ASSESSMENT USED TO MEASURE PRACTICAL SKILLS IN COMPETENCE BASED CURRICULUM IN SECONDARY SCHOOLS IN TEMEKE DISTRICT, TANZANIA

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THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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DECLARATION

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DEDICATION

This work is dedicated to my Parents late Father Raphael Kangalawe and my mother Margaret Nyeho Kangalawe for laying a good foundation in my initial education.

ABSTRACT

The purpose of this study was to explore on the Assessment Used to Measure a Competency Based Curriculum in Secondary schools in Temeke District in Tanzania. The study was guided by the following research questions: What is the assessment modes used in the implementation of competency based curriculum in secondary schools in Temeke district-Tanzania? Which resources are available for the assessment of the implementation of competence based curriculum in secondary schools in Temeke district-Tanzania? What are the teachers' skills and competency in assessing competence-based curriculum implementation in secondary schools in Temeke district-Tanzania? How do teachers use the assessment feedback to improve practical skills in secondary schools in Temeke District-Tanzania? The study targeted and sampled 7 head teachers, 115 teachers, 4 students, 1 district Education Officer, 1director of National Examination Council of Tanzania and 1 Director from Tanzania Institute of Education. Convergent Parallel Mixed Methods Research Design and Constructivism Learning theory guided the study. Data was collected using questionnaires and interview guides and were subject to content validity. Cronbach Alpha technique determined reliability for quantitative Likert scale items. In qualitative items' reliability was determined in terms of their credibility and dependability. Quantitative data was analyzed using Statistical Package for Social Science version 23 to generate frequencies and percentages that summarized data. Qualitative data was analyzed using content analysis and presented using narratives and direct quotes. Key findings showed that assessment skills in Competence Based Curriculum are not satisfactory. The mode of assessment used in schools was pen and paper. Lack of learning resources and inadequate teachers' natural sciences post a challenge assessment of practical skills. The study concluded that most teachers lacked competence in assessing practical skills. The study recommended that the Tanzania Institute of Education should prepare a document on assessment of practical skills and hold in service courses to equip teachers with skills they need handle Competence Based Curriculum.

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ABBREVIATIONS AND ACRONYMS

AFL -Assessment Form for Learners

CA - Continue Assessment

CAPs - College of American Pathologists

CBC - Competency Based Curriculum

CBE - Competency Based Education

CSEE - Certificate for Secondary Education Examination

CUEA - Catholic University of Eastern Africa

DAPS - Direct Assessment of Practical Skills

DEO - District Education Officer

DQASO- District Quality Assurance and Standard Officers

EAC - East Africa Community

ESDPT- Educational Sector Development Program in Tanzania

FDAS - Full Democratic Assessment System

FGS - Federal Government School

GCSE – General certificate for Secondary Education

HCPS - High Class Private Schools

IAPS - Indirect Assessment of Practical skills

ICD - Institute of Curriculum Development

ICT - Information and communication Technology

IE - Institute of Education

JSS - Junior Secondary School

KICD - Kenya Institute of Curriculum Development

KIE - Kenya Industrial Estate

LCPS - Low Class Private School

LSE -Life Skill Education

MDGs - Millennium Development Goals

MI - Multiple Intelligence

MKUKUTA- Mkakati wa Kukuza Uchumi na Kupunguza Umasikini Tanzania

MoEC - Ministry of Education and Culture

MoEST - Ministry of Education Science and Technology

MoEVT - Ministry of Education and Vocation Training

NACTE - National council of Technical Education

NECTA - National Examinati0on Council of Tanzania

NSGRP - National Strategy for Growth and Reduction of Poverty

OGP - Open Government Partnership

SGS - State Government School

SPSS - Statistical Package for social Science

SSS - Senior Secondary School

TETPo - Tanzania Education Training Policy

TIE -Tanzania Institute of Education

UNESCO -United Nations Education Scientific and Cultural Organisation

UNICEF - United Nations Children Fund

URT - United Republic of Tanzania

USA - United States of America

UUM - University of Utara in Malaysia

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Classroom evaluations are significant component of the teaching and learning process as they help teachers in decision-making in the classroom (Goodrum, Hackling, & Rennie, 2001).Assessments are learning tools as well as a way to assign grades and determine whether students fulfill their learning goals. Learning and quality of education defined through assessment and any improvement in learning relies on the quality of improvement in assessment (Nenty, 2005). Assessment is at the center of all educational operations and in order to establish its validity and efficiency, each activity in education depends on evaluation. Quality assessment carries on the quality of instructional inputs, procedures and therefore on the quality of education that society enjoys (Nenty 2005).

Student evaluation is a cornerstone of efficient teaching and learning, whether through standardized tests or classroom-based interventions. Good evaluations, taken as a whole, cannot only provide a reliable and valid measure of the learning and comprehension of a student, but can also help guide professors and students on a daily basis. Assessment has played a key role in United States education policy over the previous two decades, as it has for many centuries in other nations. Large-scale, summative evaluations are seen as strong levers for affecting what occurs in schools and classrooms, and as such, evaluation studies are regularly conducted to gage students ' strengths and weaknesses. In the United States of America, the adoption of the 2001 slogan, No Child Left Behind Act has become more routine, more and more important and concentrated on key content fields. Results from large-scale summative assessments, along with other measures of achievement, are regularly used to determine whether students can advance to the next grade, and to judge the quality of schools and the educators who work in them, (21st partnership skills 2007)

Assessment is a systematic process for collecting information that can be used to make inferences about characteristics of people or objects (Reynolds, Livingstone, & Wilson, 2009). Assessment according to Marriot & Lau ((2008), is not only about gathering data, but is also a process used to evaluate the knowledge, understanding, skills or skills of learners and is an indistinguishably connected to a learning outcome course or program. Other scholar such as Cooper (2011) has emphasized the need for the practical skills in assessment when he said:

> We expect all teachers to teach all learners how to think and interact efficiently in order to survive in the 21st century, and they need to evaluate these abilities and benchmark expectations for what our high school graduates will require in the globe. Furthermore, in every class and at all grades, this must occur every day. If we do this in all our colleges, while also stimulating curiosity and creativity, then all learners will have the abilities they need to get and maintain a decent job and be a citizen contributing economically, while our nation will have a workforce that can continuously generate innovations. An innovation-based economy in the 21st century will be more competitive and prosperous.

From the views of Cooper, it is evident that competences are part of what should be assessed and there for it is important for teachers to acquire skills for assessing these competencies before they can impart them to learners. Lau and Cooper (2008) asserted the assessment in five dimensions: a) Why assess? Deciding why assessment is to be carried out and what outcomes the assessment is expected to produce. b) What to assess? Deciding, realizing or otherwise coming to an awareness of what one is looking for in people being assessed. c) How to assess? Selecting from among available means, those assessments we regard as being most truthful and fair for various sorts of valued knowledge. d) How to interpret? Making sense of the outcomes of the observations or measurement or impressions

we gather through whatever means we employ; explaining, appreciating, and attaching meaning to the raw events‘ of assessments. e) How to respond? Finding appropriate ways of expressing our response to whatever has been assessed and communicating it to those concerned. In the process of learning in the role of the teacher to ensure that, the assessment is valid by observing those dimensions. Kipkorir (2014) citing (Ontario Prospects: 2002) when discussing the mathematics assessment, said in assessment it is important that students see mathematics as sensible, useful and doable. Teachers should take every opportunity during the instructional/learning process to help students develop a positive disposition towards mathematics by focusing on mathematical process skills. It is important for the teachers and educators to note that assessment is not an event of assigning examination of quiz but moreover is the process.

Countries of world have raised concern about what constitutes assessment in the school curriculum. For instance, Jones (2005) in the book “Assessment for Learning” raised fundamental questions teachers should ask before doing assessment in United Kingdom schools. This is because assessment is part of classroom activities; it is a fundamental process required to promote learning and ultimately achievement. For this reason, Jones (2005) proposes that learners need to know and understand the following before learning can take place: What is the aim of the learning? Why do they need to learn it? Where are they in terms of achieving the aim? How can they achieve the aim? These questions come up with strong base of assessing the learning process in school.

Effective assessment does not just happen; it requires teachers to have competency in testing skills. These include the need for teachers to explain the learning objectives to learners, to constantly check their understanding, demonstrate the standards learners are required to achieve and help them recognize when they have achieved that standard.

For students to experience success in their learning, feedback on how well they are doing is of paramount importance. Teacher must always give effective feedback after assessment so that learners know what to correct and how to improve. Teachers should also demonstrate high expectations and make it obvious to learners that they believe that they can improve on their past performance. It is important therefore, for school principals to provide regular opportunities for teachers and learners to reflect on the past performance. These reviews are likely to assist learners' to recognize aspects of their own work that need improvement and develop learners' self-assessment skills. These assessment strategies have been found to increase the ability of skills development for the learner in United Kingdom.

Meeting the demands of today's world requires a shift in assessment strategies to measure the skills now prized in a complex global environment. The 21st Century Skills Partnership thinks such a change is essential to our schools ' extensive implementation of 21st Century skills. We need to shift from assessing discrete understanding mainly to assessing the capacity of learners to believe critically, examine issues, collect data, and create informed, reasoned choices using technology. These assessments should recognize a variety of alternatives to a challenge in relation to posing real-world difficulties. For example, a possible assessment of 21st-century skills would focus more on the operational skills of a student, such as their expertise in appropriately and efficiently using multiple sources, rather than on whether or not papers were submitted with the correct response (21st skills 2007).

The competence based curriculum education has brought a positive impact in the world economy especially in the developed countries. The practical skills realization has empowered individual and employability as well as productivity increase, advanced economies, high-growth economies, innovative sectors and companies. Jobs today involve trained individuals who can react flexibly to complicated issues, interact efficiently, manage data, work in teams and generate new knowledge, Hanushek *et al* (2008)

Hanushek (2008) introduced the importance of competence based curriculum in the 21st century by pointing out that competence based education enhanced critical thinking and problem solving skills. The measures from, Partnership Innovation and Skills Association (PISA), term "cognitive skills" states that skills and innovation have great impact in economy for different countries in the world. The impact differentiate the economic leaders from the laggards among 50 countries from 1960 to 2000.

A highly skilled work force can raise economic growth by about two-thirds of a percentage point every year." Worldwide, the average annual Growth Domestic Product (GDP) growth rate for more than half a century is 2 to 3 percent, so this is a significant boost. "Higher levels of cognitive skill appear to play a major role in explaining international differences in economic growth, (partnership for 21st skills 2008).

The United States does not evaluate other vital abilities that are in demand in the 21st century beyond the evaluation of reading, mathematics and science. All Americans, are not only educated in the classroom; but also assess the need for abilities of the 21st century that will boost their economy. These include their marketability, employability and citizenship readiness. Their curriculums also include skills in critical thinking, which empowers learners to assess information's legitimacy with precision and value. Skills that enable them analyze and evaluate information so that they create reasoned choices and take purposeful action. These include solving complicated, multidisciplinary, open-ended issues that are regularly encountered by all employees in every type of workplace. A skill set highly associated with job creation, creativity and entrepreneurial thinking (Pink 2005, Robinson 2006).

Many of the fastest-growing employment and emerging sectors depend on the creative ability of employees, the ability to think unconventionally, question the herd, imagine fresh situations, and generate incredible job. Similarly, Americans with an

entrepreneurial mindset, the ability to acknowledge and act on possibilities, and the desire to accept danger and accountability can generate employment for themselves and others.

According to Luckerson (2015), in competence based curriculum teachers need to assess students' practical skills, which are necessary to prepare young people for "real world". Basing on the African context, having appropriate and adequate materials to assess students' skills in South Africa was of utmost importance for educational development. The ministry of education must ensure that teachers training colleges impart and educate teachers on the way of assessing. It is critical that this content be included in the curriculum that is concerned in the Teachers Training Colleges (TTC). Different countries have made effort to help teachers acquire the necessary skills. For example, in Malawi UNICEF has supported assessment of students' practical skills by reaching 5,168 schools and about 2.5 million children helped, teachers are helped to develop a competency-based curriculum within school programs on how to assess students' practical skills, (Marzano 2010). The support from the UNICEF in Malawi show in African context education was to narrow the existing gap between the teaching in the classroom and the real life in the field. Because the pen and paper assessment does not meet the purpose of education to an individual.

Kipkorir (2009) in the study examined classroom assessment practices by Secondary school mathematics teachers in Nandi Central Sub-County. In this study, the researcher established the objective of investigating the common teachers' classroom assessment practices used in school across teaching levels. The researcher was concern to establish common assessment tools/formats applied by math teachers for classroom assessment. The other objective was to find out how the math teachers used assessment information collected from students. The last objective was to examine on how often math teachers considered the mathematics competencies as they prepared assessment tools for classroom assessment practices. The study used both quantitative and qualitative research designs to collect and analyze the data.

Data were collected through questionnaires, interviews and analyzed documented data from the School records. The findings were that discourse, observation, students‘ self-assessment and peer assessment were the common classroom assessment practices reported. Open-open questions, select-type items and super items were the common assessment formats used across school categories. Assessment information were mainly used to give students grades or marks, diagnose students‘ learning problems and to assign them to different programs or tasks and mathematical competencies often considered when math teachers prepared assessment tools across school categories included communication, problem solving, mathematical reasoning and use of symbols and formal language. (Kipkori 2009). The study point out some of the assessment like observation and self –assessment.

In Kenya, for instance, the study conducted by the Kenya Institute of Curriculum Development in 2009 on evaluating the validity of primary education in Kenya. The findings indicated that there were gaps in the acquisition of practical skills in the Kenyan educational system, which led to the conclusion that there is great need of competency-based education in the country. The findings suggested that practical skills are necessary for economic development. The research done by the Kenya Institute of curriculum Development (KICD) contributed to the introduction of competence-based curriculum in Kenya in order to develop practical skills to the learners. Among the skills gaps missing in the content based curriculum included; communication skills, agricultural skills, entrepreneurial skills, vocational and technical skills, innovation and creativity as well as ICT skills. This implies that the content-based curriculum does not adequately integrate innovative, vocational and technical skills, which are considered to be important for meeting the demand for skilled labor and the country’s goal of industrialization (KICD, 2009). On the same note, concerning the study in Rutayuga (2014) in the researcher with tittle “The emerging Tanzanian concept of competence: conditions for successful implementation and future development” argued that

competence-based education and training (CBET) has received much interest globally due to its perceived potential in producing competent graduates required by the labour market. It is currently a common feature of most vocational and technical education and training reforms around the world. In this study the researcher was reviewing the evolution of CBET and understandings of the notion of competence globally, and examine and critique its efficacy in addressing the challenges of skill formation in Tanzania. The researcher marked that due to a combination of global and national influences, the introduction of CBET in Tanzania in early 2000 introduced a paradigm shift from the traditional knowledge-based education and training (KBET). In this research the researcher used the complex dynamic of shaping factors which was to explore more thoroughly through a further 16 interviews with four CBET pioneers, two policy makers, one employers' association, two professional associations and seven employers of CBET graduates in order to understand how wider influences are interpreted by those 'on the ground'. In addition, a survey of 28 teachers from technical institutions and document analysis were undertaken. The researcher come up with the result that the approach at global, national and local level in the social-technical model of competence could emerge in Tanzania. The study also considers the conditions for its successful implementation. Rutayuga (2014)

A study conducted by TIE (2008) in Tanzania on the status of curriculum for A-level secondary schools showed that the majority of form six students lack many crucial competencies including proficiency in spoken and written English, entrepreneurial skills, creativity, self-confidence patriotism and ICT mastery and application. This is evident enough that education system in Tanzania for secondary school does not equip learners with the required skills in the process of teaching and assessment.

Rutayuga (2014) introduced that educational system in the Tanzania Mainland is based on the 2-7-4-2-3+ system: two years of pre-primary education, seven years of primary,

followed by four years of ordinary level secondary, two years of advanced level secondary and a minimum of three years of tertiary level. The pre-primary education level caters for young children of ages from 3-6 years old. The primary education level is a seven-year education cycle and is compulsory for all seven to fourteen years old. "At the end of this cycle, pupils enrol in secondary education", vocational education and training (VET) or enter the world of work Rutayuga ,(2014). Transmitting from one level to the next level, it involve the summative assessment. There are standard seven national examination, form four nation examination and form six nation examination. Standard seven national examination is the exit to secondary school, the form four examination is the exit to form five and the form six national examination is the exit to tertiary education.

In latest educational reforms in Tanzania (United Republic of Tanzania (URT), 2000; MoEVT, 2010), the increasing need for the education system to generate capable graduates has gained considerable attention. This is because it has come to light that growth and development cannot be attributed solely to the increase in traditional inputs (Land, Labour, capital) but to improvements in labor force understanding and abilities and technological modifications (Lewin, 2000). This is seen in the 2025 Development Vision of Tanzania, which stipulates states that:

Education should be regarded as a strategic agent for mental conversion and the creation of a well-educated country, adequately equipped with the expertise necessary to address the development problems facing the country in a competent and competitive manner. In this light, the system of education should be restructured and qualitatively converted with a focus of encouraging creativity and problem solving " (URT, 2000 p.19).

On the other hand, in Kenya stipulated that the education system of Kenya could no longer afford to produce graduates who lack employable skills, which were deemed crucial for the academic, social and economic survival in the modern world. The scheme therefore

needed substantial reforms to enable schools to produce graduates who could generate expertise, believe creatively, and address the types of complicated social and economic issues they encounter in society (Hamilton, Mahera, Mateng'e & Machumu, 2010). Competence-based education (CBE) is desirable in order to align the education given with society's vibrant social and economic requirements. It seemed to be a response to the issues raised about school graduates ' ability and employability as it highlighted the characteristics (competencies) to be accomplished by learners (Maodzwa-taruvinga & Cross, 2012). Kitta & Tilya, 2010 posit that as a way of achieving what the policy stipulated in the year 2005, the Tanzanian government, through the Tanzanian Institute of Education (TIE) revised the curriculum from being content- based to competence-based (CBC). The changes was aiming to equip graduates with sufficient knowledge and life skills such as communication skills, agricultural skills, entrepreneurial skills, vocational and technical skills, innovation and creative skills as well as ICT so as to enable the graduates survive academically and socially in the world today.

On the view of the practical skills described in the curriculum to be imparted to the learners found that Tanzania should shift the education system from content based to competence-based curriculum. Competence based curriculum specifically outlines what is expected of the learners and what learners should be able to attain upon completion of the program of the study. Within this structure, the learners and the program will be assessed on the competence related to the content and the skills reflective in teaching and performing the actual teaching. Having this in mind, the education system should be restructured and qualitatively converted with a focus on encouraging creativity and problem-solving,(Tilya 2014). This outcome explained in the competence based education as the practical skills which the students are expected to demonstrate after the completion of the given education

program. The only way to determine these outcomes is through examinations that are the assessment process.

A study conducted by Tanzania Institute of Education (TIE) in 2013, in secondary schools the curriculum and method used in the assessment of student indicated that the assessment of practical skills in secondary schools is not clear. TIE further indicated that secondary education curriculum should provide important information for evaluating the competencies of learners and should cover a variety of aspects of student learning including content mastery, cognitive development, social and psychological development, and shifts in humanistic spiritual principles. The learners shall demonstrate the practical value of their studies. The assessment of practical skills should be given more value to add in education system. The main objective is to direct and enhance the teaching and learning process. Effectively scheduled assessment can foster learning, create trust, and create knowledge of students as learners. There will be two main assessments elements: Continuous Assessment (CA) and Final Examination, (TIE 2013).

The competency based curriculum education in Tanzania as paradigm shift from content-based curriculum is one of curriculum innovations, which has been happening in the education sector in Tanzania since the country got independence in 1961. Tanzania got its independence in 1961 and since then its educational sector has undergone four main sessions of restructuring the curriculum. *Taasisi ya Elimu* (2013) clearly outlines the four curriculum reviews. The first one happened in 1967 and its goal was to eliminate the content in the curriculum, which was encouraging racism, and serve colonial interests. This curriculum aimed to produce learners with a high self-esteem as Tanzanians. It further encouraged people to live together, work together and value human rights regardless of skin colour and economic status; it encouraged building skills for critical thinking and self-confidence, and finally, strove to prepare learners to live a village life and be self-reliant. This is where in

1967 Tanzania introduced the Socialism/ Ujamaa policy in the country. It was very important change in the country, which affected all sectors: social, economic, and educational. This is the time the education in Tanzania came to be called education for self-reliance what is known as Elimu ya Ujamaa na Kujitegemea in Kiswahili.

The second major curriculum review took place in 1979. According to *Taasisi ya Elimu* (2013), these changes added a new emphasis on technical and commercial subjects in secondary schools. Previously these subjects were taught only in tertiary institutions. The third curriculum review took place in 1997. The Taasisi ya Elimu (2013) notes that these changes were based on research findings from Makweta *Commission of 1991-92*. These changes aimed at offering education via radio broadcasting and embraced knowledge delivery as 'percentages of time' per subject, which meant the allocation of time for each subject according to weight of the subject. For example, at primary education, Mathematics received 30% of teaching time, writing 24%, Reading 22%, Sports 6%, Fine Arts 6%, Health 6% and Religion 3% per cent. These changes also affected education at secondary school level. It is therefore evident that this curriculum did not place an emphasis on learner competencies but rather put more emphasis on time allocation per subject.

The fourth curriculum reform was in 2005, which originated from the Tanzania education Training policy of 1995. Taasisi ya Elimu (2013) indicates that the last curriculum review that took place in 2005 was guided by a new motto, namely 'competency-based curriculum' (CBC), meaning that it aimed at strengthening learners' skill acquisition (Justin, 2013). According to TIE (2013):

> This secondary education curriculum offers vital data for the assessment of student skills and must cover a variety of aspects of student learning, including content mastery, cognitive development, social and psychological development and shifts in humanistic spiritual principles. The main purpose shall be to guide and improve the process of teaching and learning. Effectively planned assessment can promote learning, build confidence and develop students understanding of themselves as learners (p.4).

The ideals of shifting from content-based curriculum to competence-based curriculum /knowledge based came as a response to the following: The Tanzania Development Vision 2025 and the Education Development Sector Programme. The National Strategy for Growth and Reduction of Poverty (NSGRP) commonly referred to by its Kiswahili acronym (MKUKUTA), which is the abbreviation of Swahili words *Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania* ,the Education and Training Policy of 1995 (Tanzania Education Training Policy (TETPo 1995), the Education Sector Development Programme (ESDP, 2001) and the Millennium Development Goals (MDGs).

The National Strategy for Growth and Reduction of Poverty (NSGRP) initiative, popularly known as (Mkakati wa kukuza Uchumi na Kupunguza Umaskini Tanzania) MKUKUTA underscores the importance of education as an effective tool for poverty reduction and improving the quality of life. Goal 1: Ensuring equitable access to quality primary and secondary education for boys and girls, universal literacy among women, men, and expansion of higher, technical and vocational education (TIE 2010).

One of the millennium development goals is the provision of quality education to all. Much global pressure face developing countries to ensure that the Millennium Development Goals are met by 2015. Out of the eight Millennium Development Goals, one is directly relevant to secondary education, which is Goal number 3: Promotion of gender equality and empowering women by eliminating gender disparity in primary and secondary education by 2005, and at all levels by 2015 UNESCO, 2000 as cited by TIE 2010.

Tanzania Vision 2025 perceived quality and relevant education as a strategic agent of change that should be treated as an agent of mindset transformation and for the creation of a well-educated nation. Education should be transformed with expertise and practical skills adequately equipped to address the development problems facing the country competently and competitively. The education system qualitatively should be restructured and transformed with a focus to encouraging creativity problem solving pertaining to the social and economic development of the nation, (Tanzania Vision 1995).

Tanzania intends to be a country with a mindset of development and a competitive spirit in its people. These attributes were guided by education and expertise and are critical in allowing the country to use experience efficiently in mobilizing domestic resources to ensure the fundamental needs of individuals and to achieve competitiveness in the regional and global economy. Tanzania would strive to achieve creativity, innovation and a high level of quality education in order to respond to changes in development and compete effectively at regional and international level, aware of the reality that competitive leadership will depend on the level and quality of education and knowledge in the 21st century (URT 1995).

These ideas from difference bodies influence the reform of curriculum in Tanzania. The ideas were to be put into action by the trusted board in the country. The body trusted for curriculum and education at large in Tanzania is Tanzania Institute of Education (TIE). Tanzania Institute of Education (TIE) is a Parastatal Organization under the Ministry of Education, Science and Technology (MoEST) responsible for ensuring that the quality of education is set and maintained in accordance with the higher standards of pre-primary, primary, secondary and teacher education (http:/tie.go.tz/index.php/about-us)

The Institute's commencement came about in more than 50 years ago through enactment of Act No. 13 of 1963 whereby, the Institute of Education (IE) was established under the Dar es Salaam University College, a constituent college of the University of East

Africa. This institution established with expressed purpose of relating the University College's education programme to Government Policy on Education, the Ministry of Education directives on education and the curriculum at Teacher Training Colleges. (http://tie.go.tz/index.php/about-us)

The Institute of Education was legally disengaged by law from the University of Dar es Salaam University in 1975 Act No. 13 of 1975. The Institute became a corporate body through this Act. The Institute's main role was designing, developing, testing, reviewing and/or revising curricula at the pre-primary, main, secondary, special education and teacher level. Because of the Institute's role, policymakers decided that the role of the Institute in the name of the institution should be reflected. This was done by Act No. 4 of 1987, which altered the Institute's name to Institute of Curriculum Development (ICD) without changing its goals or tasks. It became apparent after a six-year lapse (1987-1993) that the new name (ICD) did not embody the Institute's complete variety of tasks and operationsThis resulted to another shift in the Institute's title to the present title, the Tanzania Institute of Education (TIE), which was implemented by the 1993 Act No. 5.. (http://tie.go.tz/index.php/about-us). This is body which today is refer as Tanzania institute of Education without changing its role stipulated by the parliament Act No 13 of 1975. It has all the legal responsibility mandated by the parliament on the education reform and educational development in Tanzania, (http://tie.go.tz/index.php/about-us).

In general, the changes of curriculum usual based on modification of the key areas of the curriculum which includes the content of the curriculum, measurement, and evaluation and the teaching and learning pedagogy. The changes also suggest the teaching and learning materials shall be under the control of this institution. The changes are possibly involving the modification of the previous curriculum and come up with the new curriculum. These

changes all the teaching and learning process because it affects the syllabus in all levels of part of the educational level (Taasisi ya Elimu, 2013)

Tanzania Institute of Education (TIE) (2013), as an official body responsible for educational matters in Tanzania recommended that in secondary school education, there shall be two main components of assessment; Continuous Assessment and final Examination. Continuous assessment was to be formative in nature. It shall have diagnostic value in helping the learners develop a realistic self-image and inform the teacher on how the teaching and learning process can be developed (TIE, 2013). Continuous assessment determines the progress of the learner and monitor the learning process occur throughout the four years' cycle. The assessment tools, which used were assignments, tests, projects and terminal examinations. The scores for continuous assessments would constitute a part of the final assessment of the student. Terminal test scores and project scores were sent to the National Examination Council of Tanzania (NECTA) as Continuous Assessment (CA) of the student. The assessment of practical skills is the method that shall be used to probe students' understanding, reasoning and critical thinking rather than their ability to return memorized facts. The methods shall include: Portfolios, Rating scales and rubrics, Checklists, Oral presentations, Project work, Practical tasks to demonstrate performance skills, Written essays or reports and Analysis, for example of texts.

Since the curriculum emphasizes the development of competences and practical skills, the assessment shall be competence-based assessment. Examination format shall have the following characteristics: Each paper shall consist of two sections. Section one shall test knowledge (theories and principles). Section two shall test skills and attitudes developed/attained teaching and learning methods in class. Science and technology subjects shall be examined through theory and practical papers. Each paper shall carry a weight of 50% of the total marks of the respective paper. Language subjects shall be examined through

written and oral examinations. The final/national examination shall carry a weight of 50% of the assessment marks. Thus, the total marks for the final/national examination shall include the 50% marks from continuous assessment and 50% marks from the final examination on making a total of 100% (TIE, 2010).

Practical skills assessment is very important in the whole system of teaching and learning, in science practical work has a time-honored in education of engineering, clinical and other scientists. When department grants are being cut it and demonstrators' time reduced it affect the whole process of teaching and assessment, it is particularly important to ensure that practical work and its assessment are effective. Furthermore, practical work and writing up occupies a substantial part of work of students yet is not importance always the marks they got do not reflected the reality of the course. Other practical work is that students learn more effectively when engaged actively in practical tasks. The goal of practical skills works for the purpose of improving technical skills relevant to subject, improve understanding, methods of scientific enquiry, reinforce theory with practice, develop problem solving skills and nurture professional attitudes, (Brown et al 2003).

