TEACHERS' PERCEPTION ON CRITICAL THINKING IN SECONDARY SCHOOL IN TANZANIA: A CASE STUDY OF MJIMWEMA WARD

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE MASTER OF EDUCATION IN ADMINISTRATION, PLANNING AND POLICY STUDIES OF THE OPEN UNIVERSITY OF TANZANIA

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CERTIFICATION

The undersigned certifies that she has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation titled: **Teachers' Perception on Critical Thinking in Secondary School in Tanzania: A Case Study of Mjimwema Ward",**in partial fulfillment of the requirements for the degree of Master of Education in Administration, Planning and Policy Studies of the Open University of Tanzania**.**

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Date

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DECLARATION

I, **Kuruthum Issa Mkomele** do herebydeclare that this dissertation is my own original work and that it has not been presented by any person and it will not be presented to any other University for a similar or any other degree award.

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Signature

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Date

DEDICATION

I would like to dedicate this research work to my lovely mother Fatuma Dadi Namomba, her parental care has brought me where I am, you never got tired to encourage me and support my vision. Now I do appreciate your kind parental care.

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ABSTRACT

The purpose of this study was to investigate the Teachers' Perception on Critical Thinking inSecondary School in Tanzania: Case Study of Mjimwema Ward in Temeke Municipality, Dar es Salaam, Tanzania**.** Three research objectives guided this study, namely: examine teachers' perspectives about critical thinking in secondary schools, assess strategies teachers use to inculcate critical thinking to secondary school, and Explore challenges that teachers face as they teach critical thinking in secondary schools in Tanzania. The study employed qualitative and quantitative approach and procedures in sampling, data collection (i.e. Focus group discussion and Observation) and analysis. It was conducted in four secondary schools which were Aboud Jumbe, Kisota, Kibugumo, and Kidete secondary schools. The findings revealed that Critical thinking issue are embedded with numerous variables of in and out of the class thus the perception tend to differ in regarding to different school of thoughts of depending ones need and locality criterion. Moreover, the results showed that the teacher's perceptions on critical thinking in secondary school differ in stand in understanding critical thinking as some view as critical thinking as purely the work Mind and observablefacts whereas other sees as inquisitive in nature, flexible, fair and open minded. The data revealed that the determinant factors for lacks strategies, skills and methodologies on how to inculcate critical thinking to their students as well they lack clarity on what ways they could opt to instill critical thinking. For example; the absence of in service training, upgrading course and workshop to train teachers to meet with the ever changing of science and technology and thus every teacher do in his or her way in teaching their class as well their classes.

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LISTS OF ABREVIATIONS

CRE	Christian Religional Education
FGD	Focused Group Discussion
JSS11	Junior Secondary School Class Two
SEDP	Secondary Education Development Program
TIE	Tanzania Institute of Education
UK	United Kingdom

CHAPTER ONE

INTRODUCTON

1.1 Background to the Problem

We are living in times of vast changes in a globalized world where ambivalence, ambiguity, risk, contradiction, turbulence, dangers and crisis and the order of the day. One major characteristic of the world today is that changes and transformations have become a permanent feature. Although this globalize world is supposed to provide hope and create fantastic opportunities for people to connect, share and interact, unfortunately in a majority places, it has raised a lot of disappointments and fears. It is also known that the world is lacking critical and creative citizen to confront many challenges facing the world today.

For a long time, Tanzania has strived to develop people into critical thinkers. The first President, the late Mwalimu Julius Nyerere called education researchers and practitioners to offer education that is relevant to the local conditions to help the solve their problems. Later on in 1973 the late Nyerere elaborated that educational institutions should be centers where people's minds are trained for clear thinking, for independent thinking, for analysis and for problem solving (Nyerere, 1973).

This view was reiterated by third president Mkapa, in 2009. President Mkapa outlined the objectives of education as to: enable the young people to understand the present and future challenges of their country in the broadest sense; prepare them attitudinally and professionally to integrate with their society, not to be alienated from it, prepare young people to be agents or catalysts for positive change, and

prepare young people to be innovative and competitive, whether in public service or private sector nationally, regionally and internationally (Mkapa, 2009).

In the light of these objectives, curricula at every level and instructional practices were supposed to be restructured to focus on promoting creativity and problem-solving skills. Studies have outlined three practices through which this mission could be achieved; including: using instructional strategies that actively engage students in the learning process rather than relying on lecture and rote memorization, focusing instructions on the process of learning rather than solely on the content, and using assessment techniques that provide students with an intellectual change rather than memory recall (Snyder & Snyder, 2008).

Yet, if we closely examine our secondary educational curricula and instructional models, there are concerns that secondary students in Tanzania are not well prepared to manage the economic, environmental, political and social challenges. Equally most secondary school graduates often lack skills of effective communication, problem solving, analysis and self-reliance which are key objectives of education suitable to solve local problem.

