methods conversant with CBC guidelines (TIE, 2010) and has implication in ineffective implementation of the CBC.
The second objective of the study examined teachers' practices in the implementation of competence-based curriculum. Through observations of the teaching/learning practices, and through documentary review of the assessments given by teachers, the findings indicate that there was poor implementation of the CBC in secondary schools.

The findings indicated that majority of teachers were not using participatory approaches in teaching as required by competence-based curriculum in that classroom-based problem solving, demonstration and classroom-based enquiry, conducting searches for relevant materials in the library and online, practice of technical skills and laboratory skills and group work to do assignments were rarely used. Similarly readings, posing problems and solving those set by the teacher were poorly implemented.

Furthermore, group discussion in the teaching learning process and case studies as a method of teaching was rarely used. However, group work to make presentation were implemented by majority of teacher which concludes that most teachers only use group presentation as a major way of implementing participatory approach in CBC. The findings concludes that majority of the teachers in secondary schools do not practice CBC as required instead largely used traditional methods of teaching comprising mostly of providing notes, teacher monitoring and correcting students utterance, and evaluating students learning. This has implication in leading to poor academic performance of the students in secondary schools.

The third objective assessed teacher’s challenges in the implementation of competence-based curriculum in secondary schools. The findings through focus group discussion and observation indicated that there were major challenges facing teachers on implementing
CBC in secondary schools as follows: Overcrowded classroom and high teaching load were major challenge which is contrary to guideline for effective implementation of CBC (TIE, 2010). Inadequate teaching/learning materials such as books, charts and maps, library apparatus, ICT equipment and other electronic materials prototypes) and shortage of physical facilities (e.g., classroom, libraries, laboratories were identified as major obstacle in the implementation of CBC.

Through classroom observation it was observed that teachers and students mixed English and Kiswahili during learning and therefore the study concludes that the use of English as medium of instruction in secondary school is a major barrier in the implementation of CBC. Moreover lack of in-service training on the implementation of CBC within the existing circumstances in secondary schools such as unsupportive classroom environment, poor motivation to teachers, lack of science teachers, lack of support from parents, and lack of study tours were identified as major obstacle in the implementation of CBC.

The study therefore concludes that there are major challenges facing teacher in implementing CBC in secondary schools and these challenges hinder effective implementation of CBC. The last objective examined the strategies used by teachers to address challenges encountered in the implementation of CBC in secondary schools. The findings indicated that, there were various strategies used by teachers to address the challenges during implementation of CBC. In handling large classes, and lack of teaching/learning materials teacher reverted and skipped some activities in the syllabus, combined two streams in one class, opted to knowledge based teacher centred approach and relied on use of chalkboard in teaching most of the subjects. Furthermore, findings
indicated that code switching English-Kiswahili during teaching and learning process was strategy used to overcome the incompetence in the use of English as a medium of instruction in secondary school. Thus it is concluded that CBC is ineffectively implemented due to language challenges. The study concludes that the strategies are contrary to the guidelines for effective implementation of CBC.

5.2 Recommendations

To improve the implementation of CBC in secondary school the following recommendation for action and for further research are provided based on the findings in the study.

5.2.1 Recommendation for action

The findings indicating majority of teachers having limited conception in terms of understanding of teaching/learning and assessment methods conversant with CBC, calls for the recommendation for responsible organ such as MoEVT and TIE to provide in-service training in the implementation of CBC to secondary schools teachers.

The findings indicating inadequate resources, physical, human and financial resources hinder the implementation of CBC in secondary schools and therefore it recommended Government sectors responsible for education and other school owners to increase educational budget for effective implementation of CBC.

As the findings indicated that majority of the teachers in secondary schools do not practice CBC as required due to challenges instead revert largely to traditional methods, it is recommended that as much as the TIE is eager to review the curriculum from time to time it is crucial that teachers involvement in these processes should be maximized.
5.2.2 Recommendations for future studies

The findings of the study indicating a teacher using various strategies to overcome the challenges was impressive. Thus, the study recommends further research on the strategies in line with the existing teaching and learning environment in secondary school and with the guidelines in the implementation of CBC. Studies on improvisation of teaching learning materials and strategies in handling large classes in the implementation of CBC might be future avenue of research in this area.
REFERENCES


APPENDICES

Appendix 1: Interview guide

Section A: Demographic Data

Name of the School……………………

Name of the teacher (optional)………………

Sex of respondent

1) Male ………………. (2) Female………………

Education Level of respondent

1) Diploma  (2) Degree (3) Postgraduate Diploma and (4) Masters and above

Teaching experience of respondents

(1) 5 years and below (2) 6-10 years  (3)11-15 years   (4)16 years and above

A) Teachers’ conceptions of Competence Based Curriculum

1. Have you ever heard of the concept of competence based curriculum?

2. What is your understanding about the competence based curriculum?

3. Which practices identifies a curriculum as a competence based one?

4. Does teaching reflect competence based curriculum?

5. How many times have you received seminars on CBC?

6. Mention any teaching methods that you know….

7. Mention any assessment methods that you know…..
B) Practices of Competence Based Curriculum

1. What do you do in implementing the competence based curriculum in your school?

2. How do you approach your lessons?

3. How do you assess your students?

4. How do you ensure that students have acquired skill after learning?

C.) Challenges of CBC implementation

1. Do you face any challenges during implementation of Competence Based Curriculum?

2. If yes, what are these challenges?

3. How have you personally addressed the challenges?
### Appendix 2: Observation checklist

<table>
<thead>
<tr>
<th>Item</th>
<th>Not Done</th>
<th>Done</th>
<th>Partially Done</th>
<th>Mostly Done</th>
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<tbody>
<tr>
<td>Classroom based problem solving</td>
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<td>Classroom based enquiry</td>
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<tr>
<td>Demonstrations</td>
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<td>Conducting searches for relevant materials in the library</td>
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<tr>
<td>Conducting searches for relevant materials online.</td>
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<td>Summarizing readings</td>
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<td>Posing problems</td>
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<td>Solving problems set by the teacher.</td>
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<td>Practice of technical skills</td>
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<td>Practice of laboratory skills</td>
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<td>Debates,</td>
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<td>Group discussions</td>
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<td>Group work to do assignments</td>
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<td>Group work to make presentation</td>
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<td>Analyzing case studies</td>
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<td>Proving notes</td>
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<tr>
<td>Teacher talks; Student listen</td>
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<tr>
<td>Student work alone</td>
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<tr>
<td>Teacher monitors and corrects students utterance</td>
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<tr>
<td>Teacher evaluate students learning</td>
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Issues that researcher focused on during observation of teachers’ practices