For the practical skills assessment in secondary school to be effective the availability of resources is more important. Resources refer to any inputs used in learning that makes teaching to be more effectively achieve the desired outcomes. These could be human resource, infrastructure, and financial resources. Also referred to as teaching and learning curriculum support materials. Resources in education include both book and non-written materials and any other learning environment that provides a learning experience to a learner without leaving out the human resources (KICD, 2010). Resources in education play a very important role in facilitating learning and learning outcomes (McAliney, 2009).

For effective curriculum implementation and curriculum assessment, quality physical and human resources are required. Indeed, it is difficult to envisage learning without

resources. In educational institutions, resources are critically important for ensuring wide access to quality practical skills assessment in education are therefore selected and used to stimulate interest and motivate learning (UNESCO, 2002).

For effectiveness of curriculum implementation, teachers are considered as the key people in the whole process. The competency-based curriculum in the assessment of practical skills requires the competency of teachers in the assessment of the practical skills. It is helpful for the teacher to be knowledgeable about educational assessments because the results may have a significant impact on other people's lives. Assessment results are widely used for selection, certification, diagnosis, special instruction or placement. Furthermore, tests, exams, quizzes, projects, assignments or portfolios are part of teaching and assessment is valuable for the teacher to have knowledge of using the assessment kit for the learners and their development. The ability to develop worthwhile assessments does not come naturally but it is a skill that can be acquired and it needs knowledge as well as experience. Moreover, assessments demand teacher's attention because they are a sizable portion of professional workload. Indeed, some countries are scrapping external examinations to give more focus on teacher assessment results – the latest example is England which removed the external examinations for 14-year olds in October 2008 and relied upon teacher assessment of practical skills, (Athanasou 2009).

The teachers' training is considered as an important issue in the assessment of practical skills in Secondary Schools in Temeke District in Tanzania. The research done by Makunja (2016) on the challenges facing teachers in implementing competence based curriculum in Tanzania: the case study in Secondary schools in Morogoro municipalityThe sample research included 102 randomly sampled teachers, 6 head teachers, and 6 academic masters / mistresses purposely selected from six secondary schools discovered in the Municipality of Morogoro. The research revealed standard and knowledge of teachers in

general about the implementation of competence based curriculum education. The findings show that teachers are not aware about the competence education itself before considering the assessment of practical skills. In this respect, it can be asserted that competence-based curriculum is introduced not only by teachers who have no idea of the concept, but also by teachers who are not familiar with it. During an interview one head teacher of one school admitted when he was interviewed by the researcher he responded that he does not know exactly what the competence based curriculum is all about, it was difficult for him to comment anything about practical skills assessment, (Makunja 2016). Another teacher who was an, academic master had the following to say about teachers' conceptualization of the CBC concept:

> Among many educators, competency-based curriculum is not well established. Teachers know it differently and this always gives many educators confusion, particularly when preparing lesson plans for teaching operations and assessment instruments. I believe only a few people have the correct competency-based curriculum (CBC) concept. I believe, however, that CBC is a curriculum that allows learners to show capacity to conduct a specific activity; it focuses more on what learners can do rather than what they know; we are not educated on how to proceed with this so-called skill-based curriculum. The limited or incorrect concept of the competence-based curriculum tends to restrict and undermine its CBC practice.. (Makunja2016).

Assessment in education is not only used for improving teaching and learning because learning is not end by itself especially in consideration of practical skills assessment. The feedback from assessing practical skills will be useful for educational stakeholder to develop and promote the practical skills in secondary schools in Tanzania. Programs like Personnel assessment which is a systematic approach of gathering information about individuals. The information gathered are used for the learners create employment and career-related decisions. Assessment is carried out for a particular purpose. The employer, for instance, may perform an evaluation of staff to select staff for a job. Career counselors can perform staff assessments to provide customers with career guidance. All assessment instruments used

to create employment choices are subject to professional and legal norms regardless of their format, standardization level, or objectivity. (U.S. Department of Employment and Training, 2000). These justify that Tanzanian practical skills assessment will help the employer to get the qualified workforce needed in the job market of the 21st century.

Apart from these factors, which are expressed in the curriculum to cultivate the practical skills to the learners, there are other factors, which can be out of the teaching system but increase the implication of the practical skills in human life. Effective skill development schemes that link education to technical training, technical training to labor market entry, labor market entry, and lifelong learning can assist nations maintain productivity growth and translate growth into more and better employment. The 2008 Labor Market Report examines the difficulties experienced by nations and their policy choices at distinct stages of growthIn doing so, it seeks lessons appropriate to less advanced, developing and more industrialized nations in connecting skills development systems not only to present labor market requirements, but also to future requirements as technology, markets, environmental and growth strategies shift. These skills sometimes are not only acquired in schools setting can be influenced by person effort, influence from the peer and parent and the economic status, (Labour market conference 2008). The study will treat the factors that are not part of the curriculum realization as the intervening variables.

1.2 Assessment of Practical Skills

Assessment is vital to the education process in school all over the world; the most visible assessments are summative. Summative assessments are aimed at evaluating what learners have learned at the end of a unit, promoting learners, ensuring that they have met the necessary requirements on the manner to obtaining college graduation or entering certain occupations or as a technique of choosing learners to join further education, (CERI 2008)

Assessment in competence-based curriculum is part of the curriculum implementation process and is supposed to be competence based as well. Several assessment methods are envisaged to be used in competence based curriculum. These include the use of portfolios, rating scales, checklists, oral presentations, project work, practical tasks to demonstrate performance skills, written essays or reports, analysis of texts and in-class tests and end of terms written examinations. Assessment is mainly based on two major types namely; formative and summative assessments. (Greaney, 2001).

According to TIE (2013), there are general practical skills, which are to be developed in each subject taught in school. Effective acquisition and promotion of learning skills should enable an individual to effectively participate in multiple contexts or social fields that contribute to an individual's overall successful life and a well-functioning society.

The skills stipulated in the curriculum, include critical and creative thinking encompasses the creation or generation of ideas, processes, experiences or objects and their evaluation. The two terms are interrelated and complementary thinking elements. These thinking processes are combinations of abilities, knowledge, values, attitudes and skills that are useful for the individual and societal progress. Mathematics and computer studies will help the learner to develop these skills. The critical thinking and creativity will help to develop the ability of thinking reflectively and logically, think for themselves, recognize the limits of individual reflections and the need to contribute to and build upon mutual understanding Creative thinking will create an awareness of how knowledge within subject/ fields is created, assessed, refined and altered. To promote intuitive and creative thinking and the capacity to assess thoughts, procedures and experiences in meaningful situations, creative and critical thinking is essential. The end product of critical and creative thinking is to act on things learnt to perform practical tasks, use tools and equipment to measure things, see what actions should be taken on the basis of knowledge and experience, (TIE 2013)

Communication is another practical skill expressed in the curriculum to be realized through the teaching of language in secondary school. This competence is essential to enable learners improve their ability to communicate with others, both orally and in writing. It focuses on improving learners 'understanding of the language demands in the required areas of learning based on the recognition that language proficiency is central to learning in all subject areas. In this competence, students shall be able to: Use a range of language experiences for developing knowledge of a subject area. Demonstrate competences in linguistic ability and effective use of communication skills in English, Kiswahili and in at least one other foreign language. The language proposed are Germany, Arabic, French and in the recent years the Chinese language has been included in the list, (TIE 2013)

Business subject are subjected to develop the entrepreneurship skill which include the Bookkeeping, Commerce and Home Economics. This will help the learner to be able to run their own enterprises and small business for the purpose of creating more employment.

Agriculture as the backbone of the Tanzania economy has given more weight in the curriculum as an important practical skill to be developed during the implementation of the competence based curriculum education. This competence is designed to enable learners to become capable, self-reliant, self-motivated and lifelong students. Independent learning enables learners to develop values, attitudes, knowledge and skills needed to make responsible decisions. It aims is to motivate more youth to decide to take part for self-employment in agriculture sector, (TIE 2013). The view of the research is to debate on how the schools in Temeke district are implementing the competence-based curriculum on the process of assessing the practical skills stipulated.

According to Riess (2015) assessment of competence can be done through the following modes: Direct assessment of practical skills (DAPS), formative assessment, Indirect assessment of Practical, internal assessment, Process assessment and practical

assessment. Direct assessment of practical abilities (DAPS): where students ' abilities are evaluated either in the presence of the individual awarding marks, for instance, when watching object manipulation in science, or when recordings are created when assessing oral abilities in modern foreign languages and sent to the person awarding marks. Formative assessment: Where learners receive feedback from their teacher in the course of their teaching in order to advance rather than receiving a final evaluation of their learning. Indirect evaluation of practical skills (IAPS): where the abilities of learners are inferred in a written examination or some other secondary type of assessment (Ries 2015). Internal assessment: carried out in the centre of learning (school/college), marked by the teacher and moderated by the awarding body, in case of Tanzania the awarding body is the National Examination council of Tanzania (NECTA).

Summative assessment: Learning assessment, where the marks are used for a terminal test or examination. Students' assessment is a very important tool for the academic development in any field study. The assessment motivates students in their studies when they receive the feedback on time. Classroom assessment encompasses a range of activities from construction of assessment tasks, administration, marking and grading the tasks to interpreting the results. Information generated through assessment can help teachers to evaluate the effectiveness of their teaching strategies. It is essential to use assessment feedback to make decisions about teaching and learning so as to ensure that meaningful learning takes place (Ndalichako 2011). The view of this scholar express the important of assessment in education which means in the assessment of the practical skills will help the learners to develop the skills ability if they are assessed by the teachers from the classroom level to the national level.

1.3 Competency Based Curriculum

The term “Competence” has several meanings depending on the context in which it is used. In this document, the word “competence” used to refer to expressions that describe what the learner should be able to do as a result of teaching and learning the curriculum content. Effective acquisition and promotion of learning skills should allow an individual to participate effectively in multiple contexts or social areas that contribute to an individual's overall successful life and a well-functioning society (TIE, 2010).

Competence is the student's capacity to perform a specific activity or assignment on a prescribed standard that emphasizes what they can do rather than what they know. Competence-based curriculum is a kind of education that aims to create the capacity of learning and carrying out tasks to a prescribed standard in learners. Therefore, a competency-based curriculum includes particular declarations of results showing the competencies to be achieved (Makunja, 2016).

Competency is a collection of defined behaviors that provide a structured guide for identifying, evaluating and developing individual behaviors. Some scholars consider ‘Competence’ to mean a combination of theoretical and practical knowledge, cognitive skills, values and behavior used to improve performance; or a description of skills, knowledge, attitudes and behaviors required for effective performance of a real-world task or activity (Stiggins, 2006).

Others scholars define competency as an ability to choose and use cohesive or integrated combination of knowledge, skills and attitudes with the aim to realize a task in a certain context (Kouwenhoven, 2003). Further, competencies are outcomes that learners should have acquired by the end of their general education in order to succeed in academics, in self-development, in acquiring employment and success in jobs, and inclusion in a

knowledge society. Job competencies aren't the same as work duties. Competencies include all the related expertise, skills, abilities, and attributes relating to a person's work. This set of context-specific characteristics that involve superior job performance can be used as a standard for job performance measurement and employee development, recruitment and hiring (Luhambati, 2013).

A general objective of education is to develop a person as a good citizen. In order to be a good citizen a person has to achieve some special capabilities or competency. A person does not achieve the same capabilities from the different types of education system prevailing in the society. She/he achieves different types of competency through a different type of education. For example, a person acquires competency in reading, writing and accounting through adult education. A person acquires the competency of mechanical operation through technical education. They acquire competency of tailoring through sewing. At the time of planning any educational programme the level of competency for a person should be determined and the major responsibility of the teacher will be to assist the learners in achieving the competency. That means enough knowledge of any subject; outlook and skill make a man competent. According to some, as asserted by Mission, 2009, integration of knowledge, outlook and skill is competency.

1.4 The Historical Development of Competence Based Curriculum

The competence based education passed through different stages of theoretical and implementation since it started in 1960 in United States of America until today we experience it in African countries. The first of these phases, dating from the mid-1960s to the beginning of the 1970s, is called terminological because it was precisely during this era when basic concepts of a future educational discipline were implemented in scientific use.. It is when the concept “competency” itself was introduced in education context. In the previous time, the term had been used to identify professional, a special division. These concepts linked to

each other as "professional," "expertise," "education" based on their differences with respect to the central notion of competence (Butova, 2015).

The second stage approximated to have begun in the mid-1970s to the early 1990s adopted by the psychologist in western Europe aspect who dominated in the competency-based approach, of the development of competence-based approach to education. Scholars created and developed many competency-based education ideas at that time, but their implementation was restricted to solely psychological communication theory, human resources, and psychological governance and administration (Burns, 2002).

The third phase of competence-based education development is defined by global growth and active implementation of findings reached in the two earlier phases. This stage was more active in Russia by Russian by the psychologists. This period is known for significant increase of interest in competency pedagogics in Russia, where academicians helped to put Competence Based Education (CBE) into the reality of human life by considering the social and cultures of the people. This context brings the competence-based education at the heart of human development and socialization. A characteristic feature of the third, modern stage of competence-based approach to education development becomes a documentary recognition of this approach. This considered as the four pillars of modern education stages, which are: learning to know, learning to do, learning to live together, and learning to be are actually “global competencies” (UNESCO 2015)

Therefore, the recent understanding of Competency-based curriculum derived from an analysis of a potential or actual role in modern society that tries to certify student progress on the basis of validated or demonstrated performance in some or all aspects of that role (You, 2011). In other words, competencies encourage a mastery of the relevant content knowledge of the associated skills; both cognitive and practical and it includes internalization by the learner of the associated values (UNESCO, 2015).

In East Africa Competence Based Curriculum (CBC) is associated with a person's capacity and ability to evaluate information received and making choices based on the information. Competency is a word used to denote a person's ability to acquire, retain and evaluate information as stated by Wangeleja (2010).

The amended competence-based curriculum in Tanzania, as in other African nations such as the 2005 South African curriculum, embraced learner-centered pedagogy, formative and genuine assessment approaches and emphasized the growth of competencies and the application of knowledge in actual life. The syllabus clearly indicates that the revision process entails among other things change in paradigm from content- based to competence base curriculum. This implies that the teaching and learning method, including the assessment, must shift its orientation from memorizing content information rotatively to acquiring abilities and abilities that are helpful in solving real-life issues. The instruction method promotes the creation and assessment of particular skills in competence-based programs. One of the competences in each subject is the student to have ability to demonstrate appropriate use of knowledge, concept principles and skills of the specific subject in everyday life (Paul, 2014).

It is against this background that the researcher wishes to assess practical skills in a competence based education curriculum in Temeke- Tanzania. The researcher is interested to find out how the teachers in schools are assessing practical skills and practical ability of the learners.

1.5 Statement of the Problem

The African and American Institute 2015 report indicated that Africa is the world's most youthful continent with some 200 million young people between ages 15 and 24. It added that finding youth productive employment is critical to the future of the continent. An

educated and skilled population attracts many employers and investors. Many employers throughout Africa have criticized the absence of graduates ' fundamental, technical and transferable abilities. Strong education systems in African countries are main drivers of economic growth. The quality of secondary, vocational / technical and higher schooling is assessed by the labor market performance of employees, UNESCO 2015 maintained. That is why the African education system must be strengthened to absorb the entry of millions of African young people into the national and global workforce (AAI, 2015)

The Tanzania Ministry of Labour has revealed that youth unemployment in Tanzania may be mainly caused by the education system, lack of skills in business training, inadequate credit facilities, emphasis on formal sector alone, non-attractive agricultural sectors, gender imbalance and inadequate information (Samji et al, 2012). The information shows that there is vacancy but the problem is the personnel, because most of the youth applied are lacking the practical skills to perform.

There is a mismatch between teaching in the institutions of learning and the needs of the labour market. Students have no practical experience; they learn through lectures and academic textbooks and are academically sound but they have limited opportunities of acquiring practical experiences by using machinery, equipment and practical techniques associated with their professions. There is lack of qualified teachers to teach vocational, innovative, entrepreneurship and job skills. Therefore, they learn different things, different from what they are planning to do (Ndyali 2016).

The lack of practical skills defines that the learning process and the assessment process does not consider clearly the practical skills. The lack of practical skills for these learned fellows bars the youth from employability, in form of formal employment and self-employment. Although Tanzania has changed the curriculum from the content -based curriculum to competency -based curriculum education, there is need to look for the way the

practical skills are assessed in secondary schools in Tanzania. The education system does not fill the gap between teaching/learning and the skills imparted to the learning, which means out of the school system the learners, cannot do anything with their certificate. They are lacking the practical skills to apply in their environment, (Lubagumya 2018).

The relationship between the schools and unemployment raise a question on how the competence based curriculum is implemented. The practical skills in school have to be treated as a panacea for unemployment in Temeka district. The study is assessing the implementation of competence-based curriculum in Temeke district secondary schools-Tanzania after being rolling out in 2005.

1.6 Research Questions

This study seeks to determine the assessment modes use to evaluate the practical skills in a competence based curriculum a case secondary schools in Temeke District in Tanzania. The following research questions guided the study:

i. What are the assessment modes used to evaluate communication, creative thinking, agricultural and entrepreneurship skills in competency based curriculum in the secondary schools in Temeke District-Tanzania?
ii. Which resources are available for the assessment of communication, creative thinking, agricultural and entrepreneurship of skills in competency based curriculum in secondary schools in Tanzania?
iii. What are the teachers' skills and competencies in assessing communication, creative thinking, agricultural and entrepreneurship skills in competency based curriculum in secondary schools in Temeke District in Tanzania?

iv. To what extent does the feedback of assessment for communication, creative thinking, agricultural and entrepreneurship in secondary schools help the learners to improve their acquisition of practical skills in Temeke District - Tanzania?

1.7 Significance of the Study

It was the hope of the researcher that the findings of this study would be beneficial to the Secondary school teachers since they will understand students' assessment through this approach, which will increase practical activities in the teaching and learning process. The study will also be of importance to the National Examination Council of Tanzania (NECTA), which is the body that is in charge of all the policy of assessment and evaluation in the nation. This body might also help TIE to formulate policies, which will enforce the assessment policy in secondary education in Tanzania. This will lead to an appropriate teaching and assessment of the life skills curricula, primary teacher training and other key stakeholders in education in the country.

The findings will benefit planners and policy makers at the Ministry of Education concerning implementation of the current educational change from theory based to competency based. This study will also help researchers since it will contribute to the international research field of comparative curriculum studies, providing lessons from Tanzania.

Students are among the beneficiaries of the study because it addresses the best way of assessing students' practical skills to be used for their future life and world of work. By being competent, they will provide self-employment in the country to generate the national economy and increase the national income. This study also will benefit the country in general because it is touching every aspect of learning process from the learners to the national level.

1.8 Scope and Delimitation of the Study

This study will focus on assessing the assessment of practical skills in the time of implementation of the competence-based curriculum (CBC) in Tanzania. The researcher will focus on assessment modes, resources available for the assessment of practical skills, teachers' skills and competency in assessing practical skills, use of the information collected from practical skills and how assessment of practical skills help the students in the job market.

The study site will be Dar es Salaam city in Temeke district. Temeke district has 23 secondary schools, from which 11 are private. Some of these schools have the Advanced level (form five and six) famous in Tanzania as A-level and others have only form one to form four which is called O- level (ordinary level). The types of schools, which have A-level and O-level in this study, will be treated as strata. The number of students in these schools is unevenly distributed but there is an average of 800 students in each school, which totals to about 18400 students. Similarly, the number of teachers is unevenly distributed but the distribution of teachers in Temeke district in these 23 schools bring about an average of 25 teachers in each school, which totals to about 575 teachers. The studies will focus on the assessment of practical skills because the competence-based curriculum of education was rolled in Tanzania more than 10 years down the line. During the process of data collection, the researcher will interact with officers from Tanzania Institute of Education (TIE), National Examination Council of Tanzania (NECTA) and Temeke District Education Officer (DEO) to analyse the assessment done in different period years and the content of assessing the practical skills

The reason behind selecting this region is that Temeke district is near Dar es Salaam city, the center for local and international trade in Tanzania, which has a mixture of people from all over the country. Moreover, Temeke District is the one of the populated districts in

Dar es Salaam containing people with different economic status. The distribution of schools also considers these economic statuses. There are private schools and public schools. The rich people mostly send their children to private schools while those who cannot afford private schools send their children to the public schools. This mixture of school type will give the research a reasonable data for the research. Due to these reasons, Temeke will be a good representation of the other parts of Tanzania. Moreover, due to financial constraints and short time allocated, Temeke district will make a convenient place for the researcher to get quality and reliable data.

1.9 Theoretical Framework

This study will be guided by the constructivism theory of learning and the Multiple Intelligence theory. Learning is more than just memory. In order for learners to really comprehend and apply knowledge, they have to work on solving issues, to discover stuff for themselves, to fight with ideas For example, with practice, the students will be able to apply the mathematical formula and grind out with the correct answers. The task of education is not to pour information in students' heads, but to engage their minds with powerful and useful concepts, which are the constructive learning, (Slavin2012).

The proponent of constructivism theory is John Dewey who did it in 1933, which is rooted in the democratic learning theory of 1916. Constructivism theory as one of educational theories has long tried to understand how information is accumulated, transferred, and understood from one individual to another. John Dewey, one of the pioneers of education theory, claimed that knowledge is transferred from one generation to the next by the learner's presentation of information and reconstruction of this knowledge, thus strengthening the understanding of this current information by that learner. Constructivism argues that learners must deliberately think about deriving significance when listening to or observing the instructor facilitating their learning environments, and with this observation, learners build

their own knowledge. Divergent though their respective theories might be, Piaget, Brown, and Thomas all emphasize the principle idea that learning occurs through social interaction, (Alanazi 2016)

The constructivist revolution is deep rooted in the history of education. The theory draws heavily on the work of Piaget and Vygotsky and both emphasize on the cognitive learning. Modern constructivist thoughts draw most from Vygotsky's theory, which has been used to support classroom instructional methods that emphasize cooperative learning, project-based learning and discovery learning. The theory of Vygotsky has four principles, which are social learning, zone of proximal development, cognitive apprenticeship and mediated learning (Slavin 2012). This study will look at social learning only on its application in the competence based curriculum implementation.

In social learning, Vygotsky's emphasis was the social nature of learning. He proposed children to learn through joint interaction with adults and peers that are more capable. Children develop and become exposed to the thinking processes of their peers on cooperative projects; the method not only provides all students with the learning outcome, but also makes the thinking of other students available to all. The theory observed that, through hard issues, effective problem solvers speak for themselves. Children can hear this profound inner speech loudly in cooperative groups and learn through their methods how effective problem solvers are thinking (Hall et. al 2008).

The most important principle of educational psychology is constructivism theory, which is that the teacher cannot merely offer knowlwdge to the student. Students must build their own knowledge. The teacher can facilitate this process by teaching the data to learners in a manner that makes it meaningful and relevant. The role of the teacher is just to give student ladder that lead them to higher understanding, but students themselves must climb the ladder (Gusky et al 2008)

The essence of constructivist theory is the ideal that learners must individually discover and transform complex information if they are to make it their own. Constructivism theory considers learners to constantly check new information against old rules and then revise rules when they no longer work. This perspective has profound implications for teaching as it indicates that students play a much more active part in their own learning than is typical in many classrooms. This new learning type is called student centered learning. In student-centered classroom, the teacher becomes the guide on the side instead of the sage on the stage. The role of the teacher in the student centered learning is helping student to discover their own meaning instead of lecturing and controlling them and all teaching and learning activities.

Constructivism is a theory of epistemology, learning or making meanings that explains the essence of knowledge and how humans learn it. Real understanding is built only on the basis of the prior experience and background information of the learners. It holds that people generate or build their own fresh understanding or understanding by interacting with what they already believe in and with the thoughts, events and activities they come into touch with. The teacher is a guide, facilitator, and co-explorer who encourages students to question ,challenge and formulate their own thoughts, views, and findings (Mersin 2012).

Constructivism's meaning differs depending on one's perspective and position. Constructivism theory is not a social or educational theory; It is both a theory of science and of metaphysics that defines the possibilities and limitations of the theories of daily life in human formation. Constructivists are observers in a manner that observes reality created in everyday life or in science (Jones et al, 2002).

The basis of constructivist theory in teaching philosophy goes back to the 18th century philosopher Giambattista Vico's concept of' the only way to know a thing is to have made it '. Vico's 1710 thesis of "De antiquissima Italorum sapientia" conveys to the reader the

idea of "thinking is not proof; it is the metaphysical of the writer." Since Vico does not find the concept of "what is claimed in real life is real" satisfactory, it has been indicated that, God is the artificer of Nature, man the god of artifacts knowing is knowing how to create, one understands one thing only when one can tell what components it consists of. God alone can therefore understand the real world, for he understands how and what he has created in it. The human knower, on the other hand, can only understand what he has built. In theory, it implies that builders are dependent on observation and the theory has the significance of observation when it is directly translated (Siebert, 2002). A cautious observer therefore structures the issue and how it can be understood by herself or himself.

The two main contemporaries Jean Piaget and John Dewey have developed the precise idea of what constitutes constructivism. Constructivism has an interdisciplinary point of view that distinguishes between psychological, sociological, philosophical and critical theories of education. Constructivism, by recreating the learning and teaching theories of the past and present, has later been transformed into a role in which the intensive power of the teacher has been lifted, illuminating the learner as a significant part of the learning process, (Mersin 2012)

In the 19th century, constructivism perceived as a theory of learning that has roots in both philosophy and psychology. Founded on the premise that learners actively construct their own knowledge, meaning and understanding of the world they live in by reflecting on their experiences by Doolitle & Camp (1999) as cited by Slavin (2012), who states that constructivism revolution theory has deep roots in the history of education. It draws heavy on the work of Piaget and Vygotsky both who emphasize on the cognitive that takes place only when the previous conceptions go through the process of dis-equilibration in light of new information. The modern constructivist thought draws most heavily on Vygotsky's theories which have been used to support classroom instructional methods that emphasizes

cooperative learning, project based learning and self-discovery for the new learning experience to be realized, (slavin 2012).

1.9.1 The Strength of Constructivism Theory of Learning

The essence of constructivism theory is the idea that learners must individually discover and transform complex information if they are to make their own constructive discoveries. The theory considers that learners continually check updated information against the old regulations and then revise rules when they no longer work. The constructivism theory has a profound theory implication for the total teaching and learning process because it argues for more active role for students in their own learning than typical instructional classroom (Slavin 2012).

Instead of observing and bringing previous knowledge into a learning scenario, learners learn by criticizing and reassessing their understanding of it until they can show their understanding of the topic (Epstein & Ryan, 2012). As constructivists recognize the active role of the learners in the development of knowledge. They think that learners should also play a greater role in assessing their own progress and therefore suggest that evaluation becomes part of the teaching process and should be used as an instrument to improve both the teaching of the learner and the teacher's understanding of the current comprehension of the student. The use of assessment as a instrument of accountability that makes some learners feel good about themselves and leads others to give up should be prevented and therefore the constructivists call for the elimination of grades and standardized testing (Doolitle & Camp, 1999).

The constructivism theory from the idea of Vygotsky in social learning approach developed by Hall and Greeno (2008) allied with the concept of project learning. On cooperative project learning learners are exposed to their peer thinking process which make the learning outcome available to all students and make the students thinking process

available to all. This is where the successful problem solver talks themselves through difficult problems. In the group learners can hear individually the inner speech out loud and learn how successful problem-solver are thinking through their approaches through their peer learning and assessment, (Hall et al 2008).). However, knowledge and understanding that develops on an ongoing basis must be inferred from action as they are not clearly observable and as such require ongoing assessment of teaching and learning process processes. Thus, formative evaluation is suitable for correctly creating the next sequence of experiences and events for students as well as continually evaluating the understanding of learners (Doolitle & Camp, 1999).