1.2 Background to the Study

There is a particular concerned regarding to the ineffectiveness of knowledge, skills and attitudes gained from secondary schools in the light of inculcating to students critical thinking skills. Studies by Katongo, (2010), Shaid, (2005) and Wedgwood, (2005) in Tanzania have shown that secondary school graduates lack theoretical and practical skills, self employment and entrepreneurial skills critical thinking and

analysis skills In addition, secondary school teachers are accused of devoting less attention in helping the students to think critically rather than memorization of facts, which further leads to complete their studies with superficial knowledge without any critical understanding of small issues surrounding them (Sumra and Rajani, 2006). The poor life skills among secondary school students in Tanzania reflect this lack of critical thinking capacity.

From the time of Socrates to contemporary, concerns about the need for an educated Citizenry and quality workforce, the ability to think critically and to reason well has been regarded as an important and necessary outcome of education. In this century, John Dewey (1933) pointed out that learning to think is the central purpose of education.

Despites widespread expressions of concerns from nations and educational institutions about have the need to critical thinkers, studies have shown that most schools are neither challenged to develop critical thinkers and the academic subjects that they are exposing their students into, are not helping them to develop the reasoning skill.

In USA, the California Commission Teacher credentialing completed study of college and university professors showing that while a large majority (89%) stated that critical thinking is important in their instruction, only a small percentage (19%) could clarify what they meant and even small percentage (9%) actually led their students to critically think of what they were studying.There are many concerns about the role of education system in promoting critical thinking in children. In most

classes, the traditional education favors memorization of concepts and issues studied in classroom with a goal to pass an examination. Teachers in these classes strive to stress on critical points, underlying them and making repetition as a way to remind their students that those are the critical points they should put in their minds. In this way, traditional teachers consider themselves as the all knower and the students receivers of the knowledge the teachers think there are instilling in the students.

Paulo Freire (1970) saw this kind of teaching as banking system where teachers deposit the materials that the students are expected to patiently receive, memorize and repeate them in examinations. According to Freire, the traditional teaching is far away from the concept of critical thinking.

In Tanzania and elsewhere, teachers have shifted from teacher-based and content-based teaching to student-based teaching as a way to help students develop the needed competences, including critical thinking. The shift from the content centeredness to student centeredness teaching has created the need to actively involve the students into critical thinking capacities in order to construct knowledge and solve perceived problems. This shift is a movement from the emphasis on the teacher as knowledge provider to the student as the knowledge and skill acquirer to the student as active constructor of knowledge. This, as Prince (2004) opines, results in a more efficient education because it helps the young people to take their position in society. Basically learner centered methods of teaching encourage critical thinking among the learners also make the learners take responsibility of for their own learning (Kimaro 2011). But majority of Tanzanian Secondary school students are unable to think critically.

Paul (1992) argues that students fails to think critically because typical school instruction does not encourage the development of high order thinking skills like critical thinking. He explains that typical school instruction, with its emphasis on the coverage of content, is designed as thought recall were equivalent to knowledge. This, instead of inculcating in students critical thinking, simply encourages rote learning, where students memorize material without understanding the logic of the materials that they learn.

Chiari (2010), has proposed the following methods of active teaching: a) simulation methods: games involving simulation of imaginary situations and role play; b) discussion methods: discussion, case study, brainstorming and c) problem-based teaching, while Mattes (2007) includes dialogue, brainstorming, interactive lecturing, group work, pair work, experiment, role play, planned game, project based as active teaching strategy for critical thinking.

Finally, Paul (1992) identifies critical thinking as learning to think within one's discipline by appropriating the standards and values embodied in that discipline. At the same time, however, Paul points out that critical thinking skills and abilities can be taught using both general critical thinking courses and infusing critical thinking instruction into discipline-specific courses.

While acknowledging the importance of putting the students at the centre to help critical thinking, there still is little agreement on the fundamental style of teaching for this purpose. The differences in understanding have become an interesting area of research in the sub-Saharan Africa and similar countries. Studies have been

conducted mainly focusing only on how students learn critically, or how the teachers teach for critical thinking. However studies that combine active teaching for active learning in secondary education for a country like Tanzania are highly needed due to the importance discussed above and the challenges facing the education system. In this study, explore conceptions from teachers' on their perception about active teaching and students on active learning for critical thinking. In conducting this study, have been interested in a reciprocal relationship between active teaching and active learning, where the teachers may try to engage the students in a number of activities while they do not learn or cannot reflect on what they are doing (see Komba and Nkumbi, 2008). This reciprocal relationship is creating a lot of questioning the effectiveness of putting the students at the centre while the teachers remain at the periphery in the teaching and learning process.

1.3 Statement of the Problem

From the above literature, scholars have talked much about how to inculcate critical thinking in students (Friedler et al. 1990). Most often it is directed to either the description or evaluation of projects and programmes aimed at fostering critical thinking. Some have focused on particular aspects of critical thinking, for example identifying logical fallacies. Others have argued that schools do not encourage critical thinking (example Paul, 1992, Facione, 1990). Not much has been researched on what teachers think about how they teach to inculcate critical thinking skills in their students. Further, few scholars have researched on the strategies that real teachers use to inculcate critical thinking skills to their students or challenges that they face as they do this. This study aims to fill this gap in the literature. This study

assumed that teachers are important in inculcating critical thinking to their students. Further, it is assumed that, teachers' perception of critical thinking may vary due to their qualification, experience and gender (Rama 2009). Academic qualification, teaching experience and gender may influence a teacher to select appropriate strategies and practice that promote critical thinking.