Willard & Holt (2000) emphasizes the notion of dynamic eassessment in which the real potential of the learner is evaluated through an extended interactive evaluation method; a two-way system involving communication between teacher and learner. Through the interactions, the assessor becomes the person who not only judges the achievement of the learner, but also the person who identifies the strengths and weaknesses of the learner in carrying out a task and then shares with them the possible ways of improving that performance on a subsequent occasion. Thus assessment is an integral part of the learning experience, not a separate form, and both are viewed as inextricably linked and not as separate processes (Gredler, 1997). Competency-based curriculum involves learning as an active building of systems to know the material in which learners are active participants who share learning processes, exercise self-evaluation and reflection, and work with teachers and other learners (Baartman et al., 2007). Students can participate in meaningful learning processes through interesting and genuine assessment activities in which the product and process are evaluated (Baartman et al., 2007). However, in this theory, provisions such as attitudes, values and interests that assist learners to decide are often overlooked, making it incomprehensive and in some manner inadequate (Murphy, 1999).

The study is going to dig on the assessment of the neglected values in education like attitude, value skills that cannot be assessed by using the paper and pencil. The study will be based on the competency- based education that was introduced in Tanzania in 2005 as a panacea of empowering the education system in the country.

1.9.2 The Weakness of Constructivism Learning Theory

The biggest disadvantage of the constructivism theory is lacking the structureIn order to be able to excel, some learners require extremely structured environments. Constructivism calls on the teacher in favor of discarding standardized curriculum or a more personalized study course based on what the student already knows. This could result in some learners falling behind others.

It also removes grading in the traditional manner and instead puts more importance on learners assessing their own progress, which can lead to learners falling behind but educators may not understand that the student is struggling without standardized grading and evaluations. Since there is no assessment in the traditional sense, the student may not create understanding as asserted by the theory but simply copy what other learners do.

Another drawback is that it can confuse and frustrate learners because they may not have the capacity to create relationships and abstracts between the knowledge they already have and the knowledge they are learning for themselves.

Constructivism can have its position in the learning system, but it has some shortcomings as an absolute learning system. Students may benefit with some constructivism principles integrated (Rhinernt, 2012)

Apart from the weakness of the theory it is still more useful in the education set up. Learning constructivism theory includes a learning process in which the student, through the teacher's creative assistance as facilitator, gains its own findings. The best way to plan

worksheets for teachers, lesson plans, and study skills for learners is to develop a curriculum that enables each student to solve issues while the teacher monitors and guides the learners to the right response while promoting critical thinking. This helps the students to develop their skills and apply them in their daily life as the practical skills. (http://www.teach-nology.com/currenttrends/constructivism/classroom_applications)

1.9.3 Application of the Constructivism Theory

The constructivism theory has been applied in education system in teaching, learning and assessment process**.** Many scholars have discussed the riches and application of the constructivism theory in education. The theory's proponents argue that constructivist-minded teachers are helping students build knowledge and not placing the learning responsibility solely on students. Constructivist approaches transform students from being passive recipients of information to active learners in educational environments (Ackermann, 2001). It encourages the participatory and discovery learning.

Constructivist advocates also claim that this strategy to learning helps kids to be guided by their curiosity when learning rather than being led by a big quantity of training. In reaction to constructivist critics, supporters of constructivism, such as Hmelo-Silveret al. (2007), claim that some constructivist approaches to teaching, such as problem-based learning and inquiry learning, are not minimally guided instruction. Instead, constructivist approach followers use comprehensive scaffolding and guidance. The supporters argue similarlythat their opponents, like Kirschner et al. (2006), misunderstood how these approaches work. Constructivist supporters also show that by solving genuine issues and gaining experience in teaching environments, learners learn best (Kirschner et al., 2006). Some opponents say constructivist learners are trying to "reinvent the wheel," while constructivism advocates are responding that these students are trying to find out how those wheels function (Gupta, 2011). It is alleged that Constructivist classrooms value the student.

The students can not be said to have learned anything useful in construction learning unless they have the ability to use information and skills to solve problems. A student might be good in adding, subtracting, multiplying and dividing but has a little idea to solve the problem. The difficulty most application of mathematics lies not on computation but in knowing how to set that problem to be solved. Problem solving is the skill that can be taught or learn, (Fuch et al 2006). This is applicable in the study because it describes the problem solving skills, which are among of the skills in the competence- based curriculum of education. The theory helps learners to develop the skill of problem solving. Problem solving technique is the teaching that encourages the learner to identify the goal he is to attain, the current situation and what should be done.

This theory is mostly applied in creative thinkingMost of the school problems students encounter may require careful reading and some thought but little creativity. However, many problems we face in life are not so –cut and dried. Life is full of circumstances, such as how to repair a machine with a bent paper clip, which requires creative problem-solving skill. It needs practical skills, developed in the learner through the learning process not only the issue of analyzing theories, (Plucker et al 2004). The incorporation of thinking skills in daily life lesson in classroom experience, the culture of creative and practical way of life is essential. Integrating thinking skills into daily lessons as we see it in Tshman and fellow describing it as an impromptu discussion that has been taught a generic strategy for problem solving, (Fish et al 2007).

One of the objectives of school is to develop the critical thinking. The constructive theory advocates the critical thinking. The ability of critical thinking is knowledge of making rational decision about what to do or what to believe and asking why this and not that. Critical thinking includes identifying the misleading advertisements, weighing competing evidence and identifying an assumption of fallacies in arguments. As other objectives

learning to think require practices and serious assessment to the students for example, giving many dilemmas in the class, developing logic and illogical arguments, (Epstein 2008)

In this study, the constructivism theory linked the competences the learners have from the competence- based curriculum and the application of it in their environment to develop the practical skills in their daily life. The application of the constructivism theory in learning is giving the teacher an ability to guide the learners to develop the skills they have so that they can realize the use of these skills in practical way. The learners are key players in this theory in the process of teaching and learning, the participatory learning to the student is enforcing the democratic assessment too. The learners are not passive in the learning process so the assessment should be democratic and interactive too.

1.9.4 The Multiple Intelligences Theory

This study will also be guided by multiple intelligence theory by Gardiner, which was developed in 1983 by Howard Gardiner, who was a professor at Harvard University. He suggested a new intelligence perspective that has been commonly adopted since its release and is now being integrated across the nation into college curricula. Multiple Intelligences Theory, "is a theory that questioned the dominant concept of intelligence as limited to mathematical and linguistic skills (verbal and visual intelligences). Dr. Howard Gardner, an education professor and project coordinator at Harvard University's Zero project, questioned the traditional concept that intelligence is a single ability that each person possesses to a higher or lesser extent. Armed with study proof, Gardner introduces the concept of a number of intelligences that give each person a distinctive cognitive profile. Today's face of education is altering this outstanding conception of individual competence. Many teachers and researchers have studied the practical consequences of the theory of multiple intelligence – the strong notion that human capacity is distinct (Kumar 2006).

Instead of just these two intelligences, Gardner theorized that a grouping of seven intelligences accounts more accurately for the diversity of ways people acquire and use knowledge. Using the definition of intelligence as "the ability to solve issues or to fashion products valued in one or more cultural setting," Gardner used both biological and cultural research to create a list of seven intelligences (Gardner et al 1989). Gardiner's theory of multiple intelligence described seven intelligences to be considered in the process of teaching and learning. Logical-Mathematical Intelligence is the ability to detect patterns, reason deductively and think logically. It is associated most often with mathematical and scientific thinking. Linguistic Intelligence, which is the ability to use language masterfully to express oneself rhetorically or poetically, is also a form of intelligence.

1.9.5 The Strength and Application of multiple Intelligence Theory

The theory of Multiple intelligence is one of the theories which originated from psychology but it gets more influence in the field of education. This theory has more strength in education, especially in curriculum development. Gardner prefers the description of cognitive ability as a collection of eight intelligences. Once merely a theoretical perspective, with the developments in neuroscience brain research, Gardner's view of intelligence can be seen in a fresh light. The link between mind organisation and student education indicates extra teaching and testing application in the classroom. A focus on traditional linguistic and logical teaching and testing strategies must broaden to include strategies that meet the needs of diverse learners, (Philips 2010)

Upon completion of the MI advantage assessment, the students' results are scored and they receive an instant, personalized report based on their responses to the questions. The report contains a visual bar graph illustrating their multiple intelligence profile. It also lists traits from their top-ranked intelligences, provides links to careers that match their profile,

and offers comprehensive details on each of their intelligence areas, along with suggested strategies for further developing their intelligences, (Josh 2018)

In the assessment of the students, the assessor by using this theory will not overlook the differences of the learners' abilities. The measurement of the learners usually consider that the student has different talents not only the cognitive ability. Gardner's theory does not concentrate on how smart someone is when considering intelligence, but rather on how smart he is (Christodolou et al 2009). The initial seven intelligences are a "collection of abilities, talents, or mental skills" (Gardner, 2006) to which the human mind can be analyzed Gardner (1998).

The theory applies in the whole person's learning and teaching. Linguistic intelligence involves words and language and one's ability to fancy, master, and probe into them, which develop the communication skills. Logical-mathematical intelligence is characterized by one's ability to confront and assess objects and abstractions and understand their relationships and underlying principles, where the learner personally develops the critical thinking ability, creative and problem solving techniques. In relation to listening and discerning, musical intelligence includes both composing and performing selections. Spatial intelligence embodies visual experiences with or without physical stimuli that are perceived, modified, transformed and recreated. Body-kinesthetic intelligence includes controlled and orchestrated body movements and the capacity to manage skillfully items.

The assessment MI theory has advantages by giving the following suggestions to follow in the assessment. The assessment tool must be including the nine types of intelligences, which means the evaluation should accurately evaluate a student's abilities in the nine intelligences: bodily-kinesthetic, interpersonal, intrapersonal, linguistic, logical-mathematical, musical, naturalist, spatial and existential. These are the practical skills, which each learner possesses in different capacities, (E resource 2018)

The theory is more useful in the consideration of the human being and their potential in complementing each other. Human potential can be tied to one's preferences to learning; thus, Gardner's focus on human potential lies in the fact that people have a unique blend of capabilities and skills, skill to Gardiner refers to intelligences. This model can be used to understand "overall personality, preferences and strengths". Gardner asserts that people who have an affinity toward one of the intelligences do so in concert with the other intelligences as "they develop skills and solve problems" (businessballs.com, 2009).

1.9.6 The Weakness of Multiple Intelligence Theory

Gardner (1983) proposed the following intelligences: verbal; mathematical; musical accomplishment; spatially analyzing the visual world; mastering moving abilities; and understanding others and ourselves with insight. The work of autistic people who had islands of excellent intelligence such as mathematical capacity affected this theory of various intelligences. There are many weaknesses to be discussed in Gardner's multiple intelligence theory (Garlovsky 2013).

Gardner's theory of intelligences such as musical skill intelligence should be viewed as' talents,' and if you want to create such a theory, it should be more generalized, as not everyone has these' talents.' Spearman's theory of two-factor assessment, whereby intelligences are split into generalized and particular variables that do not take such individuality as Gardner's theory into consideration, but have a much more general perspective. As Gardner goes beyond this, the theory of multiple intelligences enables someone who is not as good at generalized intelligences as others, such as verbal capacity, to have a higher opportunity of being classified as' smart' by standing out in other' particular' intelligences, such as exceptional musical skill performance. Therefore, in more generalized intelligence assessments, performing better than they would have achieved (Hakel 2002)

Some researchers like White (1998) question the criteria in Gardner's intelligence theory, arguing that these criteria can not be justified as a criterion for measuring intelligence. He says that some of the factors, such as body movements, can only be subjectively studied.

Regardless of the weaknesses, the MI theory is very useful in education system today in the 21st century. The theory can be implemented more in the teaching and learning process in the educational system. The theory can be more applied in the educational system in the process of teaching and learning. Accepting Gardner's Theory of Multiple Intelligences has several implications for teachers in terms of classroom instructionThe theory says that all seven intelligences are necessary in order to function productively in society. The intelligence has equal weight in the social, political and economic development in the societyTherefore, educators should consider all intelligences as equally significant. This contrasts greatly with traditional systems of education, which typically place the biggest emphasis on the growth and use of verbal and mathematical intelligences. The Multiple Intelligence Theory therefore means that teachers should acknowledge and educate a wider variety of talents and abilities. According to this hypothesis, in terms of a set of abilities, talents or mental abilities called intelligences, human cognitive competences are better defined. To some extent, all normal people possess each of these abilities; individuals differ in the degree of ability and the nature of their combination. Dr. Gardner believes that such a theory has significant educational implications, including for the growth of curricula (Kumbar 2006).

Both theories relate to the study because they give the application of education and the teaching methodology. The constructivism and Multiple intelligence theory are supposed to be used in the competence based education by identification of the differences and personal ability in learning. This suggests that assessment should consider the knowledge and practical skills to an individual. The interactive learning developed by the constructivism learning helps the learners to have the discovery learning with its application. The application

of the theory of discovering is what study refers to as practical skills by which the assessment in the competence- based curriculum is concerned.

In this study, the research used two theories because these theories are complimenting each other in the relation to the study. The weakness of one theory is complemented by the other theory. The weakness of the constructivism theory is lacking structure and the constructivism theory call the teachers in favor of discarding standardized curriculum. This could lead some learners to fall behind. The multiple intelligent theory states that in the assessment of the student the assessor will not overlook the differences of the learners' ability. The measures of the learners usually consider that students has different talents and abilities.

1.9.7 Conceptual Framework

Mugenda and Mugenda (2008) claimed a conceptual framework was a hypothesized model showing relationships between dependent and independent variables. Figure 1 shows how dependent and independent variables are related. The relationship is conceptualized between the independent variables and its realization to the depended variables.

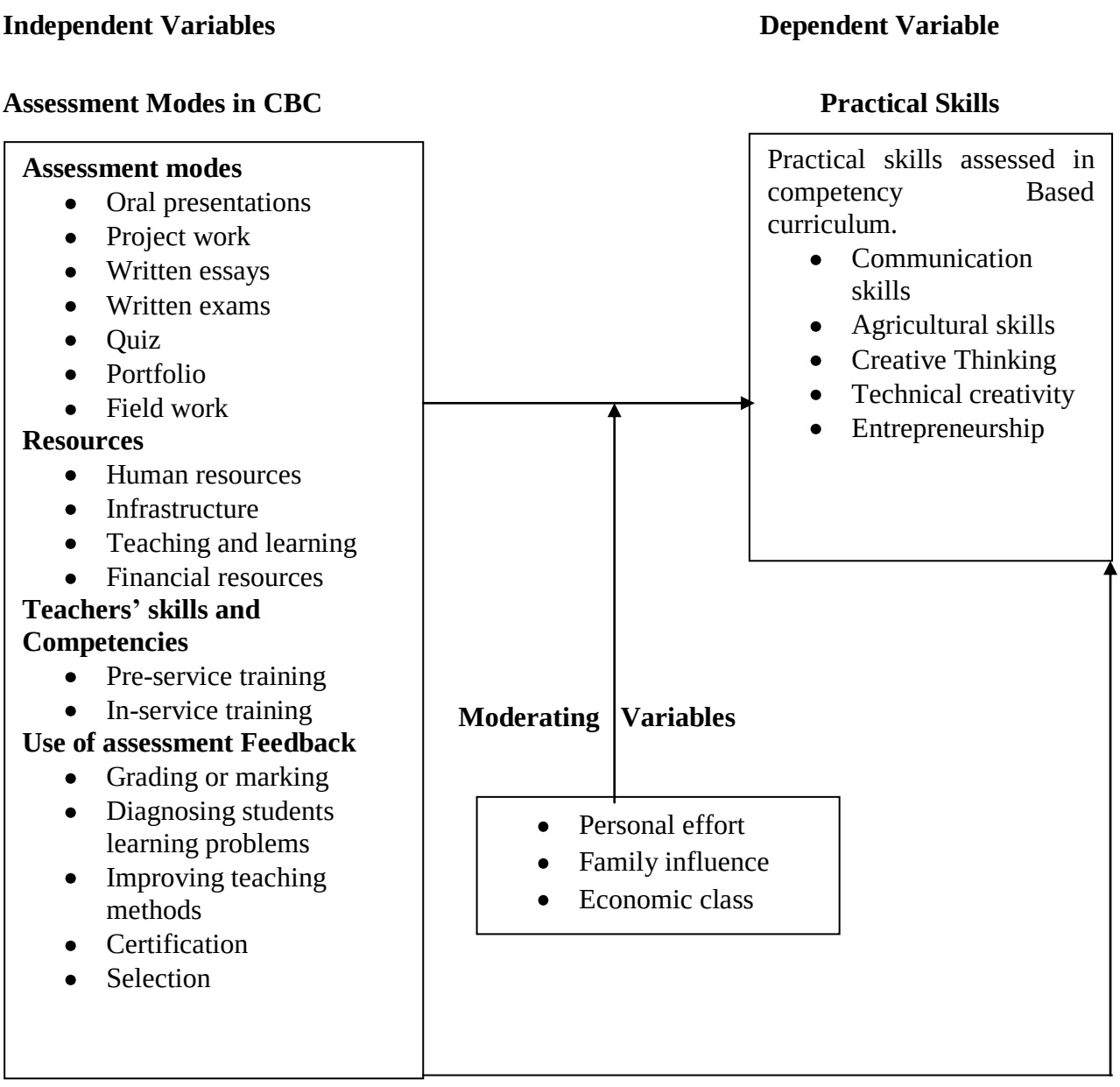

Figure 1. Conceptual Framework

Practical skills that secondary students learn in school are those skills that could help an individual create self-employment. They include communication skills, agricultural skills, entrepreneurial skills, vocational and technical skills, innovation and creativity and ICT skills.

Assessment in competence-based curriculum is part of the curriculum implementation process and is supposed to be competence based as well. Several assessment methods include the use of portfolios, rating scales, checklists, oral presentations, project work, practical tasks to demonstrate performance skills, written essays or reports, analysis of texts and in-class tests and end of terms written examinations. Noonan & Duncan (2011) established that improvement of learning occurs when teachers use classroom assessment information to establish knowledge, skills and attitudes possessed by their students and incorporate that information in planning for lessons. McMillan (2010) asserted that the type of assessment used by the teacher help the learner to develop the practical skills in their learning process

Resources refer to any inputs that are used in the learning environment to make effectively achieve the desired outcomes. These could be human, infrastructure, or financial resources. They are also referred to as teaching and learning curriculum support materials. According to Birimana (2013), inadequate instructional resources compromise the quality of education through poor curriculum implementation strategies. The availability of resources in school improves the assessment of practical skill in the implementation of practical skill and on the other hand, the absence of resources in schools affects the assessment of practical skills in secondary schools.

Teacher's skills are very important in assessment of student's skills. Therefore, teachers need to be very competent in competency-based curriculum. Teacher's skills and competencies can improve through in-service training. Ndalichako (2011) asserted that

overburdening teachers make it difficult for them to effectively use assessment strategies that could provide a comprehensive picture of students' learning.

Teachers might use assessment information obtained from students in classes to give students grades or marks, to provide feedback to students and to diagnose student's learning problems. Feedback is used to correct student errors and to discuss fields that need to be improved with them. Teachers also use the information from assessments to report to parents, to assign students to different programs or tracks or to plan for future lessons. Atim (2012) argues that the information on the assessment is useful in helping a teacher find better teaching methods that lead to better instruction. As a result, learners are encouraged to learn because of the duties they are able to perform; and communication with parents is enhanced. According to Kipkorir (2015), assessment information obtained from students is used to give students grades or marks, to provide feedback to students and to diagnose students' learning problems.

The utilization of practical skills assessment in the job market is more important. Hence, the role of education is creating labor as well as good citizens for the nation. The assessment of practical skills should therefore be realized through the job market, where the skills that are developed from school might help employers for instance in the music industry, the creative and artists design. In order to attract the employers and to perform well in jobs, people need routine cognitive tasks like bookkeeping and filing. Routine manual tasks such as: assembly line work as well as those tasks that require expert thinking such as identifying and solving new problems and those of communication like eliciting critical information and conveying a convincing interpretation of it as posited by Judith (2011).

1.10 Operational Definition of terms

Assessment of practical skills: In this study it refers to the measuring of learning outcomes on practical skills including communication skills, agricultural skills, creative thinking, technical creativity and entrepreneurship. In the education context, it is the process of ascertaining whether students have attained curricula goals. In this study, Evaluation and testing refer to assessment.

Competency: is a collection of specified behaviors that provide a structured guide for identifying, evaluating and developing individual behaviors. It refers to the ability of the learners to understand after undergoing education system.

Competency-based curriculum (CBC): The CBC seeks to develop learners' ability to know and learn how to do things. It tries to provide them with the capability to be, to live and to work with other people. According to this study, competency curriculum is the type of curriculum that helps the learners to develop an ability to put into practice the learning theory through its teaching.

Curriculum: Is the guidelines of educational provision based on building of competences that encompass knowledge, skills and attitudes; pedagogical orientations; teaching aids; assessment; monitoring and evaluation; teacher professional competences; enabling infrastructures; and programme duration.

Experienced teacher: it refers to a secondary school teacher with six or more years of teaching.

Resources: any inputs that are used in the learning environment to effectively achieve the desired outcome. These could be human, infrastructure or financial resources. They are also referred to as teaching and learning curriculum support materials, which help teachers and

learners to do practical activities in the process of teaching and learning like laboratory demonstration farms in school, workshop and well training teachers.

Teaching approaches: Instructional strategies and techniques of carrying out instruction in the delivery of curriculum content. This is where the teachers bring in the 'how' of teaching using instructional designs to convey content to learners in order to achieve learning outcomes stated in the objectives

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

2.1 Introduction

This chapter presents the review of related literature. It focuses on critical analysis of Instructional Design Theory and related literature from conceptual and empirical studies of other scholars on assessment of Competence Based Curriculum in Tanzania.

2.2 Instructional – Design Theory

This theory offers clear guidance towards a competence-based curriculum that explains how to help students learn and develop in the wake of emerging globalization. Learning is associated with cognitive, emotional, social, physical and spiritual development (Reigeluth, 1996). The proponent of this theory is Robert Gagnes in the beginning of 1960s. he developed this theory when conducted research and develop training materials formillitary Perkins (1992) describes the instructional design theory which offers guidance for fostering cognitive learning as follows: Clear information, in terms of goals, knowledge needed and performance expected. Thoughtful practice, in terms of opportunities for learners to engage in learning actively and reflectively; Informative feedback, in terms of clear and thorough counsel to learners, and; Strong intrinsic or extrinsic motivation.

Instructional design theory is design-oriented because it focuses on the means to attain given goals for learning or development. It offers guidelines about the methods to use in different situations in curriculum implementation. Values play an important role in the instructional design theory. They underlie both the goals the curriculum pursues and the methods it offers to attain the goals. As Pogrow (1996) further asserts that the single biggest tool in promoting curriculum reform has been advocacy. To help educators to improve education, it is imperative that there be public or stakeholder participation. Systemic change

in the educational system emphasizes the need to give organizations considerable autonomy to manage themselves with the purview of corporate vision, rather than being directed from above (Hammer & Champy, 1993). This allows corporations to respond much more quickly and appropriately to their customers and clients' needs. Globally, fundamental changes in the education systems have important implications for curriculum reform. Learners need to be able to think about and solve problems, work in teams, communicate through discussions, take initiatives and bring diverse perspectives to their learning. In addition, pupils need to learn more, yet they have little time available to learn it. Learners also need to demonstrate an impact of the achievement of national goals of education (Lee & Zemke, 2005).

The instructional theory is suitable for this study because is the theory which guide the learning system in the competence based education. Though the theory is guiding learning process in the global, the weakness of this theory is not clear about the assessment process. It gives about the objectives and feedback and explaining how the feedback will be obtained.

2.3 Empirical Review of Studies

This section is going to focus on the studies related to the competence based curriculum and the assessment globally, Africa, East Africa and Tanzania in particular. The researcher will find the contribution and research gap of the reviewed literature. Moreover, the section will summarize the review and the end.

2.3.1 Assessment Modes Used to Measure Practical Skills in Competency Cased Curriculum

Several assessment methods envisaged to be used in competence based curriculum. These include the use of portfolios, rating scales, checklists, oral presentations, project work, practical tasks to demonstrate performance skills, written essays or reports, analysis of texts and in-class tests and end of terms written examinations. Assessment is mainly based on two

major types namely; formative and summative assessments. Assessments become formative when the information used to adapt teaching and learning to meet student needs. It encourages teachers to use questioning and classroom discussion as an opportunity to increase their students' knowledge and improve understanding. In addition, by giving feedback to learners, formative assessment can help improve their learning and performance. Summative assessment is normally used to determine whether students are promoted to a higher grade or education level, or awarded certificates or diplomas (Greaney, 2001).

Assessment is the evaluation of student learning through an assessment method for example, assignments, examinations, laboratory work and portfolios. The assessment method is a systematic way of measuring students' learning. In this context, the main objective is to choose a method that effectively assess the fulfilment of the objectives of the course that is the expected outcomes. Furthermore, the choice of assessment methods may be linked to the overall objectives of the specific study programme and may include the development of analytical disciplinary skills like critical evaluation or problem solving and/or support the development of generic professional competencies particular team skills, group work. Leaning on the other hand is a cognitive process of acquiring knowledge. It is a dynamic process that is influence by learning environment, (Hassan 2011). These assessment models are the ways of assessing student. In actual fact no one assessment method can be applied alone to give the fully realization of valid and reliable result of the practical skills. The assessment of practical skills is to in cooperate all the assessment method at equal weight. If the assessors are capable on using all these assessment methods, they will help the learners to develop the cognitive theoretical and practical skills in their learning process.

Recent study in the field of practical job carried out by Abrahams and Reiss (2012) in England on the assessment of practical skills based on major changes is presently a footnote on how practical work will be assessed in high-level examinations (GCSEs for 16-year-olds

and A-levels for 18-year-olds in England). The aim of the study was to investigate how practical skills in school science could best be assessed and to introduce two terms: direct assessment of practical skills (DAPS) and indirect assessment of practical skills (IAPS). The target population was the GCSE student and A-level student aged between 16-18 years old science student in a given school. The methodology used is this study was the qualitative design even though the sampling procedure was unknown. The instrument for data collection was observation. The research finding concludes that both direct and indirect assessment of practical skills has their place in effective assessment of school science and that too much reliance on indirect assessment of practical skills will bring less valid assessment result (Abraham et al 2016)

From this study is the fact that there is no single assessment method, which can comprehend the evaluation of competence-based curriculum. The different assessment modes should used one by another. The use of different assessment modes always come up with a fruitfully result.

Bernholt, Neumann and Nentwig's (2012) in the broader assessment of science education describes the curriculum's significant influence and in particular associating assessment of the practical work that teachers choose to do. The study was done in In England, at GCSE and A-level, it has long been recognized to a very large extent, it is evaluation that drives what is learned to the extent that the preferences of educators to use distinct kinds of practical job are regularly affected by their consideration of curriculum targets and assessment methods. (Donnelly, 2000) The aim of the project was to develop an online assessment system for the first six grades of primary school for reading, mathemat-ics and science. The results of these studies indicated that students' knowledge fell into several segments which may be independent form each other. The attempts for theoretical explanations and generalizations led to the conclusion that at least three different kinds of

knowledge exist that are relevant to consider; different theoretical traditions may be mobilized to understand and describe the different aspects of students' knowledge, and, considering them simultaneously may result in a better framework for assessment. Thus, the approach present in paper for science works well for mathematics and with some limitations for reading as well. However, this approach focuses on the initial stage of schooling; therefore, not all aspects can be generalized to later phases of education. Thus, for developing the framework for the tests they tapped that diagnostic assessment should be an analytic activity where goals should be carefully differentiated; on the other hand, teaching science should adopt a synthetic approach where the goals are seamlessly integrated, Berholt et al (2012)

Noonan & Duncan (2011) carried out a study focused on exploring the nature and frequency of high school teachers' use of peer and self-assessment. As part of a survey of 118 assessment practices of high school teachers in a mid-sized urban school jurisdiction in Western Canada, data were collected for this study. Besides 34 compulsory selection items on grading and assessment methods, the study included several open-ended questions on the assessment methods of the teachers. In the data analysis, 110 of the 118 teacher answers were used. Of the 118 teacher responses 110 were used in the data analysis. The findings showed that many teachers find peer and self-assessment helpful and that there is potential for higher applicability in the classroom, but that more study is required to guide the diverse spread of these assessment strategies. Findings also established that improvement of learning occurs when teachers use classroom assessment information to establish knowledge, skills and attitudes possessed by their students and incorporate that information in planning for lessons. These studies discussed the assessment general assessment but the researcher did not focus on the best mode of assessing practical skill in secondary school.

Perumanathan (2014) conducted a study on formative assessment and feedback in the primary classroom: Interplay of beliefs and practices of teachers in Wellington Region, New Zealand. Purposive sampling used to select teachers teaching in primary schools in the Greater Wellington region. Semi-structured interviews with the participant teachers were the core means of exploring the participant teachers' beliefs in formative feedback practices in the examined writing classrooms. Analysis of classroom observations, teaching documents and field notes revealed that teachers adopted many strategies associated with good feedback practice. However, it showed that the impact of teacher views in the application and representation of formative feedback and the interplay of their views and procedures had an impact on their activities. The conception and beliefs of these teachers on how to practice formative feedback differed, as did their assumptions about the skills of their learners. These inconsistencies were further affected by a variety of contextual variables, including the diversity of requirements of learners, different collegial support, the structure of school writing programs, the limited professional development of teachers and/or learning about formative assessment and feedback, and the teaching of teachers in an age that favored behavioral methods. This research showed, the need for the provision of ongoing professional learning and development in writing instructions and formative assessment and feedback strategies. This would tackle the obvious inconsistencies between the conceptions and beliefs of teachers concerning efficient formative assessment and feedback and their practices. The study was investigating the importance of assessment as to bring feedback to the learners and the teachers. However, the researcher was not clear about the assessment model used.

Crook (2011) conducted a study at Otoga Uninersity on the impact of classroom evaluation practices on students in America. The target population was 35 schools, 35 principals, 300 teachers and 1500 students. Simple random sampling used to sample 90 teachers and 500 students. Purposive sampling used to sample all the principals.

Questionnaires were used to collect data, which were analyzed using descriptive statistics. Findings established that the choice of classroom assessment approach has a significant effect on the extent to which teaching and learning can be enhanced. The results also established that proper choice of classroom assessment method allows teachers to diagnose problems faced by students in attaining desirable learning outcomes and in devising appropriate remedial measures to readdress the situation. The teachers indicated that examinations cannot be used to assess the knowledge and skills that students need in their everyday life outside school. The researcher recommended utilization of various assessment modes to assess students' skills. The study is interested to find the application of different assessment models in assessing practical skills in secondary schools.

McMillan (2010) conducted a study in Western Canada on high school teachers' assessment practices. The researcher targeted 15 high schools, 45 teachers and 300 students targeted. Simple random sampling used to sample 75 students while the teachers purposively sampled. Questionnaires used to collect data. Micro soft excel was used to analyze data which was presented in tables in form of frequencies and percentages. The results of this study show that as part of their classroom evaluation practices a large proportion of high school teachers used some type of peer and self-assessment. In addition,teachers know the significance of cooperative, shared teaching experiences that can be improved by peer evaluation strategies. The study recommended that teachers should provide students with feedback for purposes of improving students 'learning. Assessment as part of a students' work and exercise should some level of flexibility in assessment so as to ensure that assessment does not dominate the curriculum. Assessment should inform instruction designer to improve teachers' instructional methods, and use multiple assessment methods to evaluate students' learning. The type of assessment that the teacher imposes to the learner should be used to improve the skills acquisition to the learners and help the learner to develop the

practical skills in their learning process. The assessment as the part of learning, the feedback should be used as the motivation for learning and knowledge acquisition to the learners.

A study done by Marzano Centre of teachers evaluation in 2014 developed a model of assessment for competence based education. Teacher Evaluation systems are designed to allow administrators to discriminate between levels of teacher performance fairly and objectively. In our view, teacher evaluation models must also provide a methodology to support teacher growth as teachers make the instructional shifts necessary to support students in rigorous, standards-based classrooms. In the study at Learning Sciences Marzano Center, the evaluation data we have collected over half a decade of classroom observations indicates that a streamlined, scientific-behavioral model is the one most likely to meet these challenges with the greatest accuracy. The Marzano Focused Teacher Evaluation model is a scientific-behavioral evaluation system. Based on objective metrics aligned to specific standards-based strategies, this system creates reliability for observers and simplifies the evaluation process. This behavioral approach emphasizes observable elements with specific evidences of effectiveness to determine scores and construct feedback, as opposed to constructivist approaches that determine evaluation scores based on lesson scripting and employing a much larger number of elements. Marzano Teachers' evaluation centre realized that classroom observations still constitute a necessary component of effective evaluation, the Focused model incorporates pre-planning and post-observation conferences, so that teachers can plan more efficiently prior to observations, and also present student evidence of desired results during the post-observation conference. Thus, if the number of annual observations or time for individual observations is limited, the observer will still be able to fairly and accurately determine scores based on evidence of student learning. The focused evaluation model is doubting, in that the model recognizes effective instruction with student evidence as the critical factor, Marzano (2017) Data collected from 277,000 classroom observations using

the Marzano Teacher Evaluation Model has indicated that teachers are still not effectively helping students develop the necessary skills, at the higher taxonomy levels, to meet rigorous standards. Most teachers are spending the bulk of their classroom time in lecture, practice, and review (47% of observed lessons). Conversely, classrooms are observed far less often engaged in the cognitively complex tasks required by new standards (4.2%).

Key Objectives of the Marzano Focused Teacher Evaluation Model is to simplify the overall evaluation process. Reduces the time and complexity burden on teachers, administer, and increases the specificity and accuracy of observations focusing on student evidences of attaining standards. Moreover, the model focuses on prioritizing deeper alignment to the instructional shifts required for new academic standards, and incorporates stronger diagnostic feedback capabilities for teachers. The model has been developed not just to measure instructional effectiveness, but to drive improvement toward student successful standards-based instruction. The design of the Focused Model integrates the four domains, or areas of expertise, into a framework for standards-based classrooms to establish a rigorous standards-based system in every classroom. A relentless focus on student results with leading indicators. To use an Instructional Framework with a pathway to scaffold instruction from foundational to complex tasks and teachers to be empowered with access to the tools and resources within a continuum for growing their practice and make the assessment possible to the learners, Marzano (2017)

Sgroi (1995) as quoted by Kipkorir (2015) in the investigation of the assessment of mathematic assessment motivates the learning process and monitor the learning process at large. The study was conducted in Nandi central sub-county in Kenya. The researcher believed that using assessment to monitor students understanding of mathematics concepts is very critical and classrooms should be organized to promote active participation and to give students the freedom to explore mathematical ideas. He further noted that teachers should use

different methods to monitor students ‘progress in mathematics. The assessment increases the learning, understanding and application of the acquired knowledge and skills, (Kipkorir 2015). The learning and participation in the assessment always increases the power of skills application to the learner as individual which empower the students in the whole learning process.

Salema (2017) conducted a survey focusing on assessment methods in Kilimanjaro's secondary schools and determining how they align with learner-centered approaches. This study also assessed the attitudes of teachers and students and challenges encountered in assessment practices. For data collection and analysis, the researcher has adopted mixed research methods. This research sampled 580 learners, 115 teachers, 6 high school heads, one educational inspector, and one official of the Tanzania National Examination Council (NECTA). Tools for data collection were questionnaires, in-depth interviews guidea and guide for document analysis. The results showed that there was a gap in assessment between theory and practice. Many teachers use a teacher-centered approach in both teaching and assessment procedures. It was also discovered that, with several difficulties, teachers and learners had a adverse attitude towards learner-centered approach assessment processes. The researcher proposes the need for in-service training to empower teachers to set up genuine assessment tests and exams that are more realistic in evaluating high school learners in Tanzania.

The assessment should not be considered as only a ‘receipt’, but also as something, that affects the students’ learning, confidence in themselves and their skills. An assessment that supports and stimulates learning means that students’ skills are analysed and evaluated to ensure that students develop in their learning and have confidence in their abilities. In this context, an effective learning environment is characterized by high flexibility, both in terms

of teaching and assessment. Assessment tools should, therefore, be designed to be based on tacit or explicit assumptions about how students learn, (Hassan 2011)

The research done by Zembazemba (2017) on educational assessment practices in Tanzania: a critical reflection. This paper critically reviews the present scheme of educational evaluation in Tanzania. The author claims using critical reflection that the present model of educational evaluation deprives learners and their relatives of the rights they deserve in the methods that affect the final results of the examination. The aim of this article was to boost debates in Tanzania on democratizing the evaluation of education. Inspired by the involvement of Tanzania in the worldwide Open Government Partnership (OGP) initiative.

Zembazemba (2017) citing Levinson (2011) said, that although educational standards, assessments, and accountability systems are of immense in political moment around the world today we have the potential to serve democratic assessment goods for the future generation. They're very potential advance systemic democratic goods, such as transparency, equality and public discourse, indicates a level of reach and power that threatens the achievement of these same democratic values. He offers an illustration where the democratically lawful control of the adults over education in a democracy in the modern. United States can also undermine the legitimate demands of children to receive an education that equips them for democracy. The scenario is distinct in Tanzania. The writer claims that the evaluation bodies ' present autonomy (which was designed to encourage quality) was used to erode the very foundations of constructing an education that will produce a society based on democratic values.

The research conducted by quoting the work of Ndunguru and Mbise (2015) he saidIt is worrying when study shows that educational assessment bodies are presently sidelining even the most significant stakeholders of such bodies, including learners and their parents in higher academic institutions in Tanzania, in decision-making. In particular, it should be a

matter of severe democratic interest to note that while higher education is often the first official academic context in which students experience important levels of social liberty and equality (Curtis and McDonnell, 2011). Such freedom is not reflected in the manner in which educational assessment is carried out at that stage of education in Tanzania. Thus, the ideal situation would be to increase transparency and fairness in the evaluation system as the level of education increases, not vice versa (SIDA, 2005).

This paper proposes a Full Democratic Assessment System (FDAS), which recognizes complete openness to stakeholders as a main element of excellent educational governance from pre-school to tertiary / higher education to create a sustainable democratic culture for present and future citizens.

From this study, Zembazemba R (2017) is introducing another mode of assessment, which is democracy mode of assessment. The study is discouraging the autonomy type of assessment where there are bodies, which decide the type of assessment mode. The assessment mode should involve the stakeholders like students and parents. There should be openness in the way of assessing student to avoid what the research call sidelining of the assessing bodies. The student should be consulted on what should be assessed instead of the body like National Examination Council to decide what to assess. This democracy assessment will help the learners in Temeke to suggest which practical skills they want to be assessed.

The findings from different researchers as evident above show that the assessment mode will determine the assessment of practical skills. The assessment can be done by using portfolio, rating scale, checklist, oral presentation, project work and demonstration of the ability of the learner. The learners can demonstrate their ability in communication for example using English language, solving problems, creativity like using computer to develop system. In addition, the teacher can rate how the learners use the leadership talent in school

and how they can run small business and serving of money to develop the entrepreneurship skills. The pen and paper are not the only way of assessing the practical to help the learners to develop these skills will guide them in life.

2.3.2 Resources Available for the Assessment of Practical Skills in Competency Based Curriculum

Resources refer to any inputs that are used in the learning environment to effectively achieve the desired outcomes. These could be human, infrastructure, or financial resources. They are also referred to as teaching and learning curriculum support materials. Resources in education include both book and non-book materials and any other learning environment that provides any other learning environment that provides a learning experience to a learner (KICD, 2010). Resources in education play a very important role in facilitating learning. For effective curriculum implementation, quality physical and human resources are required. Indeed, it is difficult to envisage learning without resources. Educational resources are critically important for ensuring wide access to quality education and are therefore selected and used to stimulate interest and motivate learning (UNESCO, 2002).

Where resources are scarce, the requirement to make education universally available can mean a reduction in the per capital funding for each child leading to higher teacher-student ratios, overcrowded classes, fewer materials and resources per class, and lower building standards thereby sacrificing quality for access. In these circumstances, access to education is an overriding concern, and it is not acceptable to discriminate between groups of children and offer preferential treatment to some on the basis of resources. Yet, whenever possible efforts need to be made to increase the budgetary allocation to ensure there is access to quality education for all children. A tendency to discriminate must be guarded against, and donors may need to ensure that funding is dedicated to the provision of education without discrimination on any grounds, (UNICEF 2007). Education as one of the basic Human right

should be equally share. The point of the UNICEF is the important of resource provision for the implement of education. There are studies, which are done to demonstrate the important resources in education. UNICEF is the important of resource provision for the implement of education.

The UNESCO Institute statistical report of 2016 on the theme of resource and learning environment in Africa key results from a regional survey on factors affecting quality of education looking on class size, textbook and learning teaching. The report listed Tanzania as one of the countries in Africa with poor school infrastructure especially class room and book supply. The report mentions Malawi, central Africa and Tanzania as countries with an average of class size exceeds 70 pupils per class. These are the most top three countries with the most crowded class in Africa. In the teaching and learning materials especially the ratio of text book an average, 14 students share the same mathematics text book in Cameroon, 5 in Chad, Tanzania and South Sudan and 4 in Equatorial Guinea. The report show that poor infrastructure and low quality of education have been identified as an important barrier of schooling and learning process (UNESCO 2016)

On this note the resource have been counted as an important instrument for quality education. The availability of resource in school in Temeke district will improve the assessment of practical skill in the implementation of practical skill. On the other side the absence of resource in school in Temeke district will affect the assessment of practical skill is secondary school.

According to KICD (2014), diverse variety of teaching and learning materials are important for effective teaching of any subject. These materials should be relevant, cost effective, meaningful and interesting so as to arouse curiosity in teaching/learning process. They should aid life skills curriculum by making the learning to be real, interesting, and meaningful facilitate high retention of knowledge. These resources can be bought,

improvised or borrowed from diverse sources. Use of real object is mostly encouraged in the learning/teaching of life skills curriculum (KICD, 2016). According to Otunga, et al (2011), there are two types of instructional resources; human and non-human resources. The human resource includes the teacher or any other person interacting with the learners, while the non-human is either print or non-print resources. Print resources include course books, reference and supplementary materials as well as class readers, journals, newspapers, workbooks, fiction, periodicals, study guides, magazines among many others. Other forms of resources that exist include, but not limited to multi-media presentations, teaching websites and repositories, government sites, conference sites, trade sites and teaching and learning objects. Assessment as part of teaching has a great need of these resource, the assessment cannot take place if the resources is not available.

Birimana (2013) carried out a study on teaching and learning resource availability and teachers' effective classroom assessment and content delivery in secondary schools in Huye District, in Rwanda. Fifteen high schools and 160 teachers were the target population. The researcher selected 60 high school teachers using simple random sampling. Questionnaires were used for data collection . For analysis, descriptive statistics were used. Findings established that most of the schools in the study locale had inadequate instructional resources hence compromising the quality of education through poor curriculum implementation strategies. The researcher suggested that teaching and learning resources should be equitable distributed in schools. The study recommended that besides using teaching materials, teachers must ensure that a variety of the same are availed in class for effective teaching and learning. The materials and equipment presented in the classroom situation should be chosen to provide many and varied opportunities for students to acquire the learning they need. This ensures that students were offered many opportunities to practice and master Life Skills

Education through a variety of materials, and hence lead into successful implementation of life skills education.

The study conducted by Maina (2014) in Kenya on classroom assessment practices in kenyan secondary schools: teacher perspective. The study adopted a descriptive survey design. Stratified random sampling and purposive sampling were used to select the sample size from the target population. Data was collected using questionnaires for teachers in the selected schools. Data was analyzed using descriptive statistics. The study resulted in a moderately thorough description of these teachers' assessment practices. Based on this, teachers demonstrated competence in assessing students learning but as regards assessment tasks as per the learning taxonomy, they showed lack of demand for application for those areas. The teachers were found assessing student in the taxonomy area no in real practices. The study suggests that there is need to train and create demand on all aspects of assessment in learning

Paul (2014) carried out a study on pre-service teacher's preparedness to assess practical skills in competency based curriculum in Tanzania. The target population was 40 teachers. There were 16 purposively selecter pre-service teachers trained at Dar es Salaam University. The study used interviews guides and observations checklists. Findings showed that while pre-service was conscious of the teaching and evaluation methods for implementing skill-based curricula, they did not adopt the techniques envisaged in their classroom practices. Although the newly adopted curriculum requires modifications, pre-service teachers have continued to use traditional teacher-centered learning techniques along with paper and pencil types of assessments. It is suggested that teacher education curriculum at Dar es Salaam University and other universities in Tanzania in specific be evaluated in order to react to the new demands in the pedagogical content understanding of educators resulting from the introduction of skill-based curriculum in secondary schools in Tanzania.

The major theme of this study was the research conducted by the Association for the Development of Education in Africa (ADEA) in Tanzania on the extent to which skills or the competency-based ethos of the curriculum are communicated in the books and learning materials used to deliver it in school year 4 and 7 in Tanzania. This research engaged officials from the districts of MoEVT, TIE, NECTA, Kisarawe, Kinondoni, Moshi Municipal and Moshi Rural as well as teachers. Documentary review, focus group conversations, classroom observations, and visited school photos were used to collect data from schools

Findings disclosed that, although there are discrepancies between the design and its execution, the curriculum has been altered from content-based to competence-based. Most books do not express the curriculum's skill ethos. It was difficult to implement the competency-based curriculum in the classroom as many schools lacked space, facilities and equipment while teachers received little or no training on the new curriculum. Inspector monitoring was rarely done because of insufficient resources and some inspectors did not command consideration for some students in the school. In- school supervision by heads of schools and heads of departments was weak. As NECTA rarely evaluated what was going on in the classrooms before setting the PSLE, it was difficult to match exams with what students had learnt and how they had learnt it. Exams ought to test what students have done and learnt it in school.

The general view of the researcher shows the important of recourses, which are infrastructures, financial, physical and human resources in the assessment of practical. In the school set up the building, the finance, the physical resource like books, computers, musical instruments, and well trained human resource are important to the assessment of practical skill in the implementation of competence based curriculum. The school to offer a real education should possess those resources. According to the research the absence of relevant resource will make the assessment of practical skills impossible. The researcher will

investigate if school in Temeke district has the required resource for the assessment of the practical skills.

2.3.3 Teachers' Skills and Competency in Assessing Practical Skills in Competency Based Curriculum

Tanzania institute of curriculum development made it clear about the qualification of the teacher to teach in secondary school. A valid Diploma in Education from a recognized institution shall be the minimum academic qualifications for a secondary school teacher to teach in O level. Where needed, graduates may be hired to teach without teacher training, but they must have a teaching permit granted by the education ministry. A teacher implementing the curriculum will have the following professional skills in relation to the academic skills: being able to apply various learning techniques in a lesson. Able to diagnose pupils' learning needs, assess their academic progress and assist them to develop proffesional skills. Able to design and improvise teaching and learning materials from local available resources. Able to apply appropriate mechanisms for testing learning competences, (TIE 2013)

A teacher for the Advanced level curriculum shall have at least a first degree in education in respect of teaching area at this level. In certain cases, nonprofessional teachers shall be employed under condition that a teaching license is issued to them by the Ministry responsible for education. But he/she should have a first degree and pursued postgraduate diploma (PGD) in education, (TIE 2010)

Research conducted on the assessment of teaching method that influence the acquisition of practical in Minna University of Technology in Nigeria and Malaysia University of Technology in Malaysia, established the important of teachers' competency in their field of specialization in order to be effective in teaching. The study was intended to define teaching techniques that use regression analysis to affect the development of practical

skills of learners in mechanical engineering trades at technical college level. Descriptive survey research design was used to conduct the study. Ninety-nine (99) teachers of mechanical engineering trades and forty-six (46) administrators at technical colleges in Nigeria's northern central states answered a structured questionnaire addressing the study issue. The Cronbach Alpha coefficient has been used to determine the instrument's reliability. The reliability coefficient of the information collection tool was 0.78. It was recommended that mechanical engineering trades teachers and administrators in the schools be encouraged to use different instructional methods, especially the methods that influence the acquisition of practical skills, so that the students can acquire the skills for gainful employment in the labor market or be able to establish on their own and become self-reliant, (Audu et al 2014)

Adika (2013) conducted a study to determine the assessment of life skills curriculum in the Kenyan secondary schools by establishing if teachers and education managers had received sufficient training, assessing the attitudes of teachers towards LSE curriculum, evaluating the adequacy of LSE instructional resources provided, and ascertaining the sufficiency of educational support accorded teachers. The study adopted a mixed methods design using descriptive survey strategy, involved 198 secondary school teachers purposively selected from stratified 19 secondary schools in the Lugari District, Kakamega County and DQASO from DEO‟ s office. Questionnaires, interview schedules and document analysis were used to collect data. Data was analyzed using descriptive and correlation statistical techniques with the help of Statistical Package for Social Sciences (SPSS). The study showed that; teachers of LSE curriculum were insufficiently trained, some (42%) of teachers had negative attitudes towards LSE curriculum, LSE instructional resources were scantily available, and education support was insufficient. The research suggested that; KIE should organize pre-service and intensive in service trainings on implementation of LSE curriculum

to improve the teachers‟ competence and capacitate education managers to provide proper education support.

Kuendeli (2014) conducted a study to examine assessment of life skills curriculum in primary schools in Lurambi Division, Kakamega County, Kenya. The aim of this study was to identify teaching and learning resources used in the assessment of life skills and whether they were adequate, what issues affected teachers during their implementation, the attitudes of teachers and pupils towards the subject, factors influenced by the community during implementation and ultimately aimed at determining to what extent the subject was taught. Review literature was performed from various sources, including written books, journals, magazines and the internet.

The study adopted a descriptive survey method of investigation. Data was gathered for the head teachers through questionnaires and interview schedules for students and women. The research sampled 10 schools from a population of 47 government primary schools using easy sampling based on their place to facilitate access. All head teachers, 30 life skills teachers and a total of 90 students were involved in the research. Using both descriptive and inferential statistics, data gathered were analysed. The results indicated that in all schools under study life skills were provided. They noted that although none of them had been engaged in developing the curriculum of life skills, very few had been trained in teaching the topic. The head teachers also reported that teachers received very little government assistance and that life skills as a topic were not popular within the community. The study recommended that teachers be actively involved in curriculum planning and design not only through service but also through community, curriculum developers and government encouragement and support.

There is a research done by Vumilia (2016) on how mentoring and socialization of pre-service teachers improve teachers’ education. The goal of this research was to determine

whether the mentoring and socialization procedures taking place in Tanzania during block teaching practice (BTP) could enhance the quality of teacher education. In a study, teacher trainees were asked to rate their mentoring experiences and whether pre-service mentoring programs could enhance quality schooling in schools and teacher training colleges. The results show that all people involved in BTP benefited from mentoring methods. Teacher trainees took advantage of the lesson planning and cooperative learning models of mentors, which also offered social support. Mentoring reinforced the trust, self-control, lesson preparation, and classroom presentations of teacher trainees. The study also revealed several challenges that students, teachers, and their mentors experience during BTP. The finding added the importance of having well trained teacher cited the Malekela 2014 who said

> Providing teachers with appropriate subject understanding and practical teaching abilities based on present learner-centered teaching techniques is a significant challenge that stands in Tanzania and other African nations in terms of attaining quality teacher education. Whether in school classrooms or in teacher education, the subject matter alone can not ensure quality education. In a study of quality education in Tanzania, because the results show poor performance when measuring the quality of education in terms of national examinations. Students understanding only the national examination cannot show the quality of education, (malekela 2014).

Ndalichako (2014) conducted the research on classroom assessment practices of secondary school teachers in Arusha district, Tanzania. The questionnaire developed for that purpose was distributed to teachers who participated in the marking of the Certificate of Secondary Education Examination in 2013. A total of 4,160 questionnaires were completed and returned. For analyzing data, descriptive statistics were used. Findings of the study revealed that the traditional methods of assessment are dominantly used in schools. The findings also indicate that teachers are overburdened with a heavy teaching load making it difficult for them to effectively use assessment strategies that could provide a comprehensive picture of students' learning. Conclusions and recommendations of the study were drawn on the basis of the findings, the key recommendation being the need for enhancing teachers'

competences in assessing students and giving them the necessary resources and support to undertake classroom assessment.

Rwezaura (2016) conducted a study to investigate the implementation of competence-based English curriculum in Kinondoni municipal primary schools' in Dar es Salaam region. It was confined to eight main schools. The following research objectives guided the study. To exploring how primary school teachers implement competency-based teaching and learning approaches. To examine the availability of material inputs used in the teaching and learning process. To assess how the primary school teachers apply competency based teaching and learning approach; and to identify challenges encountered in the teaching and learning procedure for English subject. The study used descriptive research design. The research approach used in this study was quantitative and qualitative. The data collection instruments used were interviews, questionnaires, observations and documentation. These were administered to eight heads of school; one inspector, fifty-six teachers of English and one hundred and forty-four pupils of standard five, six and seven.

Findings established that many teachers were unwilling to teach the subject because they considered themselves to be incompetent even though they aware about the competence based curriculum. The main challenges faced in English subject teaching included: inadequacy of teaching and learning materials, incompetent teachers, and congestion of students in one class. The recommendations made, propose measures to be taken to improve the situation and also carry out further research in relation to this study.

Theoretical learning has tended to dominate in most teachers ' schools in Tanzania, including private universities (Nzilano, 2013; URT, 2009). To some extent, this experience has led to the production of less prepared pre-service teachers who, in the transformative teaching we a heading, can not satisfy the requirements of their learners of today (Lau &

Bates, 2004). Pre-service teachers are sent out for teaching practice in order to match the required theoretical skills, knowledge and skills acquired at the university.

As it expressed by the researcher that the teacher is the driver of the education system because is the one interacting with the learners in the process of teaching and learning. The ability of the teacher must be questioned before sending this teacher to teach. In Tanzania when the competence based education was rolled in 2005 many teachers were having teaching experience based on the old teaching system which is content based teaching. The researcher shows that in Tanzania most of the were not aware of the implementation of competence based curriculum. The research show that there is a great need for the teacher a have skills and be competency in assessing practical skills as part of the implementation of the competence curriculum in Temeke District. The teacher as the assessor must more competent of what is she/he assessing the students. This study is finding on how the teacher a capable in assessing the practical skills to their students.

2.3.4 Teacher's Use of Assessment Feedback to Improve the Acquisition of Practical Skills

Assessment plays many roles in education and a single assessment can serve multiple, but quite distinct roles. The evaluation and assessment of the classroom are extremely concerned with qualitative assessments used to enhance the understanding and teaching of learners. Evaluation and assessment also provide teachers with helpful data on how to enhance their techniques of learning (Jabbarifar 2009). For example, results from a selection test can sometimes be used to guide instruction, while a portfolio of learner work culled from classroom assessments conducted can inform a decision about whether the learner should obtain a certificate of completion or a degree (Crook, 2008). The American Science Advancement Association (1998) classified the objective of evaluation into inner and external reasons. The internal evaluation purposes include communicating the expectations of

students about what is important to learn, providing students and parents with information about the progress of students, helping students to judge their own learning, guiding and improving instruction, classifying and selecting students. The external aim was to educate donors of education about what occurred in schools, including parents, education departments, and ministry.

Atim (2012) conducted a study on how classroom assessments promote equity and students' learning in Norway. Three (3) main school of teachers in Norway were sampled for qualitative interview technique. Detailed descriptions and analysis of the variety of classroom assessment techniques of teachers, the use of assessment information and the provision of diversity in classroom assessment were regarded . Findings in this study revealed that teachers use different methods of evaluation, such as observation, dialog with students, feedback to students, use of weekly homework tests as well as annual tests, teamwork, listening to complaints from other students, and talking to parents. To cater for diversity in the classroom, teachers use different strategies by engaging some students to write short or long answers, use computers to do the tasks, or take home the task so they can have enough time to practice. The teacher reads the questions with others, and the student provides an oral answer, and they are sometimes grouped according to their ability and given suitable duties. The research also discovered that the data on the evaluation is helpful in assisting a teacher discover better teaching techniques that lead to improved learning. As a consequence, learners are encouraged to learn because of the duties they can perform.; and it enhances communication with parents.

Thi Nhat Ho (2015) carried out a study to investigate the practice of assessment for learning in Vietnamese higher educationBased on a constructivist paradigm and socio-cultural learning theories, this exploratory, qualitative study explored three lecturers ' evaluation methods at one Vietnamese university. The analysis was based on data collected

through classroom observations, semi-structured lecturer interviews, student focus group interviews and documents. This research discovered that the three lecturers were involved in assessment teaching methods such as questioning, observation, oral feedback, and peer evaluation to some extent in order to encourage learning in their courses. Despite the important attempts of the lecturers, Vietnamese socio-cultural variables such as hierarchy, passivity of learners, exam-oriented teaching, face saving, and regard for harmony and effort significantly impeded their evaluation methods. The findings of this research support the suggestion that suitable forms of assessment for learning (AfL) should be designed that are more relevant and evaluable in higher education in Asian cultural environments such as Vietnam.