1.4 The Purpose of the Study

This study is to examined teachers' perspectives and practice in inculcating critical thinking to secondary school students.

1.5 Specific Objectives

(i) Examine teachers' perspectives about critical thinking in secondary schools

(ii) Assess strategies teachers use to inculcate critical thinking to secondary school.

(iii) Explore challenges that teachers face as they teach critical thinking in secondary schools in Tanzania.

1.5 Research Questions

(i) What are the teachers' perspectives about critical thinking in secondary schools in Tanzania?

(ii) What strategies do teachers use to inculcate critical thinking to secondary school students?

(iii) What challenges do teachers face as they teach critical thinking in secondary schools in Tanzania?

1.6 Significance of the Study

This study will benefit all citizens, the general public and Non Governments organizations as the study will visualize on how the curriculum decision are

interpreted and practiced by different education stake holders towards reaching the stated goals in 2025 and 21st century.The study will also identify the practical problem facing the curriculum implementation towards inculcating critical thinking to 21st century citizens. Finally this study will help educators and educational administrators to improve teacher's efficiency as well instructional practices at schools.

1.7 Scope and Delimitation of Study

The study was confined to secondary school teachers in Mjimwema ward, Temeke District. Represented other district in Tanzania at large. The study was concerned with teachers' perception on critical thinking in secondary schools. Since there was absence of private schools in Mjimwema ward, only public school teachers were participate in this study.

1.8 Limitation of the Study

Due to lack of fund, a sample of the study was confined to secondary school teachers in Mjimwema ward, Temeke District from four secondary schools that were selected. A sample of teachers, who were asked and provided information in classroom observation checklist and Focused group discussion the four schools, were selected as primary data collection source.

1.9 Operational Definition of Key Terms

Perception is the process by which we extract meaningful information from physical stimulation. It is the way we interpret our sensation (Santrock, 2007).

Secondary school is defined as post primary formal education offered to persons who will have successfully completed seven years of primary education and have met the requisite entry requirements. Public Secondary School is a school which is supported by government or authorized by action of and operated under oversight of publicly constitute, local or state education agency. Critical thinking is the way of decide whether a claim is true partial or false. It is a tool by which one can come about reasoned conclusion based on reasoned process.

1.10 Chapter Summary

This chapter represents an introduction of the study, starting with background to the study, followed with statement of the problem, the purpose of the study, the specific objectives, research questions, significance of study, scope and delimitation of the study, limitation of the study and operational definition of key terms.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This study presented the relevant literature to this study. It started with the theoretical framework of this study. The second part presented the reviewed work that focuses on the three bodies of literature; Teachers' perspective about critical thinking in secondary school; Strategies teachers use to inculcate critical thinking to secondary; and challenges that teachers faced as they teach critical thinking in secondary school in Tanzania and last part confirmed to the conceptual framework.

2.2 Theoretical Framework

The literature on critical thinking has rooted in two primary academic disciplines: philosophy and psychology (Lewis & Smith, 1993). Sternberg (1986) has also noted a third critical thinking strand within the field of education. These separated academic strands have developed different approaches to defining critical thinking that reflected their respective concerns. Each of these approaches is explored more fully below.

2.2.1 The Philosophical Approach

The writings of Socrates, Plato, Aristotle, and more recently, Matthew Lipmann and Richard Paul, exemplified the philosophical approach. This approach focused on the hypothetical critical thinker, enumerating the qualities and characteristics of this person rather than the behaviors or actions the critical thinker can perform (Lewis & Smith, 1993; Thayer-Bacon, 2000).

Philosophical Association's consensus portrait of the ideal critical thinker as someone who is inquisitive in nature, open-minded, flexible, fair-minded, has a desire to be well-informed, understands diverse viewpoints, and is willing to both suspend judgment and to consider other perspectives (Facione, 1990).

Those working within the philosophical tradition also emphasize qualities or standards of thought. For example, Bailin (2002) defines critical thinking as thinking of a particular quality essentially good thinking that meets specified criteria or standards of adequacy and accuracy. Further, the philosophical approach has traditionally focused on the application of formal rules of logic (Lewis & Smith, 1993; Sternberg, 1986).

The philosophical approach is applicable in education through various aspects as in the propensity and skill to engage in an activity with reflective skepticism (McPeck, 1981)reflective and reasonable thinking that is focused on deciding what to believe or do (Ennis, 1985) skillful, responsible thinking that facilitates good judgment because it 1) relies upon criteria, 2) is self-correcting, and 3) is sensitive to context (Lipman, 1988) purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or conceptual considerations upon which that judgment is based" (Facione, 1990); disciplined, self-directed thinking that exemplifies the perfections of thinking appropriate to a particular mode or domain of thought (Paul, 1992) thinking that is goal-directed and purposive, "thinking aimed at forming a judgment, where the thinking itself meets standards of adequacy and accuracy (Bailin et al., 1999b) and judging in a reflective way what to do or what to

believe (Facione, 2000). One limitation of this approach to defining critical thinking is that it does not always corresponded to reality (Sternberg, 1986). By emphasizing the ideal critical thinker and what people have the capacity to do; this approach may have less to contribute to discussions about how people actually think.