Sofo (2013) carried out a study focusing on assessment practices among secondary physical education teachers in Ghana. A purposeful sample of 63 secondary physical education teachers (43 males and 20 women) was included among the participants. The primary source of information was an open-ended questionnaire. Data were evaluated using qualitative content assessment (Patton, 2002), which included inductive as well as deductive analyses. The inductive analysis showed that teachers used the following assessments in their practical lessons: teacher observation, skill test, test of knowledge, demonstration, peer observation, and oral reporting. In their theory classes, they also reported using three kinds of assessment methods: knowledge test, individual project, and essay. The deductive analysis stated that teacher observation was the largest proportion of assessment practice used by students in practical classes (70.11 percent), while oral reporting was the smallest proportion (1.15 percent). Teachers also recorded knowledge testing (81.43%) and individual reporting (7.14%) as the largest and lowest proportion of assessment methods used in their theory courses. In this study, most teachers used assessment to document learning rather than accountability purposes. Professional development programs in-service for educators of

physical education should emphasize the use of a broad spectrum of evaluation methods. Recommendations were that the type of assessment used should correspond or be compatible with the objectives of the lesson in which it is used.

Kipkorir (2015) performed a survey of secondary school mathematics educators in Nandi Central Sub-County to examine classroom assessment methods. The study's aim was to explore the classroom evaluation methods prevalent educators used in college across learning levels. To stablish prevalent assessment tools / formats used by mathematics teachers to evaluate classrooms. To establish how the math teachers used assessment information collected from students as well as establishing how often math teachers considered the mathematics competencies as they prepared assessment tools for classroom assessment practices. The study gathered and analyzed the information using both quantitative and qualitative research designs. Data was gathered by questionnaires, interviews and documented data (school records) analyzed. The questionnaire data was provided in numbers and percentages, in tables and graphs, while qualitative methods were used to analyze the data acquired from interviews. Quantitative data was evaluated using the Statistical Software package for social sciences (SPSS) package. The findings Life Skills Education (LSE) is highly relevant to the daily needs of young people when it is part of the school curriculum. When taught, LSE allow people to discuss sex and sexuality directly; which would reduce adolescent pregnancy, drug and substance abuse, violence, riot and dropout rate. Secondary school teachers often used assessment information obtained from students in the math classes to give students grades or marks, to provide feedback to students and to diagnose students' learning problems. Feedback is used to correct the mistakes of the students and also to discuss fields that need to be improved in suggestions. The Ministry of Basic Education should establish laws, checks and balances to guarantee that various CAPS

are used in Kenya's secondary schools. The assessment as part of teaching and learning does not end with the awarding of marks to the students.

The assessment result has more uses like to improve the teaching provide the remedial to help the slow learners to perform their activities. Jabbarifar (2009) addressed the significance of assessment in learning, stating that, since educators themselves create, administer and evaluate the questions, they are more likely to apply the evaluation outcomes to their own teaching in school evaluation. Therefore, assessment offers feedback on educational efficiency and offers learners with a measure of their advancement. Assessment is a method involving four fundamental elements: 1) Measuring time improvement. 2) Encourage learners to study. 3) Assessing the techniques of teaching. 4) Ranking the capacity of the learners in relation to the assessment of the entire group. The aim of evaluating and assessing the classroom is to provide learners with the chance to demonstrate what they have learned rather than catching them out or showing what they have not learned.

The research show that assessment feedback is used in different way, used to establish resolution and improving the teaching. Also assessment used as the motivation for the students to study hard and increase the possibility of acquiring the practical skills. This study will find out how teacher in Temeke district uses the assessment feedback to improve the acquisition of practical skills to the learners in secondary school.

2.4 Summary of Literature Review and Knowledge Gap

Various studies have been reviewed on curriculum implementation and realization of the competence based education. Findings have shown that; many teachers find peer and self-assessment helpful and potential for higher applicability in the classroom. Further research is required to guide the wide range of these assessment strategies. Improvement of learning occurs when teachers use classroom assessment information to establish knowledge, skills

and attitudes possessed by their students and incorporate that information in planning for lessons. Proper choice of classroom assessment method allows teachers to diagnose problems facing students in attaining desirable learning outcomes and in devising appropriate remedial measures to redress the situation. Schools have inadequate instructional resources to implement the competence-based curriculum, hence compromising the quality of education through poor curriculum implementation strategies. Lack of in-service teacher training on curriculum, in adequate time allocation, and insufficient teaching and learning materials have a negative impact on assessment of practical skills in competency based curriculum. Some teachers were incompetence in competency based curriculum were insufficiently due poor in-service training. That is why many teachers were unwilling to teach life skills because they considered themselves to be incompetent; Evaluation of information is useful in helping a teacher find better teaching methods that lead to improved instruction.

Further findings establish that secondary students have learnt significant self-employability and entrepreneurial skills in the following areas: Fine Art (Drawing), Home Economics (Sewing), Agricultural Science (Farming), Food & Nutrition (Cookery), Introductory Technology (Electrical Works) and Music (singing). Improvement of learning occurs when teachers use classroom assessment information to establish knowledge, skills and attitudes possessed by their students and incorporate that information in planning for lessons and that employers are concerned by the lack of employability skills exhibited by entry- level job applications.

However, majority of these studies were carried out in developed countries whereby competency based curriculum is fully implemented and the schools have adequate resources for assessment. There are few studies carried out in Tanzania which focus on assessment of practical skills in competency based curriculum. There is therefore a research gap in

Tanzania on assessment of practical skills in competence-based curriculum that this study aims at filling.

The majority of researchers were interested in the implementation of competence based curriculum education in Tanzania. Their research based on teaching methodology, knowledge of teachers about the competence based curriculum and challenges facing teachers in teaching using the new paradigm of competence based curriculum. For example, Rwezaura the study aimed to assess how teachers implemented CBCE in the teaching and learning of English language in primary school. Research found that the teachers' knowledge in the implementation of competency-based curriculum The previous research didn't cover the part of assessment especially the practical skills which is the key note of competence based curriculum. The study will establish strategies of assessing the practical skills in Secondary schools in Tanzania in the implementation of competence based curriculum in Tanzania. The previous scholar did not discussed about the assessment of practical skills in the implementation of competence-based curriculum.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology used in the study. It highlights the research design, target population, description of the sample and sampling procedures and research instruments. Validity, pilot testing and reliability of research instruments are explained. Finally, it deals with the data collection and data analysis procedures as well as ethical considerations adhered to during research.

3.2 Locale of the Study

The study was carried out in Dar es Salaam city in Temeke District in seven selected secondary schools; the school selection combined the public schools and private schools. Dar es Salaam is located at 6°48' South, 39°17' East (−6.8000, 39.2833), on a natural harbor on the eastern coast of East Africa, with sandy beaches in some areas. The Port of Dar es Salaam, which is the largest in the country, is found in Temeke. It is believed that Temeke is inhabited by a high concentration of low-income residents in slums around the district. In Temeke district town there are 23 secondary schools where 11 secondary schools are private and 12 of them are public schools.

3.3. Research Design

Research design is the arrangement of condition for gathering and analyzing information in a way that aims to combine significance for the purpose of study with economy in operation, Kothari (2014). It is, therefore, the conceptual structure within which research is conducted; it constitutes the blue print for the collection, measurement and analysis of data. A mixed method particularly convergent parallel mixed methods design guided the study. A convergent parallel mixed-methods design is an approach to inquiry that combines both qualitative and quantitative methods concurrently, prioritising both methods almost equally

(Creswell & Clark, 2011), and Creswell, 2014). This means that the quantitative and qualitative methods complement each other, and provide for the triangulation of findings, hence greater validity of the emerging inferences. In quantitative research, researcher used Cross Sectional Survey Design to collect data at one point in time (Creswell, 2014). For instance, when visiting schools, the researcher collected data from students, teachers and head teachers. In qualitative approach, the researcher used phenomenological design to explore the meaning of individual perspectives and lived experiences of teachers, principals about assessment of practical skills in Competency Based Curriculum.

The Convergent Parallel Mixed Methods Design was preferred because the researcher prioritised the methods (qualitative and quantitative) equally and kept the strands independent during data collection and analysis and then mixed the results during overall interpretation. It was also preferred because the researcher compared and related data collected and analysed easily before making interpretation (Teddlie & Tashakkori, 2009). The advantage of using the mixed methods helped the researcher to get information, which was overlooked, from one of the paradigm. Convergent parallel mixed methods design was also preferred to the other mixed methods designs for its suitability and strengths in collecting, analysing and integrating quantitative and qualitative research simultaneously in a single study as advanced by Creswell, (2014). In addition, convergent parallel mixed methods design enables the combination of both quantitative and qualitative research in order to provide a better understanding of a research problem than either research approach alone.

3.4 Target Population

Population is defined as all individuals and organizations that make up study universes (Kothari & Garg, 2014). Target population defines the complete collection of populace, proceedings, or matters that are of interest to in which the researcher desires to probe; the populace shapes a foundation in which the sample amount or the study will be

selected from (Mugenda and Mugenda, 2008). The target population for this study was all the 23 principals in 23 Secondary schools, 575 teachers and 18400 students in secondary schools in Temeke district town, Tanzania; the District Education Office, the Director of Tanzania Institute of Education, the Director National Examinational council (NECTA) and the former students from the selected school. The number of students and teacher were unevenly distributed in those schools but is an average of 800 students 25 in each school (Temeke DEO office, 2019).

3.5 Sample and Sampling Procedures

A sample is a miniature proportion of target population selected for analysis. Any declaration made regarding the sample ought to be factual about the populace (Orodho, 2012). A sample design is a definite plan for obtaining a sample from a given population. It refers to a technique or a procedure the researcher would adopt in selecting items for the sample (Kothari 2009). Sampling carried out to save money, fasten data collection procedure, better correctness of findings and accessibility of population basics. In sampling the subject selected must be the representative of the total target population that the research is interested in. In this study the sample comprised of teachers, head masters/mistress, students and education officer and policy makers from ministry of education. Through sampling, it is always possible to determine the extent sampling errors and the degree of reliability of the results in terms of probability (Cooper & Schindler, 2012). In this study, the probability sampling particularly simple random sampling and stratified sampling were used to sample the study participants. In non-probability sampling purposive and snowballing were used to select participants.

3.5.1 Sampling of Schools

Sampling is the procedure a researcher uses to gather people, places of things to study (Kombo & Tromp, 2013). Statistics from education office in Temeke District indicates that there are 23 secondary schools of which 12 are public and 11 private. Stratified sampling technique was used to select schools to participate in the study. The strata were based on private and public secondary schools. From each stratum, the researcher used simple random sampling technique to pick 30% of schools that comprised of the 3 private schools and 4 public schools totaling to 7 schools that participated in the study.

The headmasters/headmistress from the sampled schools automatically participated in the study. In the study, seven headmasters/headmistress 4 from the public school and 3 from private school participated in the study. The researcher got the school alumni by using snow balling sampling.

3.5.2 Sampling of Teachers

Teachers were sampled by using probability and non-probability sampling techniques. Simple random sampling used for selecting teachers from the departments and stratified random sampling design used to select the representative of each department. In simple random sampling the researcher used folded paper written YES and NO in the department to get the representative from the department. Those who picked the paper written yes were taken to participate in the study. The number of papers written YES depend on the number of teachers who were needed from each department to form 20% of the representation. The researcher got number of representation from each department by using the stratified sampling where the department used as stratum. Each department and each selected school was represented by 20%. The numbers of teachers from each school were selected depending on the number of teachers in school and the number of teachers in department. This gave the

researcher a total of 115 teachers to participate in the study who be selected through stratified random.

3.5.3 Sampling of Students

Stratified random sampling technique was used to select the student to participate in the study. Stratified random sampling is a technique which attempts to ensure that all parts of the population have equal chance of being represented in the sample in order to increase statistical efficiency, thus decreasing the sampling error (Mugenda, 2011). Stratified random sampling is an important statistical tool and is most appropriate when the population can be divided into distinct strata, and there is a reason to believe that the strata differ with regard to the characteristics of interest (Kerlinger & Lee, 2000). The researcher stratified students into forms 4 and forms 6; then further classified students into those taking natural science, social science and business studies to ensure representativeness. From each stratum, the researcher picked 30% the students' which according to Mugenda and Mugenda (2013) were representative enough for each category to participate in the study. In general, the student sampling sample size was determined using Slovins formula of samples shown below:

$n=N / (1+N_e{}^2)$

Where:

n=Number of samples

N= Total population

e= Error tolerance

Therefore: $18400/ (1+18400 \times 0.05^2) = 391$

Table 1

Sample matrix

Category	**Target population**	**Percentage (%)**	**Actual Sample**	**Sampling procedure**
Schools	23	30	7	Stratified Random
Principals	23	30	7	Purposive
Teachers	575	20	115	Stratified Random
Students	18400		391	Stratified Random
Education Officer	1	-	1	Purposive
TIE Director	1	-	1	Purposive
NECTA Director	1	-	1	Purposive
Alumni		Snowballing	4	
Total	**19024**		**608**	

Source: Education Office, Temeke, 2019.

3.6 Description of Research Instruments

A researcher is required to design instruments for data collection. Orodho, (2012) asserted that instrumentation discusses the instruments used for data collection from respondents. This study used both qualitative and quantitative research instruments. Interview guides were

used to collect qualitative data whereas questionnaires used to collect quantitative data. Mugenda and Mugenda (2008) asserted that structured items denote questions with a list of all likely substitutes where respondents select the answer that describes their circumstances. Alternatively, open-ended questions refer to questions which grant respondents a comprehensive freedom of response where they respond in their own words. A questionnaire enables the researcher to obtain a large quantity of data inexpensively from a wide range of participants sometimes spread extensively in a geographic space. The respondents will have enough time to think about the questions and will give well thought answers (Kothari, 2008).

3.6.1 Questionnaires for Teachers

Both closed and open-ended questions constituted the questionnaires for teachers. The questionnaires comprised of six sections. Section A was looking at demographic information regarding gender, age, academic qualification and years of experience in teaching. Section B of the questionnaire were concern with the assessment modes used to assess practical skills. Section C was about the resources available for the assessment of practical skills and section D on teachers' skills and competency in assessing practical skills. Section E on teachers use of the information collected from practical skills assessment in competency based curriculum in secondary schools Tanzania and section.

3.6.2 Questionnaires for Students

As defined by McMillan and Schumacher (2008), a questionnaire is set of questions or statements that assess attitudes, opinions, beliefs and biographical information. The questionnaires were considered appropriate for this study because they allowed the researcher to obtain information from a large number of student population. The questionnaire contained both open and closed ended items. The open ended items allowed the participants the freedom to respond to items in their own words because closed-ended items can not reveal hidden information, background, hidden motivation, decisions, interests and feelings.

The questionnaires comprised of five sections. Section A sought for demographic information regarding gender and age. Section B solicited information concerned with the assessment modes used to assess practical skills. Section C obtained information about the resources are available for the assessment of practical skills. Section D addressed on the teachers' skills and competency in assessing practical skills. Finally Section E contained information on teachers' use of assessment feedback in competency based curriculum in secondary schools Tanzania.

3.6.3 Interview Guides for Head Masters/ Mistress

An interview is a conversation for gathering information. A research interview involves an interviewer, who coordinates the process of the conversation and asks questions, and an interviewee, who responds to those questions. Interviews can be conducted face-to-face or over the telephone. The internet is also emerging as a tool for interviewing, Interview guide is an oral questionnaire administered face to face and which gives immediate feedback. The interview is used when participants cannot be directly observed, participants to provide historical information and allow the researcher control over the line of questioning (Creswell & Clark, 2007). This study used semi-structured interview to collect data from headmaster/headmistress, Tanzania institute of Education and National Examination Council of Tanzania. The interview guide was appropriate for this study since made the headmaster/mistress and the educational officers to open up and provide adequate data for the study (Easwaramoorthy et al, 2006). The interview guides were appropriate for the headmasters/mistress and educational offices because they have a busy schedule and might not have time to fill a questionnaire. The use of interview guide enabled the researcher to elicit detailed information on assessment of practical skills. The research himself administered the interview face to face to the headmasters/headmistress and educational officers. The interview guide focused on the background information of the head

master/mistress, about assessment modes used by teachers, resources available for assessment, how teachers use information collected from practical skills assessment as well as utilization of practical skills in the job market

3.7 Validity, Pilot Testing, Reliability and Credibility of Research Instruments

The researcher tested the validity and reliability of the research instrument before going to field for data collection. Instruments were also pilot tested before they were used in the actual field study.

3.7.1 Validity of Quantitative Research Instruments

Validity is defined as the extent to which a concept is accurately measured in a quantitative study. Validity indicates the degree to which an instrument measures what it is supposed to measure and can also be thought as utility. That is the extent to which variance found in the measuring instrument replicate true variance amongst those that have been tested (Kothari, 2004). The research instruments were subjected to both content and face validity. Content validity refers to the degree to which an instrument measures the content it is intended to measure, that is, whether the research instrument cover the entire domain related to the variable, or construct it was designed to measure (Heale, 2015). To determine whether the research instruments adequately covered all the content under study, the researcher gave the instruments to experts in Curriculum studies and research to read and judge their appropriateness and assess whether they answered the research questions. Experts were also asked to determine whether the sentence construction, spacing, and grammar were clear and to detect errors. The items that were not consistent were deleted and their suggestions were incorporated to validate the questionnaire.

3.7.2 Pilot Testing of Research Instruments

A pilot study is a primary test carried out before the final study to make sure that questionnaires are working properly (Polit, Beck & Hunger, 2001). Pilot testing of research instruments provides information about deficiencies and suggestions for improvement. It ensures content validity of a questionnaire as it offers the chance of improving questions and the format of the instrument (Creswell, 2014). For purposes of this study, researcher administered the questionnaires to 15 teachers and 32 students in one of secondary schools that were not included in the actual study. After filling the questionnaires, the researcher held a debriefing session with the teachers who had filled in the questionnaires, to give their assessment of the questionnaires concerning the clarity of question items, their appropriateness and relevance as recommended by Neuman (2013).

3.7.3 Reliability of Quantitative Research Instruments

Reliability is the stability or consistency of scores over time and is therefore, the degree to which measures are free from error and in effect yield consistent results (Mugenda and Mugenda, 2008).

Cronbach Alpha technique, which requires only a single test to determine internal consistency of instruments, was used. The Cronbach Alpha technique is generally the most appropriate test of internal reliability for survey research and other questionnaires, which use more than two choices, such as the Likert scale (Kothari & Garg, 2014). McMillan and Schumacher, (2001) stipulate that, whatever research type undertaken, a good rule of thumb for a satisfactory reliability is at least 0.70. The coefficient for this study is 0.811 (refer to appendix VI which is above the cut off points, hence the researcher termed the research instrument reliable for data collection.

3.7.4 Credibility and Dependability of Qualitative Instruments

Credibility is the confidence that can be placed in the truth of the research findings. In order to ensure credibility, the researcher carried out a preliminary visit to the sampled secondary schools. This will help the researcher to create a rapport with the headmasters/ headmistresses and the teachers. Dependability is the stability of findings over time. To ensure dependability, the researcher discussed his study process and findings with neutral peers, who are experienced in qualitative research. According to Patton (2002) peer examination helps the researcher to be honest about his/her study and peers contribute to his or her deeper reflexive analysis. Additionally, colleagues helped to point out the areas not addressed by the research questions or help to identify negative cases. In addition, the researcher used member-checking strategy, whereby, data collected from interview guides was given back to the participants to confirm what the researcher had captured during the interviews.

To ensure dependability of qualitative instruments, the researcher used instrument and source triangulation strategy as recommended by Creswell, (2014), whereby, the researcher used multiple-data collection instruments which included questionnaires and in-depth interview.

3.8 Data Collection Procedures

Data collection procedures according to Creswell (2014) refer to the protocol that must be followed to ensure that data collection tools are applied correctly and efficiently. The researcher obtained a clearance letter from the Department of Postgraduate Studies in Education at The Catholic University of Eastern Africa. Once the researcher arrived in Dar es Salam, Tanzania, he requested for a letter from the District Education Officer (DEO) Temeke to allow him to conduct research in secondary schools in Temeke district before visiting the schools. After approval, the researcher visited the schools to seek for permission to collect

data, familiarized himself with the participants and made appointments for carrying out the research.

The researcher personally administered the interview guide to the headmasters'/ headmistresses education officer, Director of Tanzania Institute of Education (TIE), alumni and director of National Examination Council of Tanzania (NECTA). The main objective of the study was explained and clarified; the clarification motivated student participants to answer questions carefully. The researcher agreed with the participants on when to collect the questionnaires within 2 to 5 days.

The meetings on when to administer the interview were arranged during the preliminary visit to the schools. At the beginning of each interview the researcher explained to the school administration the purpose and nature of the study and assured them that the information they give was confidential and used for academic purposes only. During interviews, the researcher wrote down information keenly as expressed by the interviewee. In both the questionnaires and interviews, the researcher collected the data personally on different days after administering the instruments as well as obtaining information from documents using document analysis guide.

3.9 Data Analysis Procedures

Data analysis entails categorizing, ordering, manipulating and analyzing raw data to get answers to the research questions (Kothari, 2004). In other words, data analysis is the breaking down of large components of research data on information to simpler easily synthesized and understood part. The raw data collected were systematically categorized. Quantitative data from questionnaires was cleaned, coded, entered into the computer and analyzed using the Statistical Package for Social Science (SPSS) version 21/23. Descriptive statistic generated in form of frequencies and percentages summarized quantitative data that was presented in frequency tables.

Qualitative data from interviews and document analysis guide were analyzed using content analysis and organized into themes. Content analysis involved grouping topics into meaningful segments, coding and analyzing them into categories. The researcher simultaneously combined categories into themes and presented narration of the experiences of the headmasters/headmistress and educational officers on assessment of practical skills in secondary schools in Temeke district. This was a very useful way of organizing and presenting data since it drew together all the relevant data needed by the researcher.

3.10 Ethical Considerations

Ethical issues are one of the main concerns in conducting research in academic field like education health and social science and physical science in general. According to Mugenda and Mugenda (2008), ethical considerations are crucial for any research. The ethical considerations observed prior to the study are those which involved making the preparations for the study. These included writing the research proposal, defended and did corrections; that enabled the researcher to get a clearance letter and official permission from the university to conduct research. The researcher also sought full permission and approval to conduct research from appropriate District Education office Temeke before going to the field for data collection as advocated by Best & Khan (2011).

The researcher observed various ethical concerns during the actual field study. For instance, Informed consent is an ethical requirement that demands that participants be allowed to choose to participate or not to participate in the research after receiving full information about the possible risks or benefits of participating (Urombo, 2000). The researcher visited the schools, obtained informed consent from all the schools he used to collect data, in order to make sure that they participated voluntarily. He contacted in time the principals of all sampled schools early enough to seek their consent and communicate to all the participants the purpose of his study (Best & Khan, 2011). The researcher told the

participants that they were free to decline to participate or withdraw from the research study at any time. In this study the researcher informed the selected participants the purpose of the study and gave them freedom to choose to participate or not participate in the study.

Another ethical concern observed during the study was confidentiality. For Neuman (2013), confidentiality implies the researcher's ethical obligation to keep the participant's identity and responses private. A participant has the right to have his or her identity remain anonymous (AERA, 2011). In this study confidentiality and anonymity were observed by not asking participants to write their names on the questionnaires, instead numbers were used. In order to gain the goodwill of the respondents the researcher strived to establish good relationship with them before the day of the meeting.

Ethical considerations require that the researcher avoids all kinds of psychological harm to the participants of the study. These harms according to Urombo (2000) include: embarrassment, irritation, anger, emotional, stress, loss of self-esteem, invasion of privacy and damage to personal dignity. Participants may experience psychological harm if they are asked to provide information on private and sensitive issues. In this study the researcher avoided to expose the participants to the above psychological harm by being sensitive to the language use .

After data collection the researcher embarked on analyzing data. When writing the research reports, the researcher was mindful of how other people's work were paraphrased or quoted by making sure that they were properly cited as to avoid any form of plagiarism. The researcher also avoided any incriminating act such as falsifying other people's work and presenting them as his own or fabricating of information (Kombo & Tromp, 2013).

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter offers data analysis, interpretation, presentation and discussion of findings. The objective of this study was to assess the competence-based implementation of the curriculum in the assessment of practical skills in secondary schools in Temeke District-Tanzania. Based on research questions the survey was organized. Included are the assessment modes used to evaluate practical skills, resources available for the assessment of practical skills, and the teachers' skills and competencies in assessing practical skills. Others are the extent to which feedback of assessment in secondary schools help the learners to improve their acquisition of practical skills as well as how assessment of practical skills help the students in the job market. The responses were analyzed and presented into frequencies, percentages and mean and tables.

4.2 Instrument Response Rate

The researcher distributed questionnaires to the participants of the study. These were the head teachers, teachers, students, the district education officer, Tanzania Institute of Education (TIE) and National Examination Council of Tanzania(NECTA) director. They were asked to fill the questionnaire with the required information and return it to the researcher. Their response rate is presented in Table 2.

Table 2

Instrument Return Rate

Statement	**Sampled size**	**No. collected**	**Return rate (%)**
Head teachers	7	7	100
Teachers	115	69	60
Students	391	337	86.2
District education officer	1	1	100
TIE Director	1	1	100
NECTA Director	1	1	100
Alumni	5	3	60
Total	**521**	**419**	**-**

Table 2 indicates that the average questionnaire return rate was well above 70 percent which according to Mugenda and Mugenda (2008) is adequate for analysis. However, the response rate for teachers (60%) was a bit low because they were busy with the issues of the reopening of the semester. Moreover, the alumni were not readily available for the planned interviews because of the nature of their work and responsibilities.

4.3 Background Information of Respondents

The background information of teachers concentrated on gender, age, teaching experience and teaching subject while students' demographic information concentrated on class, gender and age. Table 3 presents the teachers' demographic information.

Table 3

Background Information of Teachers **n =69**

Statement	**Frequency (F)**	**Percentage (%)**
Gender of Teachers		
Male	25	36.2
Female	44	63.8
Total	**69**	**100.0**
Age		
25-27 years	9	13.0
30-34 years	26	37.7
35-39 years	12	17.4
40-44 years	8	11.6
45-49 years	3	4.3
50-54 years	7	10.1
More than 55 years	4	5.8
Total	**69**	**100.0**
Teaching experience		
Below 5 years	15	21.1
6-10 years	33	47.8
11-15 years	8	11.6
16-20 years	13	18.8
Total	**69**	**100.0**
Head teachers period of serving in current school		
Less than 5 years	4	57.1
6-10 years	2	28.6
12 years	1	14.3
Total	**6**	**100.0**
Teaching subject		
Art & Performance	6	8.7
Physical science	19	27.5
Social science	28	40.6
Business	3	4.3
Languages	13	18.8
Total	**69**	**100.0**

Table 3 shows that majority of the teachers 63.8% were female and 36.2% were male. This implies that there was more female responded in the teaching fraternity in the study area.

Most of the teachers 63.8% were aged between 25-39 years which means the teachers were young and energetic hence capable of teaching as well as assessing students' practical skills. Findings also show that majority of the teachers, 78.2% had a teaching experience of between 6-20 years hence suitable for the study since they understand the teaching practices in secondary schools. Although all subject teachers were well represented in the study, majority of the teachers taught social sciences. It is an indication that teachers who teach physical science subjects were few.

Findings from the interview guide show that 57.1% (4) of the head teachers had served in the current school for less than 5 years, 28.6% (2) for 6-10 years and 14.3% (1) for 12 years. Considerably in the interview all the head of schools responded that they have been in school as head of school for more than 5 years. This shows that the school heads had been in the schools for a considerable number of years and could therefore understand students' practical skills assessment practices in the secondary schools.

The background information of students concentrated on class, gender and age. Findings are presented in Table 4.

Table 4

Background Information of Students **n =337**

Variable	**Frequency (F)**	**Percentage (%)**
Form		
Form 4	260	77.2
Form 6	77	22.8
Total	**337**	**100.0**
Gender		
Male	180	53.4
Female	157	46.6
Total	**337**	**100.0**
Age		
15-18 years	262	77.7
20 years and above	75	22.3
Total	**337**	**100.0**

Table 4 shows that majority of the students 77.2% were in form 4 while 22.8% were in form 6 hence suitable for the study since they had already selected subjects which suit for their careers. Moreover, assessment in practical skills at this level is crucial to prepare the students for the job market and life outside secondary schools. The students have been in secondary school for a considerable number of years thus suitable to answer questions related to assessment of practical skills in secondary schools. According to Tanzanian education system Form Four are the candidates for the examination Secondary Education Certificate which is known as ordinary level education in this time are in time of choosing their combination to take in advanced level which will lead to their career which can be in physical science, social science or commercial subjects. With respect to gender, 53.4% of the students were male while 46.6% were female which a good representation in the study is. Findings also showed that most students 77.7% were aged between 15-18 years while 22.3% were aged more than 20 years. The students were therefore old enough to recognize their talent based and respond to the questions as pertains to the teaching and learning on their proficiency in the practical skills taught at school.

4.4 Assessment Modes Used to Evaluate Communication, Creative, Critical thinking, Agriculture and Entrepreneurship Skills in Competency Based Curriculum

The first research question was to assess modes used to evaluate practical skills in competency based curriculum in secondary schools in Temeke District-Tanzania. The researcher sought to find out whether teachers assess students' practical skills. Teachers responses are presented in Table 5.

Table 5

Teachers Response on whether Assess Students Practical Skills n= 69

Responses	**Frequency**	**Percentage**
Yes	14	20.3
No	55	79.7
Total	**69**	**100.0**

Source: research 2019

Table 5 show that majority of the teachers (79.7%) indicates that they did not assess students' practical skills while (20.3%) assessed students' practical skills. Majority when are asked to explain how practical skills are assessed, 95.7% of the teachers explained that practical skills are only assessed in subjects like physics, chemistry, biology, computer and home science whereby students are required by the examination body to do practical but in other subjects the grading is 100% from theory.

In the interview with the DEO, the responded respondent that the teacher might not be assessing practical skills in all subjects, the teachers are assessing students in form of pen and paper. The view of the DEO was supported by the TIE responded who said that secondary school teachers are not assessing practical skills because the TIE have not developed the document for assessing the practical skill. The officer from TIE added that apart from the fact that TIE have not developed a document for assessing practical skill but there is a problem of the teachers to accept changes. The CA is not clear how it works the officer responded when pointing out the policy of 50% theory and 50% practical. The officer said the policy was not actualized in the assessment of competence-based education. The NECTA directors supported that the practical skills in secondary schools was not well actualized. But the responded said the policy of 50% theory and 50% practical in the assessment well implemented in the natural science subjects. He added that national examination has a specific system of conducting the continuous assessment from school. They have their own

formula they use to calculate to get the 100% marks for the final examination and the continuous assessment. Most of the practical examination which are common for every school are for three subjects; Biology, Chemistry and Physics. There is no practical examination for mathematics; there is no practical examination for agriculture science. There is practical examination for computer and technology studies but very few schools offer the subject. In more than 6000 secondary schools in Tanzania, less than 5% of them teach-Information Communication and Technology (ICT) and do the national examination.

This shows that practical skills assessment is not so much clear to all subjects taught in secondary schools, only for physical science subjects taught in secondary schools in Temeke district. The assessment of practical skills as part of competence based curriculum it seems is not clear for most of the teachers, even those teachers teaching subjects, which involves practical training like physical science they are not aware on how to assess practical skills like creative and critical thinking which were developed by physical science subjects. Also the teachers who teacher art and performance which include the music and fine art also are not aware even though their subject are more practical. This finding disagrees with that of Noonan and Duncan (2011) who found out that improvement of learning occurs when teachers use classroom assessment information to establish knowledge, skills and attitudes possessed by their students. Students were requested to explain whether teachers assessed their practical skills and their responses are presented in Table 6.

Table 6

Students' Response whether teachers Assessed Practical Skills n = 337

Responses	**Frequency**	**Percentage**
Yes	188	55.8
No	149	44.2
Total	**337**	**100.0**

Source: research 2019

Table 6 shows that (55.8%) of students were in agreement with the teacher that assessment of students' practical skills while (44.2%) of the students indicated that practical skills were not assessed. The researcher asked the list the means of assessment used to measure the practical skills. The students in their number of 78.2% listed some of the assessment methods used by teachers, which included; class assignments, examinations, tests, quizzes, class presentations and sports which was done daily. Even though students mentioned sport as one of the practical skills assessed, they were not aware on how the sport assessed. It is clear that some students (55.8%) were aware of the various assessment modes used by teachers in daily classroom practices and others (44.2%) did not know. The findings also show that the teachers still use the traditional modes of assessment. The finding concurs with Ndalichako (2011) study, which revealed that the traditional methods of assessment are dominantly used in secondary schools in Tanzania. Since the examinations are in the form of the old model of pen and paper, there is need to train teachers on other modes of assessment that also assess students' practical skills as the implementation of competence based curriculum. The researcher found out that there was a controversial between the document of competence-based curriculum and the actual implementation.

Through document analysis guide, the researcher assessed the format of the examinations questions asked by the national examination council. The researcher checked some of the examination papers to identify the assessment of practical skills in the national examination. The researcher found that past examination papers examined content-based learning. For example, Commerce Paper 1 for Advanced certificate for secondary school, which was done on 10th May 2018. Most of the questions in this paper required the learners to explain, to elaborate and to describe. The paper does not indicate questions which require the learner to apply some entrepreneurship skills. Another paper is Civics paper for certificate for secondary school November 2014, the questions asked are not practical. The national

examination gives the questions which require only paper and pen to attempt which in Civics, as a social science subject would require to develop the leadership and citizenship skills.

History paper 2, 2018 for advanced certificate for secondary education examination does not allow a candidate to show their practical skills learned during instructions. For example, question No 3 “Explain six causes of French Revolution of 1870”. Question No 8 “explain six effects of Jewish –Arab war of 1967.”. This confirms that rarely does the curriculum integrate practical skills in their examinations hence cannot attain the objectives of competence based curriculum. Further observation indicated that most questions set encouraged rote learning. For instance, a Commerce paper of 2016 for the certificate of secondary education examination question No 1 (X) the multiple choice the question asked; “Which of the following is the correct form of transport?”

a) Water, land and air

b) Water, land and railway.

c) Water, air and road.

d) Land, lake and air.

Analysis of this questions from past papers, the researcher wonders whether these questions develop adequate critical thinking, creativity and problem solving. The questions asked seems to be assessing theory, memorization than the aforementioned competency based skills in addition to those entrepreneurship and communication skills as stated in the curriculum. The researcher found that the questions are measuring the memorization.

The researcher further sought to find out the frequency of assessing students practical skills. The participants were asked to indicate how often the skill was used in class by ticking one of appropriate option using the Key *Always=1 Often=2, Sometimes=3, Rarely=4 Never=5.* Their responses are presented in Table 7.

Table 7
Teachers Response on Frequency on whether teachers assess the practical skills n=69 (100%)

Teachers responses	1		2		3		4		5	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Communication skills	24	34.8	24	34.8	4	5.8	3	4.3	14	20.3
Creative thinking	27	39.1	15	21.7	11	15.9	0	0	16	23.2
Entrepreneurship	10	14.5	15	21.7	14	20.3	8	11.6	22	31.9
Problem solving	26	37.7	14	20.3	12	17.4	3	4.3	14	20.3
Leadership skills	13	18.8	16	23.2	18	26.1	5	7.2	17	24.6

Source: research 2019

Table 7 show that the teachers always assessed communication skill in 34.8%, creative thinking skills and problem solving skills. The teachers never assess entrepreneurship skills that show the response of 31.9% and the teachers often assessed students' leadership skills. This shows that the teachers assessed communication, creative thinking, entrepreneurship, and problem solving and leadership skills in students although the frequency of assessing every skill varied.

When the researcher asked the teachers next question to explain most appropriate model used to assess the mentioned practical skills in Competence Based Curriculum, they were unable to explain. They are 11 teachers from social science including languages who explained that they assess communication skills through oral questions and debate. The rest of the teachers respond that they use pen and paper assessment model. These findings are not in agreement with McMillan (2010) who established that teachers used some type of peer and self-assessment as part of their classroom assessment practices to equip students with various skills. The researcher is suspecting that the teachers are not aware about practical skills in relation to competence based curriculum education system, because the pen and paper which majority of teachers explained as the means of assessing practical skills like creative thinking, problem solving leadership skills is not related as the correct means of assessing these skills.

Students were asked to state how often their teachers employed the different assessment modes in daily classroom practice. The participants were asked to indicate how often the skill was used in class by ticking one of appropriate option using the Key *Always=1 Often=2, Sometimes=3, Rarely=4 Never=5.* Table 8 summarizes the findings.

Table 8

Students' Response on Frequency of Employing Assessment Modes n=337 (100%)

Statements	1		2		3		4		5	
Assessment models	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Oral questioning	163	48.4	84	24.9	40	11.9	17	5.0	33	9.8
Assignments	84	24.9	121	35.9	79	23.4	8	2.4	45	13.4
Homework	102	30.3	94	27.9	103	30.6	29	8.6	9	2.7
Class exercises	154	45.7	95	28.2	56	16.6	31	9.2	1	0.3
Quizzes	97	28.8	105	31.2	86	25.5	43	12.8	6	1.8
Tests	65	19.3	86	25.5	141	41.8	28	8.3	17	5.0
Class work										
Presentations	68	20.2	69	20.5	80	23.1	90	26.7	30	8.9
Practical tasks	24	7.1	50	14.8	37	11.0	51	15.1	175	51.9

Source: Research, 2019

Key: Always=1 Often=2, Sometimes=3, Rarely=4 Never=5,

Findings in Table 8 show that the teachers questioned students orally, the oral assessment gave (48.4%) assignment, homework, quizzes, and tests often. Teachers always gave class exercises they sometimes asked students to do class work presentations and rarely assigned practical tasks the practical tasks recorded a lowest record of 7.1% always assessment on the other side it recorded the highest score of never assessed in 51.9%.

The finds show that most of teachers do not assess the practical skills. The most appropriate modes used to assess students' practical skills in competence based curriculum

identified by the teachers were asking questions, class exercise and oral questions. According to this finding, it shows that the teachers are not assessing the practical skills because majority of the teachers are employing assessment methods, which cannot be applied to the practical skills. On the assessment mode, the information accrued from the interviews with head teachers, alumni, DEO, TIE director and NECTA director indicated that they have a similar opinion. The DEO said the most common mode of evaluating student in secondary school is pen and paper. This was supported by the director of NECTA and TIE, officials who said:

> that the common model of assessment used in school is the pen and paper. The headmaster/mistress supported by when they said, students were assessed by using the pen and paper in form of quiz, test and examination. They said pen and paper is the best model of assessment because is the only model used by the national examination council to assess the students. Teachers also use group discussion in the teaching process and project work. The project work only done by the candidates who are the form four and form six. Assignment and home works are also used to assess students' skills in competency based curriculum but has no much contribution in the certification. The practical skills of critical thinking, problem solving, communication and agriculture are not assessed in school. This is because the teaching methodology used in the school is not competency based education. The best mode of assessment practical skills are observation, checklist and portfolio mode of assessment because these modes of assessment can be used to assess the whole person **(Interviews with DEO, TIE, NECTA and Headmasters, 29 January- 4 February, 2019).**

The above information shows that teachers frequently conduct assessment in classrooms but assessment of practical skills is very rare in some schools and are never conducted in other schools. The finding disagrees with that of Thi Nhat Ho (2015) who said that teachers engage in assessment for learning practices such as questioning, observation, oral feedback and peer assessment to promote learning in their classes to some extent. The researcher also sought students' opinion on practical skills assessment modes. The students were asked to indicate their agreement level concerning skills by selecting the best option using the Key: Key: SD=Strongly Disagree, D=Disagree, UN=Undecided, A=Agree, SA=Strongly Agree. The findings are presented in Table 9.

Table 9

Students Perceptions on Teachers Assessment Modes n=337 (100%)

Perceptions on assessment models statements	SD **F (%)**	D **F (%)**	UD **F (%)**	A **F (%)**	SA **F (%)**	
Teachers during continues assessment always include practical activities	88(26.1)	110(32.6	47 (13.9)	63 (18.7)	29 (8.6)	
There is an examination which assess practical skills in all subjects	89(26.4)	101 (30.2)	31 (9.2)	54 (16.0)	62 (18.4)	
The final and ongoing assessment mode always examine practical skills	115(34.1	78(23.1)	59 (17.5)	50 (14.8)	35 (10.4)	
The type of assessment does not reflect the implementation of CBC.	40(11.9)	62(18.4)	69 (20.5)	76 (22.6)	90 (26.7)	
Our mode of assessment is always in paper and pen	42(12.5)	19(5.6)	14 (4.2)	177 (52.5)	85 (25.2)	
The school has special assessment mode to help student who cannot explain themselves in term of pen and paper	77(22.8)	129 (38.3)	24 (7.1)	68 (20.2)	39 (11.6)	
The competency of each learner is developed through assessment mode.	32(9.5)	45 (13.4)	54 (16.0)	141(41.8)	65 (19.3)	2.33

Source: Research 2019

Findings in Table 9 show that; the students strongly agreed that the mode of assessment is always in paper and pen with 52.5%. Students strongly disagreed that the final and ongoing assessment mode always examine practical skills 26.4%. Majority of the students disagreed with the statement that teachers' assessment always includes practical activities. There is no examinations which is in form practical skills in all subjects, that the mode of assessment discriminates the learners. Students disagreed with the statement that the

school has special assessment mode to help student who cannot explain themselves in term of pen and paper 38.3%

This was confirmed by interview from the alumni, headmasters/mistress, DEO, TIE and NECTA directors who supported the findings from the students that practical skills are not assessed in Secondary school. The TIE arguments were basing on the fact that, in Tanzania all examinations conducted by the National Examination Council of Tanzania (NECTA) are summative in nature. In such kind of examination there is no way the talents which are non-academics can be assessed in the summative examinations. The Tanzania Institute of Education (TIE) responded from the department of Assessment and evaluation accepted that as institution have not developed a format of assessing the practical skills like critical thinking, creativity, entrepreneurship, communication, agricultural, leadership and other skills. The official from TIE added that, the examination theft in the current situation is the evidence that there no competence based curriculum implemented in the teaching and learning in secondary school. Therefore, no assessment of practical skills going on in secondary school. The responded said in competence-based curriculum learners are assessed by using the final exam like what is happen in school nowadays.

The alumni said that examination for the subject like dress making, physical education; Nutrition fine art and drawing at least assess the ability of the learners in practical. The problem to these subjects are taught in very few schools. The alumni site example that in Temeke district there only one school where subject like nutrition and textile and dress making are taught.

The director of NECTA argue that after receiving the Continuous Assessment (CA) form from schools, they assume that in the respective schools, teachers who have been teaching these students have assessed them in other skills which cannot be assessed in form of pen and paper. In addition, one of the secondary school alumni in Temeke District

commended that practical skills are not yet recognized in such a way that can be assessed in secondary schools and be graded for certification. The summative way of assessment cannot be used as means of assessment in the competency based education.

The information was confirmed by the head of schools who said, students are assessed by using quizzes, tests and in form of pen and paper which are the common way of assessing. They said that they are not assessing because there are no tools developed by the curriculum developers for assessing the practical skills in secondary schools. The same sentiments were seconded by another head of school who said, they use pen and paper assessment mode because is the only assessment mode used by the National Examinational Council of Tanzania (NECTA). Another head of school added that even though the teachers in school level are trying to work to teach by following the practical skills is a big challenge because the final examinations are not in practical skills modality.

This implies that although there are various assessment modes used to assess students' practical skills, the level of practical skills assessment in secondary schools is still very low and teachers use only the content based approach hence it becomes hard to assess students' competency in various skills that could help to nurture students' talents. The finding concurs with Salema (2017) that many teachers in Tanzania use teacher centered approach in both teaching and assessment procedures. The students are not actively involved in the learning process which can only be done if students carry out practical's where the teacher guides and the student perform the action.

4.5 Resources Available for the Assessment of Communication, Creative, Critical thinking, Agriculture and Entrepreneurship Skills in Secondary School in Temeke District in Tanzania

The second research question aimed at assessing the resources available for the assessment of practical skills in competency based curriculum in secondary in Tanzania. The researcher sought to find out whether the teachers were aware of resources required for assessment of practical skills. Findings are shown in Table 10.

Table 10

Teachers Awareness of Resources Required for Assessment n =69

Responses	Frequency	Percentage
Yes	**55**	**79.7**
No	**14**	**20.3**
Total	**69**	**100.0**

Source: Research 2019

Table 10 show that majority of the teachers 79.7% were aware of resources required for an assessment of practical skills, while 20.3% were not aware. The researcher asked the teacher to list the resources required for the assessment of practical skills. Majority of the teacher (85.7%) listed books, computers, music instruments and workshops for manual works as basic resources for the assessment of practical skill.

The findings were supported by the interview conducted by the researcher in different times to the headmaster, DEO, TIE director and NECTA director who indicated the resources required for assessment practical skills includes books, computers, laboratories, music instruments, sports equipment, workshops for manual works and libraries. Moreover, the DEO added that human resource meaning well trained curriculum implementer is very basic

in the assessment of practical skills in secondary schools in Temeke district. The DEO added that in the Temeke district there is shortage of natural science teacher.

Most of the headmaster/mistress in Secondary School in Temeke especially from public school showed that there is poor supply of teaching and learning resources. One of the headmaster said for the implementation of free education in O-level Secondary, they schools receive money in two forms, there is grants and subsides, the grants is 978Tsh which is 0.4$ while the subsides is 1033 Tsh which is 0.42$ per student per month. This money is very little to run a school he said.

The TIE said in the circumstance of schools and the implementation of free education for O- level secondary school is very difficult to meet the target of the required resource in school. The officer added that in this situation is not easy to have the assessment of practical skills in secondary. On the other the Director of NECTA said what they know is that when the send exams in schools are done, the Director is not in the position of commending about the resource because it taken care by another ministry not under the ministry of education.

This implication of the data is that teachers and head teachers, DEO, TIE Director and NECTA director are aware of various resources required for successful assessment of students' practical skills. The finding is in agreement with Paul (2014) who revealed that teachers in Tanzania were aware of resources used to assess students' practical skills in implementation of competence based curriculum. The resources like laboratories are used for practicing the theory taught in class, music instruments for nurturing music talents, sports equipment for practicing various sports like football, netball, athletics, workshops for manual works like embroidery and arts and libraries for reading and enhancing communication skills. The researcher also sought to find out whether the students were aware of the resources required for assessment. Table 11 presents the findings.

Table 11

Students Awareness of Resources Required for Assessment *n= 337*

Responses	**Frequency**	**Percentage**
Yes	187	55.5
No	150	44.4
Total	**337**	**100.0**

Source: Research 2019

Table 11 shows that 55.5% of the students were aware about resources required for assessment while 44.5% were not aware. The researcher asked the student to list the resources which are important for the assessment of practical skills in Secondary school. Majority of student 90% = 300 student were able to list the resources required for the assessment of practical skill. The resources listed by the students included laboratory, farming tools, libraries, music instruments, sports and games equipment and computers. The report show that more than half of the students in selected secondary schools in Temeke district in Tanzania were aware of resources required for assessment of practical skills. The findings are in line with KICD (2014) report on teaching and learning materials required for effective implementation of competence based curriculum and assessment of students' practical skills.

The researcher asked students to rank on the extent at which learning resources provided be the schools helped in the assessment of practical skills in secondary schools in Temeke District. Table 12 presents the findings.

Table 12

Students Responses : To what Extent the availability of Resources helps in Practical Skills Assessment n=337

Extent	**Frequency**	**Percentage**
Very great extent	69	20.5
Great extent	69	20.5
Moderate extent	122	36.2
Little extent	51	15.1
Not at all	26	7.7
Total	**337**	**100.0**

Table 12 shows that 36.2% indicated that resources help in skills assessment to a moderate extent, very great extent, another 20.5%. The ranking show that students are not so much aware of the important of resources in the assessment of practical skills. The ranking was so scatted in the way that the responded are not aware on the uses of these resources. The researcher has a view that the resource are not so much used that is why the student are not aware on how the resources were helpfully.

In the interview with the head masters/mistress, the researcher found that the resources are very important in the assessment of practical skills. The head masters/mistress supported that the resources are important but are not available. One head master said " In my school I cannot tell the important of resource in the assessment of practical skills because the school is located in very small area. The place is populated so in this area is very difficult to get resources like playground and other infrastructure to facilitate teaching and assessing students' practical skills. The school does not have a playground, music instruments, games, workshop for manual works and sports equipment and teachers only teach in classrooms. But I think if we have those resources that can help in the assessment of those practical skills" **(Interview, with headmaster/mistress from 25 January and 3Feburuary 2019).**

This shows that adequate resources are essential for effective assessment of practical skills. The findings are in agreement with Otunga, et al (2011) that assessment cannot take place if the resources are not available and therefore majority of secondary schools in Temeke district, are not able to assess students' practical skills.

The researcher has a view that physical, financial and human resources are vital in the whole teaching process. There is a need of well trained teachers, funding for buying books, laboratory chemicals, and apparatus. Also physical resources like buildings are important to make the teaching and assessment process to take place in a good environment.

In order to find out the adequacy of teaching and learning resources required for skills assessments, teachers were asked to tick on the level of adequacy of the teaching and learning resources that facilitate practical learning in their school. Table 13 presents the finding.

Table 13

Teachers Responses on Adequacy of Teaching and Learning Resources n=69 (100%)

Adequacy of Resources	Very adequate		Adequate		Inadequate		Not available	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Books	21	30.4	35	50.1	13	18.8	0	0
Computers	9	13.0	19	27.5	17	24.6	24	34.8
Work shop for manual works	6	8.7	12	17.4	14	20.3	37	53.6
Sport and game field	15	21.7	28	40.6	16	23.2	10	14.5
Music instruments	5	7.2	9	13.0	15	21.7	40	57.9

Source: Research 2019

Results in Table 13 show that (50.1%) of the teachers felt that the books were adequate, 34.8% indicated that the computers were not available, 53.6% indicated that workshops for manual works were not available, 40.6% indicated that sport and game fields were adequate and 57.9% of the teachers indicated that their schools did not have music instruments.

From the rickets scale the researcher asked teacher to explain how the resources mentioned used to facilitate the assessment of practical skills. The teachers responded that books are used to give students assignments and homework and to read ahead of the teacher on upcoming topics. Reading books improves students' communication skills, which are adequate resource. The computers used to research more on class work as well as test whether the students understand what they are taught in class work with regards to the skills of using computers. Workshops were used for manual works like embroidery, pottery and art work. Sport and game field were used to assess students' skills in games and athletics. Music instruments were used to assess students' skills in playing music instruments, dance and singing. They added that the challenge is most of these resources are not available in school.

The teachers also added that they encountered some challenges in assessing practical skills in competence based curriculum education which included few assessment resources (books, laboratory, library, sports and games equipment, music instruments, computers), limited time for practical activities, lack of knowledge in competency based curriculum, students' unwillingness to learn, overcrowded classes and language barrier.

The interview conducted by the researcher from the head of schools, District Education Officer, (DEO), Tanzania Institute of Education (TIE) director and National Examination Council of Tanzania (NECTA) director in different times were in agreement with the findings from the teachers that resources for assessing practical skills are inadequate thus posing challenges to assessment of students' practical skills. (**Interview: DEO, TIE and NECTA 2019)**

The 4 head of schools from public schools had the same view about the adequacy of resources to facilitate the assessment of practical skills in secondary school in Temeke District in Tanzania. They said there is a shortage of human resource especially teachers for physical/natural science like mathematics, physics

and chemistry. They argued that also they lack teachers for practical subjects like dress making and textile, cookery and nutrition and physical education. In school, it is common to find a class with 80 and above students instead of the recommended 45-50 students. One of the headmaster from a public school added that teachers prefer to work in private schools because the government remunerations are low. Also the infrastructures are not friendly to the teaching and learning. We are facing challenges on the availability of the chairs and tables whereby some students are forced to share them. We have inadequate classrooms, offices for teachers and toilets. The laboratories are not enough, for the whole school from form one to form six. The laboratories are only for natural science subjects. There is also poor supply of laboratory chemicals. With regard to a language laboratory, even teachers are not aware if there is such are laboratory in the world. The government is responsible for supplier of human resource, financial resources and building the school infrastructure like classroom and laboratories and the school is strictly instructed not to solicit any fund from the parents because the government is implementing the policy of free education. The TIE director supported the head teachers that there are challenges of resource in secondary school in form of financial, physical and human.

The implication of these arguments from different people is that the assessment of practical skills is not possible in such a situation where the teaching and learning resources are not available. For example, if there are no teachers to teacher obviously the assessment will be unreliable.

The researcher realized that teachers knew the resources needed and their uses but the challenge for the resources like computer workshop for manual work, and music instrument are not available in secondary schools in Temeke District in Tanzania to facilitate the teaching and assessment of practical skills. However, one of

the head master from the private secondary school where students pay school fees in a well-established system disagreed with the teachers findings, when he said that:

> The school has enough resources. We have a big library, a modern physical science laboratory, enough music enough instrument and space for different sports and games. The school infrastructures are well established. In this school, we have enough resources to enable assessment of students' practical skills although the national examination body does not give a room for skills assessment of practical skills to the students, so the resources are rarely used**. (Interview, 25 January, 2019).**

The DEO in Temeke district challenged the view of the teachers about the availability of resources. The DEO said apart from little challenges of physical science teachers the government has done a lot to supply the teaching and learning resources in secondary schools in Temeke district. In every school there is a laboratory for natural science subjects and the government is supplying the chemicals directly to schools. The NECTA director said that is not in the position of commending about the resources in secondary school because it is handled by the Ministry of Local Government and Administration (Wizara ya Tawalaza Mikoa na Serikaliza Mitaa- TAMISEMI) not the Ministry of Education.

This shows that the majority of secondary schools in Temeke district have a challenge of resources that are essential for practical skills assessments. This finding concurs with Birimana (2013) Huye district in Rwanda who established that most of the schools have inadequate instructional resources hence compromising the quality of education through poor curriculum implementation strategies.

The evidence from teachers' head of schools with the challenge paused by the District Education Officer put the researcher into junction to call upon more researcher find out the documents and verify the availability of the physical resources. All in the DEO is the one

responsible matters pertaining education in the whole district. Students were asked to tick on the level of adequacy of teaching and learning materials. Table 14 presents the findings.

Table 14

Students Rating of Availability of Teaching and Learning Materials n=337 (100%)

Teaching and Learning Materials	Very adequate		Adequate		Inadequate		Not available	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Video tape and video camera	2	0.6	19	5.6	20	5.9	296	87.8
Magazines	30	8.9	41	12.2	47	13.9	219	65.0
News papers	63	18.7	42	12.5	59	17.5	173	51.3
Books	156	46.3	94	27.9	66	19.6	21	6.2
Physical science Laboratories	145	43.0	94	27.9	66	19.6	32	9.5
Chemicals in the laboratory	125	37.1	105	31.0	65	19.3	42	12.5
Work shop for manual works	43	12.8	38	11.3	80	23.7	176	52.2
Music instruments	46	13.6	28	8.3	47	13.9	216	64.1
Game and sports equipment	79	23.4	86	25.5	108	32.0	64	19.0
Language laboratory	30	8.9	31	9.2	27	8.0	249	73.9
Computer laboratory	34	10.1	28	8.3	34	10.1	241	71.5

Source: Research 2019

Table 14 shows that 87.8% of the students indicated that the video tape and cameras are not available. Then 65% indicated that magazines were not available, and 51.3% indicated that newspapers were not available, 52.2% indicated that workshops for manual work were not available, 64.1% indicated that music instruments were not available, 73.9% indicated that language laboratory was not available and 71.5% of the students indicated that computer laboratory were not available. This shows that majority of the secondary schools in Temeke district have very scarce resources that are essential for teaching of skills and thereby assessment of skills assessment. The finding supports The UNESCO Institute statistical report of 2016 that listed Tanzania as one of the countries in Africa with poor school infrastructure especially class room and book supply. Inadequate or complete lack of

resources is therefore a major hindrance to assess students' practical skills in secondary schools in Temeke district in Tanzania.

From the data the researcher observed that language laboratory (73.9) computer laboratory (71.5%) are the most missing facilities in secondary schools in Temeke district. The financial resource seems to be the most challenging issue in public schools, because the private schools were students pay school fees the situation is better. The supply for the resource done by the government as the DEO stated is not satisfying the number of needs in the number of schools in Secondary schools in Temeke District. The researcher sought teachers' opinion on adequacy of human resource both teaching and non-teaching staff. Table 15 presents the findings.

Table 15

Teachers Responses on Adequacy of Human Resource *n =69*

Responses	**Frequency**	**Percentage**
Yes	31	44.9
No	38	55.1
Total	**69**	**100.0**

Source: Research 2019

Findings in Table 15 show that 44.9% of the teachers opined that there is sufficient human resource in their schools to facilitate the process of student's practical skills assessment and 55.1% opined that human resource in their school was not sufficient.