2.2.2 The Cognitive Psychological Approach

The cognitive psychological approach contrasts with the philosophical perspective in two ways. First, cognitive psychologists, particularly those immersed in the behaviorist tradition and the experimental research paradigm, tend to focus on how people actually think versus how they could or should think under ideal conditions (Sternberg, 1986).

The cognitive psychological approach. Added that rather than defining critical thinking by pointing to characteristics of the ideal critical thinker or enumerating criteria or standards of "good" thought, those working in cognitive psychology tend to define critical thinking by the types of actions or behaviors critical thinkers can do. Typically, this approach to defining critical thinking includes a list of skills or procedures performed by critical thinkers (Lewis & Smith, 1993).

Philosophers have often criticized this latter aspect of the cognitive psychological approach as being reductionist reducing a complex orchestration of knowledge and skills into a collection of disconnected steps or procedures (Sternberg, 1986). For example, Bailin (2002) argues that it is a fundamental misconception to view critical thinking as a series of discrete steps or skills, and that this misconception stems from the behaviorist's need to define constructs in ways that are directly observable.

According to this argument, because the actual process of thought is unobservable, cognitive psychologists have tended to focus on the products of such thought behaviors or overt skills (e.g., analysis, interpretation, formulating good questions). Other philosophers have also cautioned against confusing the activity of critical thinking with its component skills (Facione, 1990), arguing that critical thinking is more than simply the sum of its parts (Van Gelder, 2005). Indeed, a few proponents of the philosophical tradition have pointed out that it is possible to simply "go through the motions," or proceed through the "steps" of critical thinking without actually engaging in critical thought (Bailin, 2002).

The Psychological approach is applicable in education as it is rooted in mental processes as whereby the mental processes, strategies, and representations people use to solve problems, make decisions, and learn new concepts (Sternberg, 1986) the use of those cognitive skills or strategies that increase the probability of a desirable outcome" (Halpern, 1998) and seeing both sides of an issue, being open to new evidence that disconfirms your ideas, reasoning dispassionately, demanding that claims be backed by evidence, deducing and inferring conclusions from available facts, solving problems, and so forth" (Willingham, 2007). Apart from the two antagonist approaches there are also the other emerged approach as

2.2.3 The Educational Approach

Benjamin Bloom (1956) and his associates is the pioneer of manipulating cognitive skills to increase the probability of desirable outcomes by introducing taxonomy for information processing skills. Their concept of teaching through taxonomy was one of the most widely cited sources for educational practitioners when it comes to

teaching and assessing higher-order thinking skills. Bloom's taxonomy is hierarchical, with "comprehension" at the bottom and "evaluation" at the top. The three highest levels (analysis, synthesis, and evaluation) are frequently said to represent critical thinking (Kennedy et al., 1991).

The benefit of the educational approach is that it is based on years of classroom experience and observations of student learning, unlike both the philosophical and the psychological traditions (Sternberg, 1986). However, some have noted that the educational approach is limited in its vagueness. Concepts within the taxonomy lack the clarity necessary to guide instruction and assessment in a useful way (Ennis, 1985; Sternberg, 1986). Furthermore, the frameworks developed in education have not been tested as vigorously as those developed within either philosophy or psychology (Sternberg, 1986).

Critical thinking always takes place in response to a particular task, question, problematic situation or challenge, including solving problems, evaluating theories, conducting inquiries, interpreting works, and engaging in creative task (Bailin 1990), and such challenges always arise in particular contexts. Dealing with these challenges in a critical way involves drawing on a complex array of understandings (what colleagues and I have termed intellectual resources), the particular resources needed for any challenge depending on the specific context.

A number of researchers have recommended using particular instructional strategies to encourage the development of critical thinking skills and abilities, such as explicit instruction, collaborative or cooperative learning, modeling, and constructivist

techniques. For example, many researchers have noted that critical thinking skills and abilities are unlikely to develop in the absence of explicit instruction (Abrami et al., 2008; Case, 2005; Facione, 1990; Halpern, 1998; Paul, 1992). Facione points out that this explicit instruction should also attend to the dispositional or affective component of critical thinking.

2.3 Empirical Studies on Critical Thinking in Schools

2.3.1 Teachers' Perception About Critical Thinking in Schools

Sorial (1998) did study on high school teachers perception and practice about critical thinking in USA .The intent was to discover if high school English teachers realize the importance of the great significance of critical thinking and implement it through their teaching method to develop the students' critical thinking skills . She interview 8 English teachers for grade 4, 11, and 12 indifferent schools in Edmonton, Alberta. The findings indicated that critical thinking continues to grow in popularity .Most of the high school teacher realize and believe in the value of critical thinking as academic competency that is crucial for students future success and progress .Most of high school teachers practice and model these skills to their students and try to creatively develop the students' critical thinking skills.