Apart from the closed question (YES/NO) asked the teachers to explain their arguments for this view on the adequacy of the human resource. The teachers gave their explanations in different ways that most of the teachers are in school and supposed to teach and assess students in practical skills while are not trained in that. They said that there is

challenge of inadequate teacher in physical/natural science subjects like mathematics, physics, chemistry and biology.

In the interview with the heads of schools some of them responded in the affirmative that their school had enough teachers, enough trained personnel in music and sports, enough laboratory technicians and enough workshop personnel this was in private schools. On the other hand, the teachers who gave a no answer explained that the teachers were few as well as the non-teaching staff in the laboratory and workshops. They also pointed out that there was no specialist in music and games and the students only depended on teachers to train them in core-curriculum activities. This shows that adequate human resources are essential in assessment of students' practical skills. The finding is in agreement with Otunga, et al (2011) who noted that human and non-human resources are essentials in assessment of students' practical skills. When teachers are enough, they will have enough time to attend students and at the same with non-teaching staff especially in the laboratories and the workshops since it is very hard to teach and assess practical skills of many students at the same time.

The researcher asked the teachers to suggest ways of addressing the challenges of financial, physical and human resources to improve the assessment of practical skills in secondary school in Temeke district.

The teachers in their responses they said that more money should be given to the schools so that they can solve the challenges of physical resources like to building more class rooms, to buy books and more teaching and learning resources. Apart from soliciting money from the government the teachers were against with the policy of the of free education in lower secondary school. They suggest that cost sharing could help to improve financial situation in secondary school.

Moreover, parents should be responsible to buy other learning resources for their children so as to reduce the heavy burden the school is bearing for buying books for students in secondary school in Temeke District. Their suggestion was supported by the interview from the head of schools. The 4 head of schools from public schools supported the ideal of the government to add more resource in supporting education in Temeke District. To verify that the financial resource in not enough, one of the headmaster who gave the figure of the money the schools receive per month from the government. The headmaster said the school receives money in form of subsidies and grant to each student. The grant is Tanzania shilling 907.78 Tsh = $ 0.4 per student per month while the subsidy is Tanzanian shilling 1033.36 Tsh = 0.46$ per month equals to 0.86$ each student receives per month. This indicated that school with these little amounts of money could not afford to provide all required teaching and learning materials without parents to contribute something or to buy some materials like books.

One of the headmaster added that the government should have a special budget to recruit more teachers every year especially in science subjects and good resource management should be insisted so as to use the little available resources to help the assessment of practical skills as required by the competence based education.

4.6 Teachers Skills and Competency in Assessing Communication, Creative, Critical thinking, Agriculture and Entrepreneurship Skills

The third research question focused on teachers' skills and competencies in assessing practical skills in competency based curriculum in secondary schools in Temeke District in Tanzania. The teachers were asked to tick with a yes or no answer in response to statements on skills and competency. Findings were presented in Table 16.

Table 16

Teachers Responses on Adequacy of Skills and Competency n=69 (100%)

Statement	Yes		No	
	F	**%**	**F**	**%**
Is your training acquired in the college applicable to the teaching and assessment of practical skills in the implementation of competency based curriculum today	29	42.0	40	58.0
There is a need of in-service training in relation to competency based education teaching and assessment of practical skills	64	92.8	5	7.2
Have you attended in-service training on assessment of practical skills?	20	29.0	49	71.0

Source: Research, 2019

Table 16 shows that 58% of the teachers indicated that the training acquired in the college is not applicable to the teaching and assessment of practical skills in the implementation of competency based curriculum today and 42% indicated that the training is applicable. Most of the teachers 92.8% said that there is a need for in-service training in relation to competency based education teaching and assessment of practical skills. This will help teachers to be able to assess practical skills since they trained on new methods teaching both content and competency based curriculum. Findings also established that majority of the teachers 71% had not attended in-service training since the competence base curriculum started in 2005 in Tanzania.

The researcher asked the responded to explain their responses on why they need in-service training of not. Teachers' responses varied according to the period of time they had taught and their time for training. The teachers who was in the field of teacher before 2005 found themselves cannot implement the competence based curriculum especially in the assessment of practical skills, these teachers responded their training institute did not equip

them with the knowledge and skills in the implementation of competency based curriculum in the assessment of practical skills.

They added that teachers who had attended in-service training improved their teaching methodologies and were capable of using various modes to assess students' practical skills. This because in-service training equips teacher with skills on competency based curriculum and they are therefore able to teach and assess students' practical skills.

The teachers said there is a great need for in-service training for teachers because they are in the in world of science and technology where competence based curriculum is the only type of education needed in the world. This is time of competence based and practical skill application in problem solving in life. Teachers must be equipping with the knowledge in teaching and assessment of practical skills, they commented. Their suggestion of in-service training is an indicator that these teachers found that in whole teaching process there is gap. The gap is in the implementation of competence-based curriculum, which is basis for the assessment of practical skill

The interview from the head master/mistresses, district education officer, TIE and NECTA directors in different time also agreed with the teachers with regards to teachers' skills and competency in practical skills assessment.

The 4 head of schools in public school and 1 from private were in agreement that the in-service training was not conducted in their school while two from private schools said they have attended an in-service training. They said that they just heard that there is in-service training for the implementation of new curriculum called competence-based curriculum but in their school they have never received any training about the teaching and application of competence-based education, said one of the headmaster.The TIE director supported the head teacher by saying:

> Since the competency-based curriculum was rolled out on 2005 the TIE have not played her part of training teachers especially in the area of in-service training in the implementation of competency-based curriculum. The issue of resource provision has been challenging to the institution that is why the in-service training was not conducted. Assessment of practical skills as part of competence based curriculum have been difficult for teachers. The teachers' knowledge on competence-based curriculum is not adequate and they are not able to teach and assess students' practical skills. The teachers just teach by experience, they use the old model of teaching and assessment so the researcher cannot see any improvements in this system of teaching and learning. The education is more theoretical and there is no practicability in teaching (**Interview with TIE, 2019)**

The director of NECTA has a different opinion from that teachers and TIE. His argument was that they are composing examination in competence based and the learners are performing well, is in institution is assuming that teachers are well trained. NECTA director added that they send the practical examination for science subjects like chemistry and biology and students are performing well. This shows that majority of teachers are not trained in competency based curriculum hence their inability to assess practical skills. The finding is in line with Malekela (2014), who stated that providing teachers with proper subject-knowledge and practical teaching abilities based on present learner-centered teaching techniques is a significant challenge in attaining quality teacher education in Tanzania.

When the researcher held interview with director of NECTA, he realized that the directors' argument on practical skills was based only in physical sciences subjects. The director was not on the assessment of practical skills stated in the competence based curriculum with leadership skills, creativity, entrepreneurship and problem solving. From that argument the research discovered that the National Examination Council of Tanzania

was not aware about the practical skills. The researcher observed past examination questions and found that the examination do not assess the practical skills (**Appendix XIII).** The researcher also sought students' opinion on teachers' skills and competence in assessing practical skills. Findings are presented in Table 17.

Table 17

Students Opinion on Teachers Skills and Competency *n =337*

Responses	Frequency	Percentage
Teacher are competent	106	31.5
Teachers are not competent	231	68.5
Total	337	100.0

Source: Research 2019

Table 17 show that majority of the students 31.5% had the opinion that their teachers were competent in assessing them practically. The students supported their answer by explaining that some of their teachers were confident while teaching and always assigned assignments, quizzes and supervised students during practical's. However, majority of the students (68.5%) opined that their teachers were not competent.

The open ended question required the students to explain their responses. The findings were supported by the students who indicated that teachers are not competent explained that their teachers only taught theory in classrooms and they were reluctant to answer questions and practically teach students in laboratories, field or workshops. The students further pointed out that the teachers do not give them a chance to show their talents, some were rude and do not know how to assess students' skills.

The interview from the alumni, NECTA and TIE director also agreed with the students' responses with regards to teachers' competency in competency based curriculum. The NECTA director supported the student that teachers are not well trained in implementing

the competency based curriculum. The opinion was supported by one of the alumni who said:

> Teachers are not well trained because some teachers when they are teaching lose direction when the students ask the teachers to do a demonstration, they do not know how to manage time and they do not even know how to oversee class presentation from one group to another even when the students are presenting the same topic. The teachers are not adequately prepared to implement the competency based education. Most of the teachers are only trained in content based curriculum because there are teachers who are good in express thing in theory but when it comes to the issues of conducting the practical they are not competent. (**Alumni interview, January 2019**)

TIE director added that, apart from training, the attitude of teachers toward competence-based curriculum is negative. They have not accepted it full heartedly. Even though some teachers are trained, are still using the tradition teaching and assessing methodology. Some teachers are so reluctant, they do not like to adopt any change, they do not like to move from their comfort zone of just teaching content based in classrooms. The trained teachers are unwilling to implement competency based curriculum in preparation, in teaching and in assessing students in secondary school."**(Interview, 1 February, 2019).**

This shows that majority of the teachers were not skilled in competence and therefore unable to assess students' practical skills. The findings are in agreements with Adika (2013 who noted that insufficiently trained teachers affect curriculum implementation based on life skills. The researcher further asked the students to tick on their agreement level on adequacy of trained teachers in assessing practical skills in their school. Table 18 presents the findings.

Table 18

Students Level of Agreement on Adequacy of Trained Teachers *n=337*

Extent	Frequency	Percentage
Strongly agree	69	20.5
Agree	69	20.5
Neutral	122	36.2
Disagree	51	15.1
Strongly disagree	26	7.7
Total	**337**	**100.0**

Source: Researcher (2019)

From Table 18 show that majority of the students (36.2%) were not sure whether their schools had adequate trained teachers, 20.5% strongly agreed that their school had adequate trained teachers, 20.5% agreed, 15.1% disagreed and 7.7% of the students strongly disagreed that their school had adequate trained teachers. Students were asked to justify their opinion. The majority of the students (36.2%) said they are not sure if the teachers are well trained or not because they are not so sure about the teaching and assessment modes which are supposed to be used. This shows that the secondary schools do not have adequate trained teachers hence the need for in-service training.

In the interview with the head of schools, one of the headmaster from a private school disagreed with the students' findings and said: "since the implementation of competence-based curriculum, they have trained their teachers twice. The first training was done in 2009 and the second training was done in 2013 which was specific allow assessment, Showing the certificate showing the unit covered in the training". **(Apendix XIV).** The training was financed by the school itself not the government. The teachers got the trainers from Tanzania Institute of Education (TIE) the headmaster insisted that they still have a future plan for training for teachers according to the need of the teachers. To them is their wish ensure that the competency based curriculum is fully implemented. The trained teachers have been more

interactive and they have changed the mode of teaching. Most of trained teachers are using the learner centered teaching method which was not common for most of the teachers before training. The training helps the teachers to improve the teaching methodology, build the confidence of teachers in teaching and impart to the teacher the new assessment techniques. **(Interview, 25 January, 2019).** This finding is consistent with Kendeli (2014) that teachers were not engaged in the development of the curriculum of life skills and very few had been educated in how to teach the subject.

4.7 Teachers Use of Feedback Acquired from Assessment of Communication, Creative, Critical thinking, Agriculture and Entrepreneurship Skills

The fourth research question assessed the extent to which the feedback of assessment in secondary school helps the learners to improve their acquisition of practical skills in Temeke District – Tanzania. Teachers were asked to tick on the frequency of using information gathered from the student's assessments. Table 19 presents the findings.

Table 19
Teachers Frequency of Using Information Gathered from the Students' Assessment n=69 (100%)

How teachers use the Feedback information	1 **F**	**%**	2 **F**	**%**	3 **F**	**%**	4 **F**	**%**	5 **F**	**%**
To evaluate the effectiveness of my teaching	37	53.6	24	34.8	5	7.2	3	4.3	0	0
To provide remedial teaching	23	33.3	21	30.4	21	30.4	3	4.3	1	1.4
To report to the parents the development of studies of their children	24	34.8	33	47.8	10	14.5	2	2.9	0	0
To give advice to students and parents	32	46.4	25	36.2	12	17.4	0	0	0	0
To punish students	15	21.7	17	24.6	23	33.3	11	15.9	3	4.3
To help students to improve their grades	35	50.7	22	31.9	10	14.5	2	2.9	0	0
To diagnose learning difficulties	33	47.8	23	33.3	12	17.4	1	1.4	0	0
To motivate student to acquire more practical skills in their learning	35	50.7	28	40.6	4	5.8	0	0	2	2.9
To guide learners to nurture their talents	26	37.7	23	33.3	12	17.4	6	8.7	2	2.9
To stream students	22	31.9	19	27.5	15	21.7	6	8.7	7	10.1

Source: Research, 2019

Key: Always=1 Often=2, Sometimes=3, Rarely=4 Never=5, Always,

Findings from Table 19 show that majority of the teachers always use information gathered from the student's assessments to evaluate the effectiveness of their teaching 53.6%to give advice to students and parents, to help students to improve their grades, to diagnose learning difficulties encountered by students and to motivate student to acquire

more practical skills in their learning. The least of teachers uses the feedback gathered from assessment to punish students who do not meet the expected standard. The interview with the head masters/mistresses, former students, DEO, NECTA and TIE director supports the teachers finding that information obtained after assessing students' practical skills is helping in the teaching and learning process. The DEO said:

The teachers always try their level best to use the feedback information to help the learners to improve their learning and improve their teaching strategies as well. The feedback teachers get from the student's examination result are most used in the preparation of report to the parents and are used as Continuous assessment to be sent to the national examination council. At school level the feedback of assessment is used more in reporting and some teachers used them to do correction with their students. The teachers use the assessment feedback to evaluate their teaching and improve the teaching and learning process. The teachers and students challenge themselves in the teaching and learning process respectively. Also the feedback information of assessment is used to motivate the whole process of teaching and learning, it motivates the teachers, it motivates the learners. Teachers use the feedback to monitor the teaching process. The result in each subject is discussed in the department on its effectiveness and weakness for the purpose of setting the strategies to improve the future teaching and assessment. The teacher uses the feedback to arrange the remedial classes for students who face difficulties in their studies. The feedbacks from the formative assessment used by the teacher to investigate the teaching process, to guide the learner in the professional career and to report to the parent the academic development of their children in school. The teachers use feedback in the corrective purposes" **(Interview: DEO, 4February 2019).**

This shows that the teachers used the information gathered from students' assessment in various ways all aimed at improving the teaching and learning process as well as equipping students with life skills. The finding supports Kipkorir (2015) findings that feedback is used to correct students' mistakes and also to talk to them about areas they need to improve in recommendations and Sofo (2013) who found out those teachers used assessment for documenting learning. The researcher realized the teacher has a positive application of the feedback of assessment but they are not assessing the practical skill. Is the view of the researcher that if the teachers in school could be assessing the practical skills, they would helped the learner to improve their practical skills.

The students were asked whether the examination they do helps them to improve the application of practical skills. Table 20 presents the findings.

Table 20

Students Responses on Use of Feedback in the improvement of practical skills n=337

Responses	**Frequency**	**Percentage**
Examination helps to improve the application of practical skills	257	76.3
Examination does not help to improve the application of practical skills	80	23.7
Total	**337**	**100.0**

Source: Researcher (2019)

Table 20 shows that majority of the students 76.3% said that the examination they do helps them to apply practical skills and 23.7% of the students said that the examination did not help them to improve in their application of practical skills. The researcher asked the students to explain their responses. The students (76.3%) who responded in the affirmative explained that exams helped them to identify their strengths and weaknesses and eventually perfect in some areas and those who said no explained that the teachers did not assess their

practical skills. This shows that assessing students helps to improve their practical skills. The finding was in agreement with Atim (2012) study that the assessment of data is helpful in assisting a teacher discover better teaching techniques that lead to improved instruction, improved teaching and learning practices.

The view of the researcher is that, teacher's use assessment feedback from the students in different ways, which have the purpose of improving teaching and learning. The view from the data obtained from students, teachers, and interviews from headmasters, education offices and alumni justify that the feedback of assessment are so useful in improving the teaching and learning. The finding is promising that the on the important of assessment. The challenge remained that this teachers are not assessing the practical skills. The assessment of practical skills would help the learner to be more competence in their respective skills and specialization.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENTATIONS

5.1. Introduction

The chapter gives the summary of the findings, conclusion and the recommendations from the students, teachers, headmasters/mistress, education officer, document analysis, Tanzania Institute of Education (TIE) director and National Examination Council of Tanzania (NECTA). The chapter gives suggestion for areas for further studies in line with curriculum studies and Instruction.

5.2. Summary of Findings

The following research questions guided the study. What are the assessment modes used to evaluate communication, creative, critical thinking agricultural and entrepreneurship skills in competence based curriculum in secondary schools in Temeke District in Tanzania? Which resources are available for the assessment communication, creative, critical thinking agricultural and entrepreneurship skills in competency based curriculum in secondary school in Temeke District –Tanzania? What are the teachers Skills and Competencies in assessing communication, creative, critical thinking agricultural and entrepreneurship skills in Competence-based Curriculum in secondary school in Temeke District in Tanzania? How does feedback of the assessment communication, creative, critical thinking agricultural and entrepreneurship in secondary school help the learner to improve their acquisition of practical skills in Tekeme District- Tanzania? The study was guided by two educational theories; Multiple Intelligence theory and Instructional Design theory. Review of related literature brought out knowledge gaps whereby some researchers focused on a single design, research instruments and a few participants. These had limitations, which might have affected their findings of the study; these were mitigated by the current study's use of a mixed method designs where weaknesses of quantitative design were made up by that of qualitative design.

The study employed questionnaires and interview guides to collect data for triangulation purposes. Reviewed literature on assessment of practical skills revealed that teachers lack competence in assessing competence-based education.

The first research question investigated modes of assessment used to evaluate student practical skills in competency-based curriculum. The participants were students, teachers, headmasters/mistress, District Education Officer, Tanzania Institute of Education (TIE) Director of National Examination Council (NECTA) and alumni from the selected schools. The findings showed that 55.8% of the participating students' responses showed that teachers do not assess them in practical skills in their teaching process. This means that teachers mostly used pen and paper to assess students. The study revealed that the most commonly used modes of assessments were class assignments, written examinations, tests and quizzes. These modes of assessment pointed out were not compatible to the assessment of practical skills which means that the communication skills, creativity, critical thinking, agricultural and entrepreneurship were not appropriately assessed. The study found out that the mode of assessment was not clear either. The researcher observed that there was neither specific format for assessing these skills nor standardized means of assessing them. That meant that each school had to assess skills according to their level of understanding, because the Tanzania Institute of Education has never developed clear documentation on how to assess the practical skills since when they introduced the competence based curriculum in 2005.

The findings from the teachers neither contradicted students' responses that teachers assessed them in the practical/soft skills nor assigned practical skills tasks. This shows teachers frequently conduct assessment in classrooms but assessments of skills practically is very rare in some schools and in other schools were never conducted.

The second research question sought to establish the availability of resources for the assessment of practical skills in competence based curriculum. The findings showed that

teachers and students used course books, computers, laboratories, music instruments, sports equipment, workshops for manual works and libraries. This shows that teachers are aware of various resources required for successful assessment of students, practical skills even though are not assessing the practical skills. Although teachers said that, they were aware on how to use these resources in the assessment of soft/practical skills in secondary school, they contradicted themselves in their explanation. That made the researcher concludes that the teachers lacked knowledge and technical knowhow on assessment of practical skills since they did not use them for assessment.

The researcher observed that the resources for the assessment practical skills were not available schools. Most of the schools were lacking the human resources, financial resources, infrastructure and teaching and learning resources. The absence of resources has been an obstacle for the assessment of practical skills. From all schools the researcher visited, only two schools had workshop for manual works; one is a government while the other is a private school. The teachers in schools in Temeke District acknowledged that they were facing many challenges on the assessment of practical because of poor availability and uneven distribution of the required resources that rendered assessment of practical skills impossible. The third research question examined the skills and competences teachers possessed in aassessments of Communication, Agricultural, Creative Thinking and Entrepreneurship Practical Skills integrated in Competency Based Curriculum in Secondary School in Temeke District. Such information was important, as tteachers are the key resource people in curriculum implementation and their competence in their career are of necessity. Key findings showed that most teachers handling Competence Based Curriculum lacked skills on how to assess practical skills. The researcher found out that since Competence-Based Curriculum was rolled out in 2005, there has been no in-service training on the same. It was noted that the Tanzania Institute of Education (TIE) has not trained teachers due to lack of

financial resources. That is why majority of the teachers (92.8%) proposed the need of in-service training on competence-based education teaching and assessments. Although the challenges of in-service training were common in public schools, the study established that private schools teachers had been trained in Competence Based Curriculum and were performance was better.

The fourth research question investigated on how teachers use feedback from assessment to improve the learners' acquisition of communication, creative thinking, and entrepreneurship of practical skills. The teachers' responses showed that they use the feedback to assist learners improve learning. The participating students concurred with teachers' responses by emphasizing that they are benefiting a lot from assessments as it enhances their academic growth. Most students said that the examinations they do incorporate some practical aspects that have enabled them improve the application of practical skills. Through exams, students identified their strengths and weaknesses that they reworked on to perfect those difficulty areas they previously encountered. The findings made the researcher emphasize that if the practical skills were included in the process of teaching and learning, it will enable learners interact with information to gain confidence to apply it in real life situations. Formative assessments are very important in the improvement of academic performance. The finding s showed that teachers used the feedback to improve teaching, to help student to identify their weakness to work on for improvement, to guide learners in the professional career and to inform parents on the academic development of their children in school. All these feedbacks when utilized well contribute to acquiring skills needed in competence-based curriculum that contribute to better teaching and learning practices.

5.3 Conclusion

The mode of assessment used in evaluating students in secondary schools in Temeke district is mostly paper and pen assessment. The implementation of Competency-Based Curriculum is not realized well in the assessment of practical skills because the Tanzania Institute of Education (TIE) has not developed instruments of assessing the practical skills.

The assessment of practical skills in secondary schools in district does not occur because the resources for assessing the practical skills are not available. The challenges of resources included human, financial and infrastructure. The classrooms were overcrowded and a few teachers for natural science subjects. The challenges of resources were more in public schools than in private schools.

Third, the competency of teachers in assessing practical skills in the competence-based curriculum found low. Almost all the public schools participated in this study, the teachers responded that were not received an in-service training since the competence-based curriculum started in 2005. They said one responsible to trainer them who is the Tanzania Institute of Education had not played the role. Tanzania Institute of Education (TIE) reasoned that the constraint of funds has been an obstacle to them to conduct the training teachers in the competence base curriculum.

Fourth, the uses of assessment feedback in promoting practical skills. The study found that most of the teachers uses the feedback of examination to help student to improve their performance. They use to assess their teaching process, teaching materials and guide student in their career. The challenge is that they do not assess the practical skills, they assess the theory and rote learning which is more in the content base curriculum

Fifth, the study found out that lack of capital and mind set are the cause of unemployment in Temeke district. There are some learners, who are capable in conducting

their own project and entrepreneur, but they are facing the challenge of capital and the social mind set of the type of job. The society's minds are still in the white color job and not to blue color job; this is another reason for the increase of unemployment and crime in Temeke district. Those who changed their mind from the formal employment to informal employment have created self-employment after the practical subjects training from secondary school like cookery and textile and dressing have helped a lot of to those who did those subjects. As one of alumni said "in secondary school I was trained a tailor and that is what I like and I enjoy doing because it contribute a lot to my income. When I went to the University I was trained as Telecommunication engineer, I am doing this because my father wanted me to do. They pay me low salary and above all I did not like this job"

The researcher concluded that government of Tanzania is deceiving itself that the competence-based curriculum is working in secondary schools The reality it was not true. It seems there is poor monitoring on the curriculum implementation. Hence the need to improve on monitoring of curriculum implementation and assessment in the competence based curriculum

5.4 Recommendations

The researcher recommended that the Tanzania Institute of Education (TIE) should develop a clear document for the assessment of practical skills in Secondary schools. The horizon of education should be widen from reading and writing only to instruction and doing in secondary school to help the learners to develop their talents and practical skills, which will help them in the real life. The mode of assessment used in schools is pen-paper evaluation. There manual work and other non-academic activities are not considered in the assessment, the educational stakeholder should come up with the mode of assessing the practical skills. The education system must involve the mind set changes in the all teaching to prepare the learners and the social for informal employment. Secondary school teachers in Temeke

District are to take initiative towards the implementation of competency based curriculum in the assessment of practical skills. Lastly, the construction of the examination should have allied with the requirement of the competency-based curriculum in the assessment of the practical skills. The questions constructed are evaluating the rote learning because they do not include the doing activities as suggested in the competency based curriculum. The assessment of other talents like athletics, football, music and art and performance will make learners to perfect on these talents. The practical subjects like cookery, textile and dress making, sport and game, communication skills and manual works should be more encouraged in all school and be assessed practically.

. The training of teachers in the teachers training institute should involve the assessment of practical skills as part of implementation of competency based curriculum. Temeke district should adapt the in-service training model for teachers to make them aware in the competency based curriculum and the assessment of practical skills. From the data collected the researcher concluded that the education system in Tanzania is still far from the competence-based curriculum, there is need to revise the education system. The government should provide the fund for the training of teachers especially the in-service training in case of any changes in the curriculum in the country.

5.5 Recommendation for Further Studies

The study investigated the assessment of practical skills in a competence-based curriculum in secondary schools in Temeke District Tanzania. There is a need to investigate the in no participation of the policy implementer in the policymaking. This will give a full understanding of the participation of teacher in curriculum changes and training of in-service teacher.

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APPENDICES

APPENDIX I: Introduction Letter

Constantine Raphael Kangalawe,

P.O. Box 62157- 00200,

Nairobi.

The Head master/ Mistress,

…… Secondary School,

Dear sir/madam**,**

RE: PERMISSION TO COLLECT DATA FROM YOUR SCHOOL

I am a student at the Catholic University of Eastern Africa (CUEA) in Nairobi-Kenya pursuing master degree in education specialising in curriculum studies and instruction and I am in the process of conducting a research on **assessment of the implementation of competence in promoting practical skills in secondary schools of Temeke District in Tanzania**. Your school has been selected to participate in this study. Kindly allow me to administer questionnaire to you, the teachers and students. I assure you that the information you provide will only be used for academic purposes and your identity will be treated with strict confidentiality.

Yours faithfully,

Constantine Raphael Kangalawe.

APPENDIX II: Questionnaire for Teachers

Please tick (√) in appropriate bracket or fill in the information as your response to all the following questions. Do not write your name or the name of your school anywhere. The information will be completely confidential.

SECTION A: **Demographic Information**

1. Indicate your gender:

Male ( ) Female ( )

2. Which is your age Group:

25-27 years ( ) 30-34 years ( )

35-39 years ( ) 40-44 years ( )

45-49 years ( ) 50-54years ( )

55+ years ( )

3. Indicate your teaching experience

Below 5 years ( ) 6-10 years ( )

11-15 year ( ) 16-20 years ( )

4. Indicate your teaching subject

Art and performance ( ) Sport and games ( )

Physical science ( ) Social Science ( )

Business ( ) Language ( )

Any other_____

SECTION B: Assessment Modes Used to Assess Practical Skills in Competency Based Curriculum

5. In the process of teaching do you assess your students the practical skills?

Yes ( )

No ( )

(b) If yes, the following are some of the practical skills that teachers are expected to assess.

Rate the frequency at what these aspects are assessed.

Always =1 Often=2, Sometimes=3, Rarely=4, Never 5

No.	**Practical skills**	1	2	3	4	5
I	Communication skills					
ii	Creative thinking					
iii	Entrepreneurship					
iv	Problem solving					
v.	Leadership skills					

6. Which are the most appropriate modes used to assess students' practical skills in competence based curriculum? Explain briefly why they are appropriate

i._____

ii. _____

iii_____

iv_____

v_____

SECTION C: Resources Available for Assessment of Practical Skills in Competency Based Curriculum

7a Are you aware of the resources needed for assessment of practical skills?

Yes ( ) No ( )

7b. If yes, kindly list them.

i_____ii_____iii_____

iv_____v_____vi_____

8a. Kindly rate by putting tick in appropriate the adequacy of the teaching and learning resources that facilitate practical learning in your school listed below.