Sorial(1998) suggest that there many opportunities in the high school English curriculum for educators to help develop critical thinking skills .The integration of critical thinking skills through the creative use of various teaching methods is possible and essential .High school teachers can be highly influential in establishing a classroom environment that fosters critical thinking development.Twibell (2008) did study on faculty perceptions of critical thinking in students' clinical experience in

school of Nursing Ball state University Muncie, Indiana. Six clinical faculty members were interviewed using ethnographic approach .The faculty members conceptualize critical thinking as putting it all together through information seeking ,reflecting ,assigning meaning ,problem solving ,predicting ,planning and applying information. Faculty members perceive that they teach critical thinking through number of approach that includes asking questions, reviewing written products, conducting clinical conferences, and evaluating student's journals.

Twibell suggested that, the successful preparation of nursing students for critical practice depends on the effective of teaching of critical thinking skills. The faculty can focus on effective questions and allowing students' time to reflect on experiences and assign meaning. While consensus is growing about the definition of critical thinking in nursing and how to teach critical thinking, the need to continued dialogue and researched is evident.

Huang (2008) did empirical study which seeks to understand Chinese international students' experience of critical thinking while they are studying for their master's degree in tourism and hospitality at university of Plymouth in UK. He investigates students' and lecturers' perception on critical thinking. He interviewed 10 Chinese students and all 5 of their lecturers as well as did few sessions observation. The findings shows that the Chinese students have different views on critical thinking in turns leads to lack of a clear understanding of critical thinking cause difficulties in application. The study also reveal that different lecturers have different understanding of critical thinking.These findings reflect Mingers (2000) conclusion that the concept of critical thinking is vague and different educators have different

views on this matter. The lecturers' consensus that critical thinking is a culture practice is broadly supported by researchers in this area (Egege and Kutiel (2004), Turner (2006).

Huang (2008) suggest that there is significant scope for further research in this area , particularly related to perception of critical thinking in Chinese students who are studying in the UK .In addition a comparison of Chinese students studying in different countries would be valuable to access how perception of critical thinking varies according to location and culture .Equally important ,further research into the understanding and application of critical thinking among UK lecturers is needed such research would provide a much needed fuller understanding of critical thinking in general and possible assist in the of better support for Chinese student in particular.

Choy and Cheah (2009) did empirical study on teachers' perception of critical thinking among students and its influence on higher Education in Malaysia . Questionnaires were used for this investigation. 30 respondents were asked to answer a questionnaire. The results show that teachers perceive they are teaching critical thinking to their students. They believe that critical thinking will provide the intellectual stimuli that will facilitate learning among students .They perceive that students ability to explain concepts in their own words is evident that they were thinking critically .However this perception is questionable because thinking logical and being able to problem solve using new approach may not be indicative of critical thinking but may be the process the students undertake to gain understanding of

critical thinking .This seems that the teachers themselves they not have understanding of critical thinking.

Choy and Cheah suggested that there a need to improve the understanding of the concept of critical thinking among teachers to enable them to effectively teach students to think in this manner. There also seem to be a lack of understanding of the requirements needed to help students think critically. It would also be important for teachers to give consideration to their current instructional methods and their personal belief before attempting to incorporate critical thinking in their lesson.

Rodzalam and Saat (2015) did study on students perception of critical thinking and problem solving skills .The study aim to determine whether their differences between gender and academic discipline on this skill. A sample of 2000 undergraduate from six Malaysian public university completed survey.

Findings indicate that students perceived they have high critical thinking and problem solving skill. It is also revealed that male students are perceived to have better critical thinking and problem solving skill. Social science students appear to perform better in this skill than science and engineering students.

Rodzalam and Saat (2015) Suggested that lectures should provide clear instruction and conduct interesting activities in the class because it influence students' thinking process. Also should emphasize in giving students with challenging tasks that require them to think critically, instead on focusing in rote learning.

2.3.2 Challenges Teachers Faces as they Teach Critical Thinking in Schools

While teaching critical thinking, most of teachers are faced with difficulties Miu and Chi (2010) did empirical study on influence of culture in teaching and learning of critical thinking The Chinese International and New Zealand European Postgraduate students were interviewed.The findings show that Asian students perform less well than their western counterparts. While observed differences seem to suggest that Asian students appear not as good as western counterpart, the different is related to language ability rather than culturally determined factors. Behavior manifestations of critical thinking, such as critical debate, argumentation, or even writing argumentative essay require appropriate use of language.Elder and Paul (2006) suggested that there strong connection between the ability to think and the ability to write well. In relation to International education in teaching of Asian students in critical thinking could be difficulty due to students in using English language as a second language in the academic discourse.

Miu and Chi suggested that effectiveness of critical thinking instruction in International education can be improved by paying attention to the language issue such as helping students with lower English proficiency and using simpler language in structuring course materials.

Cosgrove (2010) did a study on challenges teacher's faces as they teach critical thinking in schools by using Qualitative method interviewed 38 leaders and professors, staff and students as well as did 38 observations at University of Cambridge. The findings show that one of the main impediments of the development of critical capacity of students is that many professors and teachers do not have much

significant experience investigating idea (critical thinking) explicitly and deeply , and have not dedicated significant time and energy to the consideration of how to foster it within classrooms.