Resources	**Very adequate**	**Adequate**	**Inadequate**	**Not available**
Books				
Computers				
Work shop for manual works				
Sport and game field				
Music instruments				

8b. Explain how you use these resource to assess students to measure their practical skills they had acquired

_____

_____

_____

9a. There is sufficient human resource in your school to facilitate the process of student's practical skills assessment? Yes ( ) No ( )

b. Explain your answer

_____

_____

_____

10.Suggest ways to address the problem of physical, financial and human resource to improve the assessment of practical skills in school?

_____

_____

_____

11. Is your training acquired in the college applicable to the teaching and assessment of practical skills in the implementation of competency-based curriculum today?

Yes ( ) No ( )

b. Give a reason for your answer

i _____

ii_____

12. What are the challenges do you face in assessing practical skills in competence based education in your teaching subject?

i._____

ii._____

iii_____

13a. There is a need of in-service training in relation to competency based education teaching and assessment of practical skills?

Yes ( ) No ( ).

b. Give reasons for your answer

_____

_____

_____

14. Have you attended in-servicing training on assessment of practical skills?

a. Yes ( ) No, not currently ( ) Don't know ( )

b. If the answer is YES how has in-service training on assessment of practical skills in competency based curriculum helped you?

i_____

ii_____

iii_____

iv_____

SECTION D: Teachers Use of the Feedback from Practical Skills Assessment

15. Below are some of the areas that teachers can use the information gathered from the students' assessment. Show how often you use it in those key areas. Indicate by ticking the appropriate response.

Always =1 Often=2, Sometimes=3, Rarely=4, Never 5

No.	**use of information collected from practical skills**	1	2	3	4	5
i.	To evaluate the effectiveness of my teaching					
ii.	To provide remedial teaching for low achieving students					
iii.	To report to the parents the development of studies of their children					
iv.	To give advice to students and parents					
v.	To punish students who do not meet the expected standard					
vi.	To help students to improve their grades					
vii.	To diagnose learning difficulties encountered by students					
viii.	To motivate student to acquire more practical skills in their learning					
ix.	To guide learners to nurture their talents					
x.	To stream students according to their performance in classes					

SECTION E: Utilization of Assessment of Practical Skills in Job Market

16. To what extent does assessment of practical skills help students in the job market?

Very great extent ( ) Great extent ( )

Moderate extent ( ) Little extent ( ) No extent ( )

17 To what extent does the listed skills equip students with employability skills?

Very Great extent =1 Great extent =2, moderate extent =3, Little extent=4, No extent 5

No.	**Skills**	1	2	3	4	5
i	Social life skills					
ii	Skills of effective decision making					
ii	Creative thinking skills					
iv	Communication skills					
v	Skills of coping with stress					
vi.	Leadership life skills					
vii.	Problem solving skills					

Thank you very much for your co-operation

APPENDIX III: Questionnaire for Students

Please tick (√) in appropriate bracket or fill in the information as your response to all the following questions. Do not write your name or the name of your school anywhere. The information will be completely confidential.

SECTION A: **Demographic Information**

1. Indicate your class/form……

2. Indicate your gender

Male ( ) Female ( )

3. What is your age: Below 14years ( ) 15-18 years ( ) 20 and above years ( )

SECTION B: Assessment Modes Used to Assess Practical Skills in Competency Based Curriculum

4. Do the teachers assess your practical skills?

a. Yes ( ) No ( )

b. If yes, how do teachers assess students' practical skills in the daily classroom practice?

_____

_____

5. Kindly state how often your teachers employ each of the assessment modes you have listed in the daily classroom practice.

Always =1 Often=2, Sometimes=3, Rarely=4, Never 5

No.	**Assessment modes**	1	2	3	4	5
I	Oral questioning					
Ii	Assignments					
iii	Homework					
Iv	Class exercises					
v.	Quizzes					
vi.	Tests					

vii.	Class work Presentations					
viii.	Practical tasks					

6. Kindly indicate your level of agreement on the following statements on assessment modes?

Key: 1-Strongly agree, 2-Agree, 3-Neutral, 4-Disagree, 5-Strongly disagree.

S/No	Statements	SA	A	UD	D	SD
i.	Teachers in ongoing evaluation always include practical activities in their assessment tools					
ii.	There is examination which is in form practical skills in all subjects					
iii.	The final and ongoing assessment mode always doesn't examine practical skills					
iv.	The type of assessment we are undergoing in our school doesn't reflect the implementation of competency based curriculum.					
v.	Our mode of assessment always in paper and pen					
vi.	The competency assessment mode is not so clear to me as student					
vii.	The school has special assessment mode to help student who cannot explain themselves in term of pen and paper					
viii.	The mode of assessment discriminate the learners					
ix.	The competency of each learner is developed through assessment mode.					
x.	We are assessed in non-academic skills like sport, music and art and performance					

SECTION C: Resources Available for the Assessment of Practical Skills in Competency Based Curriculum

7. Are you aware of the resources required for assessment of practical skills in competency based curriculum?

a) Yes ( ) No ( )

b) If yes kindly list them

i_____ii_____

iii_____iv_____

v_____vi_____

8. Kindly rate the availability of teaching and learning materials listed below in your school.

Resources	**Very adequate**	**Adequate**	**Inadequate**	**Not available**
Video tape and video camera				
Magazines				
News papers				
Books				
Physical science Laboratories				
Chemicals in the laboratory				
Work shop for manual works				
Music instruments				
Game and sports equipment				
Language laboratory				
Computer laboratory				

9. (a).To what extent does the availability teaching and learning resources helped you in the assessment of practical skills in your school?

Very great extent ( ) Great extent ( )

Moderate extent ( ) Little extent ( ) No extent ( )

(b). Suggest on the availability of teaching and learning resources in school and its importance in your practical skills acquisition

_____

_____

_____

SECTION D: Teachers Skills and Competency in Assessing Practical Skills

10. In your opinion, do you think your teachers are competent in assessing your practically?

a) Yes ( ) No ( )

b) Kindly explain your answer

_____

_____

11. There are enough trained teachers in assessing practical skills in your school?

a) Strongly agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly disagree ( )

b). Explain your answer.

_____

_____

SECTION E: Teachers Use of Feedback Acquired from Assessment of Practical Skills

12. The examination you do helps you to improve the application of practical skills?

a) Yes ( ) No ( )

b) Explain why

_____

_____

_____

Thank you very much for your co-operation

APPENDIX IV: Interview guide for Headmaster/mistress

1. How long have you served as a head master/ mistress in this school?
2. What classroom assessment modes do the teachers in your school apply?
3. What is the best classroom assessment modes that you would recommend to teachers and why?
4. What are challenges you facing in the availability of resources for the assessment of practical skills in competency based curriculum in your school?
5. Who is responsible for the supplier of the resources in school?
6. Have all the teachers attended training on assessment of practical skills since implementation of competency based curriculum?
7. Kindly explain how training helps teachers to effectively assess students' practical skills?
8. 8.How are your teachers involve in planning and designing of competency based through in service training?
9. How do teachers use the assessment information they gather from students?
10. How does assessment of practical skills help students in the job market?

APPENDIX V: Interview guide for education officers and policy maker

1. What is the policy of education in education in Tanzania about the assessment in secondary school in relation to competency based education?
2. How the education system recognizes the talents which non-cognitive from the learner?
3. How the National examination council implement the policy of 50% theory and 50% practical skills in the assessing learning in the National examination?
4. There are enough resources for assessing practical skills in the whole country?
5. Who is responsible for the provision of the resources for teaching and assessing practical skills in schools
6. There are frequent of in service training teachers for practical assessment in the implementation of the competency based education curriculum?
7. Is the assessment of practical skills useful for the world of job to the graduates from different levels of education in the country?
8. What is your view about the implementation of competency based curriculum in the assessment of practical skills?

Appendix VI: Reliability Tests

Students

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.811	10

Item Statistics

	Mean	Std. Deviation	N
Teachers in ongoing evaluation always include practical activities in their assessment tools	4.07	1.073	30
There is examination which is in form practical skills in all subjects	3.87	1.102	30
The final and ongoing assessment mode always doesn't examine practical skills	4.59	.752	30
The type of assessment we are undergoing in our school doesn't reflect the implementation of competency based curriculum.	2.98	1.207	30
Our mode of assessment always in paper and pen	3.43	1.440	30
The competency assessment mode is not so clear to me as student	4.55	.617	30
The school has special assessment mode to help student who cannot explain themselves in term of pen and paper	4.59	.613	30
The mode of assessment discriminate the learners	4.30	.794	30
The competency of each learner is developed through assessment mode.	4.18	.882	30
We are assessed in non-academic skills like sport, music and art and performance	1.99	1.474	30

Appendix VII: Letter for Data Collection from Catholic University of Eastern Africa

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

Faculty of Education

Department of Postgraduate Studies in Education

CUEA/DVC-ACAD/FOE/PGSE/010/December 2018

19th December, 2018

TO WHOM IT MAY CONCERN

RE: **CONSTANTINE KANGALAWE – REG. NO. 1031460**

I am writing to introduce to you **Constantine Kangalawe,** who is a final year MED student at The Catholic University of Eastern Africa, Nairobi – Kenya, and to request you to assist him to accomplish his academic research requirements.

Kangalawe's Master's Degree in Education specialization is Curriculum and Instructional Studies. He has completed all course work requirements for this programme. However, every student in the programme is required to conduct research and write a report/dissertation submitted during the final years of studies.

Accordingly, Kangalawe's research topic has been approved. He will conduct research on the following topic:

"Assessment of the Implementation of Competence Curriculum in Promoting Practical Skills in Secondary School of Temeke District - Tanzania".

Thanking you in advance for any assistance you give to Kangalawe.

Sincerely,

19 DEC 2018

Prof. Marcella Momanyi
HEAD OF DEPARTMENT - POSTGRADUATE STUDIES IN EDUCATION

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA (CUEA) P.O. BOX 62157 00200 Nairobi – KENYA
Tel: 020-2525811-5, 8890023-4, Fax: 8891084, Email: pgse@cuea.edu, Website: www.cuea.edu
Founded in 1984 by AMECEA (Association of the Member Episcopal Conference in Eastern Africa)

RECEIVED 24/12/2018

Appendix VIII: Permission Letter For Data Collection From Temeke District

TEMEKE MUNICIPAL COUNCIL

[All letters should addressed to the Municipal Director]

Tel: +255 22-2928132/2928138/2928139
Fax: +255 22-2928137
Email: temeke@temekemc.go.tz
Website: http//.www.temekemc.go.tz

TMC/MD/P.16/2

P.O.BOX: 46343,
92 Mandela/Taifa Road,
15833 - DAR ES SALAAM,
TANZANIA.

Date: 3/1/2019

MSEO
.....

RE: - RESEARCH PERMIT CONSTANTINE KANGALAWE

Please refer to the heading above.

This is to inform you that permission is granted to the above mentioned student/Researcher from THE CATHOLIC UNIVERSITY OF EASTERN AFRIKA to conduct research on Assessment of the Implementation of Competence Curriculum in Promoting Practical Skills in Sec School of Temeke District T2. Case study of TEMEKE MUNICIPAL.
This permit will effect from the date of this letter.

Please give with necessary assistance.

Yours faithfully.

Habel J. Uledi
For: MUNICIPAL DIRECTOR
TEMEKE

For: Municipal Director
TEMEKE

HALMASHAURI YA MANISPAA YA TEMEKE

[Barua zote zipelekwe kwa Mkurugenzi wa Manispaa Temeke]

Simu: +255 22-292 8132/22-292 8138/22-292 8139
Fax: +255 22-292 8137
Barua pepe: temeke@tmc.go.tz
Tovuti: www.tmc.go.tz

Ofisi ya Mkurugenzi
92 BARABARA YA MANDELA/TAIFA,
S.L.P: 46343,
15883 - DAR ES SALAAM,

Ref. No. TMC/ED/SEC/U.....

Date 04.01.2019

The Headmaster/Mistress,
Jitegemee, Changlombe, Keko, Yemen, Kibasila, Kurasini, Miburani, Tandika, Maarifa Tandika & Temeke Islamic.
DAR ES SALAAM.

RE: RESEARCH PROJECT PERMIT FOR CONSTANTINE R. KANGALAWE

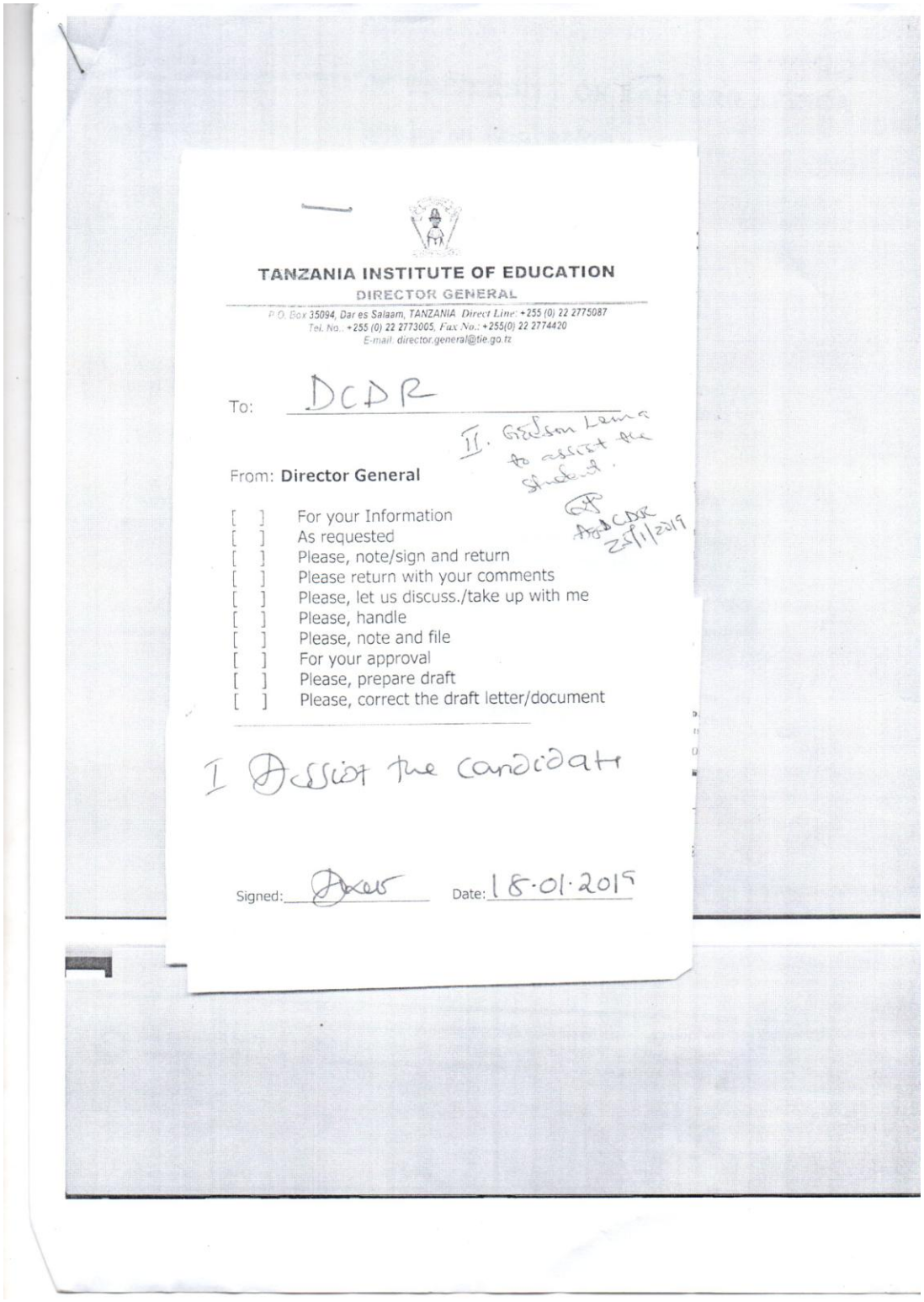
Please refer to the above.

Kind allow Constantine Kangalawe from catholic university of Eastern Africa to conduct research on Assessment of the implementation of competence Based Curriculum in promoting practical skills in secondary schools in Temeke please give necessary assistance to achieve his goal.

Kny: MKURUGENZI WA MANISPAA TEMEKE

Donald S. Chavila
SECONDARY EDUCATION OFFICER
TEMEKE.

Appendix IX: Permission from Tanzania Institute of Education



TANZANIA INSTITUTE OF EDUCATION

DIRECTOR GENERAL

P.O. Box 35094, Dar es Salaam, TANZANIA Direct Line: +255 (0) 22 2775087
Tel. No.: +255 (0) 22 2773005, Fax No.: +255(0) 22 2774420
E-mail: director.general@tie.go.tz

To: DCDR

II. Grelson Lema to assist the student.

From: **Director General**

[ ] For your Information
[ ] As requested
[ ] Please, note/sign and return
[ ] Please return with your comments
[ ] Please, let us discuss./take up with me
[ ] Please, handle
[ ] Please, note and file
[ ] For your approval
[ ] Please, prepare draft
[ ] Please, correct the draft letter/document

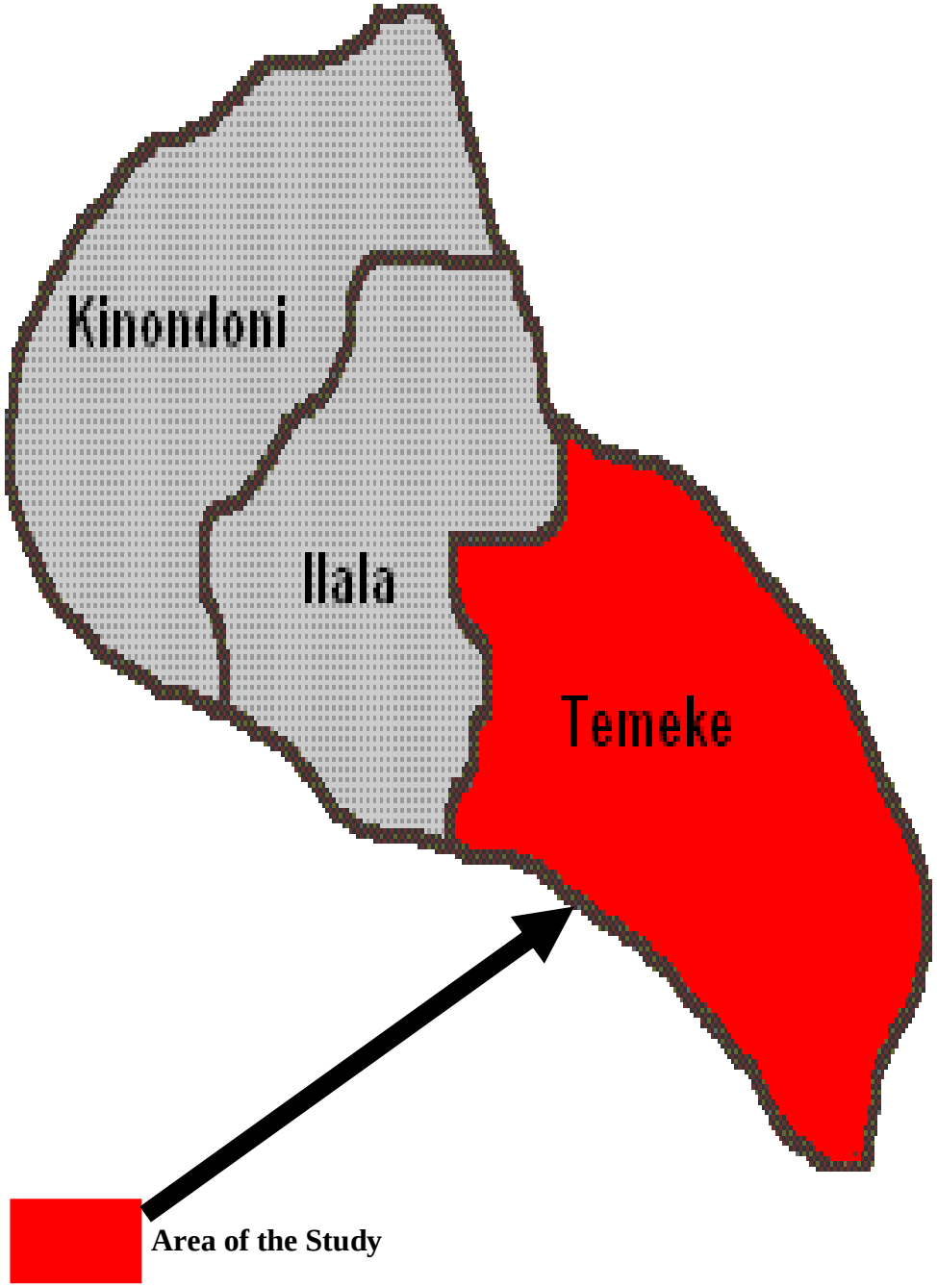
I Assist the candidate

Signed: Date: 18.01.2019

Appendix X: Map of Tanzania with Districts

Appendix XI: Dar Es Salaam Region Locational Map

Appendix XII: Dar Es Salaam Map With The Boundaries of Three District



Source: Google Map, 2019

Appendix XIII: Temeke District Headquarter

Appendix XIV: Temeke District Educational Office

Appendix XV: The Examination from National Examinational Council of Tanzania

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
ADVANCED CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

112/2

HISTORY 2
(For Both School and Private Candidates)

Time: 3 Hours **Friday, 11th May 2018 p.m.**

Instructions

1. This paper consists of sections A, B and C with a total of **ten (10)** questions.
2. Answer **five (5)** questions, choosing **two (2)** questions from each of section A and B and **one (1)** question from section C.
3. Each question carries **twenty (20)** marks.
4. Cellular phones and any unauthorized materials are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

802112 200014

ACSEE-0518

SECTION A (40 Marks)

Answer **two (2)** questions from this section.

1. In six points, validate the conditions which forced European merchants to enslave Africans in the New World during mercantile period.

2. Show how Africans were affected by the trade relations with America and Europe by the 15th century. (Give six points).

3. Explain six causes of the French Revolution of 1789.

4. Elaborate six reasons that propelled the unification of Italian states by 1870.

SECTION B (40 Marks)

Answer **two (2)** questions from this section.

5. In six points, examine the foreign policies in Italy, Germany and Japan between the First and Second World War.

6. Describe six causes of the 1949 Chinese Revolution.

7. Assess six impact of the rise of USA's capitalism in the world.

8. Explain six effects of Jewish - Arabs war of 1967.

SECTION C (20 Marks)

Answer **one (1)** question from this section.

9. Evaluate six obstacles hindering implementation of the South - South Commission's goals.

10. Explain six economic indicators of underdevelopment in developing nations.

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

061 **COMMERCE**

(For Both School and Private Candidates)

Time: 2:30 Hours **Friday, 11th November 2016 p.m**

Instructions

1. This paper consists of sections A, B and C.
2. Answer **all** questions in section A and B and **two (2)** questions from section C.
3. Calculators and Cellular phones are **not** allowed in the examination room.
4. Write your **Examination Number** on every page of your answer booklet(s).

(vi) The capital employed is obtained by
A adding current assets to current liabilities
B adding current assets to total liabilities
C adding total assets to total liabilities
D adding total assets to working capital
E adding total liabilities to working capital.

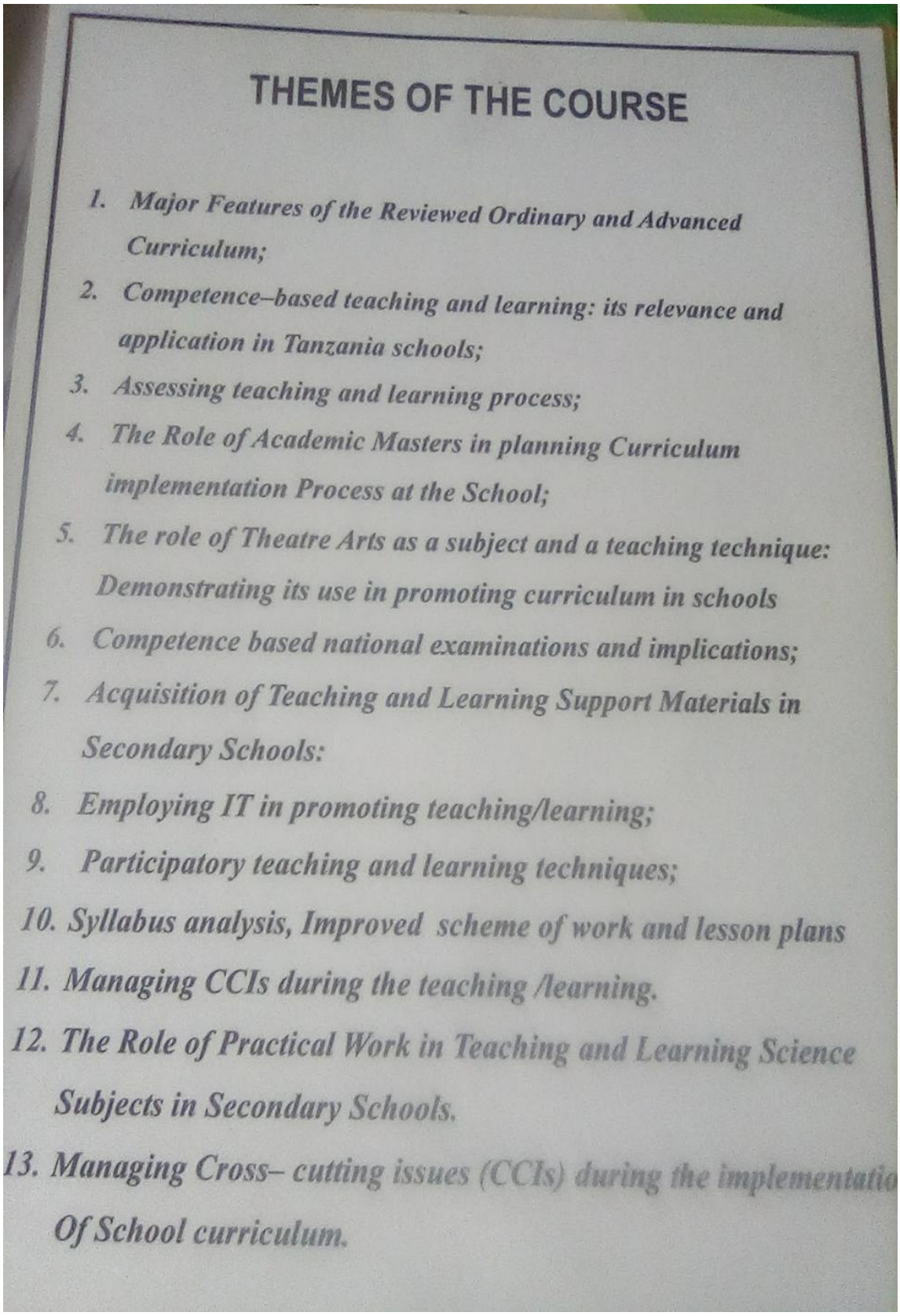
(vii) A life assurance policy where an assured person promises to pay premium for a specified number of years is called
A Whole life policy
B Endowment policy
C Annuity policy
D Family income policy
E Group life policy.

(viii) Which one of the following is **not** an important clause of a charter party?
A The parties to the agreement.
B The cargo to be carried.
C The freight to be paid for the voyage.
D The terms of the voyage.
E The passengers to be carried.

(ix) Which document is to be sent by the exporting country showing the list of goods needed to the importer who buy goods through an agent?
A A letter of credit
B Bill of lading
C Certificate of origin
D An indent
E Bill of exchange.

(x) Which of the following is the correct form of transport?
A Water, land and air.
B Water, land and railway.
C Water, air and road.
D Sea, railway and air.
E Land, lakes and air.

Appendix XVI: The Topics for In Service Training for Competence Based Curriculum



THEMES OF THE COURSE

1. *Major Features of the Reviewed Ordinary and Advanced Curriculum;*
2. *Competence–based teaching and learning: its relevance and application in Tanzania schools;*
3. *Assessing teaching and learning process;*
4. *The Role of Academic Masters in planning Curriculum implementation Process at the School;*
5. *The role of Theatre Arts as a subject and a teaching technique: Demonstrating its use in promoting curriculum in schools*
6. *Competence based national examinations and implications;*
7. *Acquisition of Teaching and Learning Support Materials in Secondary Schools:*
8. *Employing IT in promoting teaching/learning;*
9. *Participatory teaching and learning techniques;*
10. *Syllabus analysis, Improved scheme of work and lesson plans*
11. *Managing CCIs during the teaching /learning.*
12. *The Role of Practical Work in Teaching and Learning Science Subjects in Secondary Schools.*
13. *Managing Cross– cutting issues (CCIs) during the implementatio Of School curriculum.*