Cosgrove suggested that for critical thinking to developed to a significant portion of students require that a significant portion of teachers within an educational institution have a significantly well-developed understanding of critical thinking as well as how to teach for it.Any institution seeking to improve this direction should design a substantive and long term professional development plan aimed at deepening professors understanding and broadening their practice to critical thinking.

Minds (2002) of Missouri State University did a research on teaching from the critical thinking,problem-based curricular approach: strategies ,challenges, and recommendation using mixed approach methodology .Total of 25 teacher leader from throughout the state completed a mail questionnaire in 2002 as well he did group discussion .The findings shows that a the problem which challenged the teachers was their perceived and need for developing authentic assessment techniques to show how students mastery of thinking and solving skills. The time involved in teaching this approach and in developing and implementing new learning materials is a difficult. Other challenges expressed were concerned for time to complete the curriculum and teach more in depth.

Minds suggested that teachers need a solid understanding of critical thinking, problem-solving approach and the value it has for them and their student’s .Teachers must learn to think critically and model and practice the techniques consistently with

students. Support and continued professional development for current and future teachers in the critical thinking problem solving approach is needed

Shriberg (2007) did a study on teachers, well-being and its consequences on quality education. The study used mixed approach: quantitative and qualitative. Briefs survey, questionnaire and interviews were conducted among private and public schools in Liberia .The findings show that, there is a reciprocal synergistic relationship between perceived areas of well being affected negatively and impact on quality education include critical thinking (needs unmet: psycho-social well being, corruption; pedagogy and content).Teachers survival and quality of education appeared to be impacted negatively by lack attention and response to teacher welfare. Teachers, psycho-social well being is impacted negatively by low resources, for example low salary earned,and difficulty schools environment(overcrowded classroom and lack of school materials).Students enrolled in schools have had different schooling experience due to civil war hence problem in language of instruction .French is official language for Ivory coast and Guinea –and accreditation posed challenges for English speaking Liberian students to receive credentials they needed when return to home.

Shriberg suggested that teachers, motivation is not only financial; professional development and opportunity and opportunities for personal growth also play an important role. Effort should be made to ensure that teachers are able to benefit from quality in –service training as well as further research on teachers and teachers support.Aliakbar and Sadeghadaghigh (2012) Did a study on teachers' perception of the barriers of critical thinking. The study was intended to investigate the barriers to

developing good critical skills from English teachers view in Iran.The present study surveyed 100 educators for barriers to critical thinking implementation.The study revealed that students attitudes and expectations, self- efficacy constraints and lack of critical thinking knowledge are among teachers were reported as major obstacles in teachers' views.

Aliakbar and Sadeghadaghigh (2012) suggested that improvement of critical thinking skills and strategies would easier if the obstacles with educator experience along the way will be removed.

Kowino et al (2012) did a study on challenges that teachers faces as they teach critical thinking .Four instruments used in collecting data: A graphic observation; rating scale; an in-depth interview schedule; document analysis guide. 16 teachers and 343 learners were selected in the study .The findings shows that the scenario in which irrational behavior has dominant the character of Kenyan youth has brought to contention that the moral well being of youth is on a downward trend suggesting that either the teaching of critical thinking through Christian Religion Education (C.R.E) is defective or Kenyan Education system is defective. Kenyan syllabus does not contain relevant elements that could enable students acquire and develop the needed critical thinking skills .One other like hood of could be the existence of discrepancy between the C.R.E program objectives and the instructional practices meant to achieve them.

Kowino suggested that curriculum guide in C.R.E. should be relevant to include and make elaborate the critical thinking skills that the teachers need to use in inculcating

in the learners ability to think critically.Secondly the teachers in-service training should be enhanced to enable them acquire critical thinking skills.Hamilton et al (2010) did study on a need assessment study of science education and applied mixed approach. Surveys, interviews documents analysis and observation were the primary methods used to gather data for the study .The study conducted in 9 regions of Tanzania mainland and one region of Zanzibar: Arusha, Dar-Es-Salaam, Dodoma ,Kiowa, Kilimanjaro, Mbeya, Mjini Magharibi, Mtwara, Mwanza and Rukwa. A total of 133 secondary and 79 primary school teachers participated in the study.

The findings show the challenges of teaching critical thinking that includes resources are lacking in most every aspect of education, including insufficient numbers of qualified teachers of mathematics and science in primary and secondary schools levels, inadequate equipments and materials, textbooks and facilities (i.e. laboratories and libraries). Teachers in schools are not well trained in the use of appropriate pedagogies.Whereas most teachers surveyed do know and report applying some context- based approaches ,students performance in mathematics and science reflect neither thorough subject- matter knowledge nor adequate knowledge /application of competence based approach that are basis for science and mathematics. Measure to address these issues have not fully implemented and /or have been poorly articulated within policy/program.

Hamilton et al recommended establishing national and regional centers of excellence to effective link science and technology education to its real-life application. Establish and strengthen an effective system of teacher’s preparation, including pre-service and in-service training components. This system would emphasis the use of

context and inquiry based instruction methods in science and mathematics. Secondly, provide supplementary curriculum guides for improving teacher's capacities to implement existing curricula while improving their abilities to use context based and improvissional instructional practices .Use materials to foster the development of mobile, school laboratories, in which the local environment and materials become resources for teaching and learning.

2.3.3 Strategies that Teachers use to Inculcate Critical Thinking in Schools

Alexander et al (2010) did a study on strategies that promote critical thinking .He used qualitative approach and interview 24 students of Educational psychology course in southern United states through on line discussion. The students respond to questions design to encourage critical thinking through the four-question technique of analyzing, reflecting, applying, and questioning. The findings show that the four-question technique is effective in enhancing critical thinking through instructional strategies that promote active learning (critical thinking) the strategy is worthwhile in all learning environment. However, active learning techniques may be particularly important in the on line environment where the opportunity for interaction may be lacking. Even with Internet, communication such as Email and chat rooms, online courses may have limited learner-to-learner interaction and instructor-to –learner interaction that often comes with face to face communication and immediate feedback in traditional setting.

Alexander et al suggest that lecturers should use the four question technique to enhance quiz performance as a part of face to face learning environment as well as use four- questions technique to promote critical thinking.Cheong (2008) did a study

using qualitative approach in Singapore and interview 35 students through online discussion The Study investigate lower secondary school student's critical thinking in an asynchronous online discussion environment. It shown that electronic discussion can be used effectively to teach critical thinking and can achieve greater understanding .The use of online discussion is common in polytechnics and university, and many schools in Singapore have begun to introduce online forum for discussion beyond classroom. Some enhanced scaffolding strategies for online discussion participants and guide, on designing good questions are recommended to foster critical thinking skills in this environment.

Cheong recommended that to provide students with a forum facility for communication is insufficient. The teacher's role in scaffolding the online discussion environment is vital to success of constructive discussion .One of the most important roles that the moderator should use questions and probes for student response that focus discussion on critical concepts, principles and skills. These strategies could facilitate in depth thinking among students in online discussion environment.

Osalusi (2012) did study on how to develop critical thinking abilities in students using individualistic and cooperative learning strategies to achieve powerful and effective social studies teaching. The study adopted the pre-test control group quasi-experimental design 180 junior secondary school class two (JSS11) students drawn from three schools in West/East,Ikere and Ido-Osi local Government areas of Ekiti State ,Nigeria. The results show that there is significant difference in the critical thinking and decision-making ability level between the experimental and control groups. However, subjects exposed to cooperative learning strategy had the highest

mean score. Osalusi suggested that social study teachers should employ use of cooperative learning strategies in their teaching to enhance the development of critical thinking and decision making abilities in learner's.Appropriate stake-holders in the field should organize on-job training programs for teachers on essential features of cooperative learning strategies.

Scott.(2009) Did study on perception of students' learning critical thinking through Debate in a technology classroom. She interviewed 111 students enrolled in Science, Technology and society course in Southeast Missouri State University Cape Girardeau. Overall students believed that the debate process helped them to understand the topic better, learn new knowledge and gain an understanding of the debate process.

Scott suggested that debate as teaching tool has a place in pedagogical method because it allows students to enhance critical thinking through investigating arguments, engaging in research, gathering information, performing analysis. Assessing arguments, questioning assumption, and demonstrating interpersonal skills.

Suleiman (2012) Did study on Incorporating critical thinking strategies; Teaching strategies in Malaysian technical and vocational education .The purpose of study was to investigate the extent to which polytechnics lectures in Malaysia incorporate critical thinking into their teaching strategies. The web-based survey Qualities was used to disseminate the teaching strategies questionnaire to 4529 lectures of 27 Malaysian polytechnics. A non experimental design was employed to explore the

most frequently used effective strategies and the relationships and differences among frequency of use, perception of effectiveness and knowledge of critical thinking teaching strategies relative to the highest level of education and year of teaching experience.

The findings indicates that among 58 critical thinking strategies, open-ended questioning and small group discussion were perceived as most effective strategies to the lectures.Open-ended questions revealed cognitive and effective domain were used for students. Learning outcomes and rubrics examination, presentations and lab-experiments were incorporated to asses' critical thinking.Suleiman (2012) recommended improving usage, perception and knowledge of critical thinking strategies.

2.4 Research Gap

Unfortunately, these studies have concentrated mostly in developed countries, leaving much in developing countries. Scientific studies are needed to specifically, concentrate on African context (Sheinberg 2007) and particularly looking into the two sides, teaching and learning. Furthermore, most of studies and their population concentrated more in higher institution hence study which concentrate in secondary school level is also needed. This study intends to investigate teachers' perception on critical thinking in secondary schools in Temeke District.

2.5 Chapter Summary

In this chapter the teachers perception on critical thinking in schools have been presented.The empirical study by Sorial (1996), Twilbell (2008), Huang (2008),Choy

and Cheah (2009) have indicated the teachers' perception about critical thinking. Miu and Chi (2010), Cosgrove (2010), Minds (2002), Sheinberg (2007), Kowino (2012), Hamilton (2010) have indicated challenges teachers faces as they teach critical thinking in schools. Alexander et al (2010), Cheong (2008) and Osalusi (2012) have indicated strategies that teachers use in inculcate critical thinking in schools.

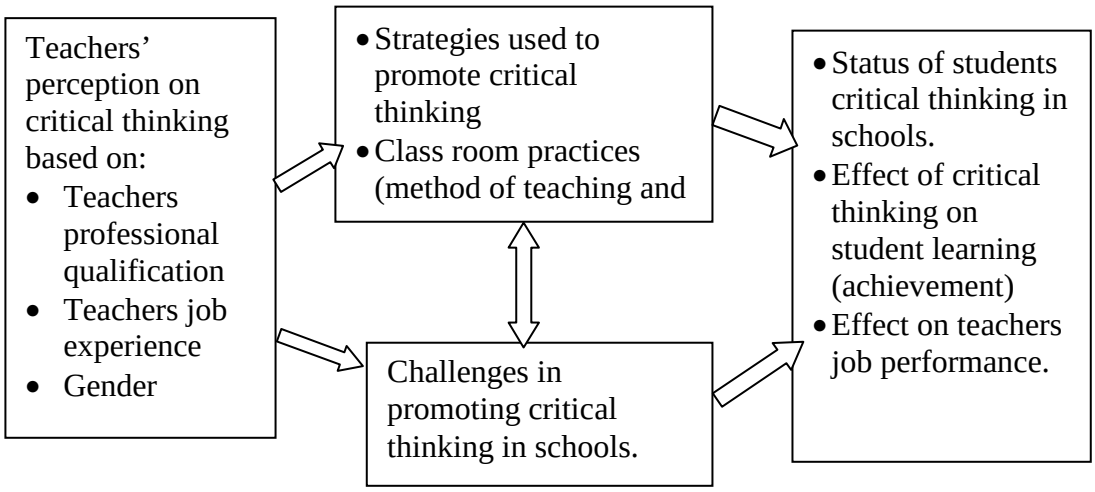

Figure 2.1: Conceptual Framework of the Study

Source: Field Data (2015)

Illustrations on Figure 2.1 Teachers perception on critical thinking is based on three variables: Teachers profession qualification, job experience and gender. These variable may enable a teacher to select strategies used to promote critical thinking as well as classroom practices ((method of teaching and assessment). Negatively, these variables may leads to challenges in promoting critical thinking in schools. In turns, outcomes will be status of students critical thinking in schools, effect critical thinking on learning achievements and effects of teachers job performance.

CHAPTER THREE

RESEARCH METHODOLOGY AND PROCEDURES

3.1 Introduction

This chapter contains presentations and discussions of various methodological issues related to the study. It includes research paradigms, description of the population and sampling techniques, sampling, procedure of an area of the study, instrumentation for data collection and analysis presentation of ethical issues reliability and validity were also examined. It explained on how classroom observation checklist and focus group were administered. At the end of this chapter, a summary of methodological issues is also presented.

3.2 Research Paradigms

In educational research there two paradigms, those are interpretivism and positivism (Creswell, 2005; Gatsha (2010). Interpretivists claim that reality exists within people and by questioning them one could construct the reality of a phenomenon. The interprevists seek to understand experience, behavior, and opinion of individuals in a natural setting through naturalistic inquiry as advocated by Patton (2004).

To the contrary, positivists develop theories and scientific laws based on statistical hypotheses and testing. This paradigm claims to use statistical methods to general conclusion using wider sample as opposed to interpretivist (Creswell,2005,Gatsha,2010,Rwejuna,2013) .It is common for researchers to use those interpretivist paradigms (qualitative) to lead and investigate complement by quantitative methods. This was because there no method that is best for all times for

all situations, for example, the qualitative approach lack definite data analysis and has loose design which may result into difficulty in analyzing (Miles and Heberman,1994; Patton, 2004). Another weakness of this approach is that data collection may take a long time as the interview processes often take longer to be completed. This is due to the fact that the respondents sometimes need to recognize information on the questions raised and sometimes the respondents' memory is lost,the last shortcoming of qualitative research is that is associated with research bias.

3.3 Research Design

A research design is arrangement of condition for collection and analysis of data in a manner that combine relevance of research purpose with economy procedures (Seltz, 1965 cited in Kothari, 1990) .For the purpose of this study qualitative and quantitative approach were employed in data collection and analysis. The design suitable in the collected data about people's opinions and view on teacher's perception .It allowed determination of the distribution of the incidents and inter-relationship between independent and dependent variables (Kerlinger, 1986). Independent variables were those attributes that have effect on the dependent variables. In the context of this study, the independent variables was the perception, where as dependent variable was critical thinking.

3.4 Area of Study

The study conducted in Temeke District at Mjimwema ward. Temeke District is located at the southernmost of the three districts of in Dar es salaam, Tanzania, with Kinondoni located to the far north of the city, and Ilala being in the downtown of Dar

es salaam. To the East's Indian Ocean and the southwest is the Coastal regional of Tanzania. Mjimwema is an administrative ward in the Temeke district. According to the census of the 2002 census; the ward has total population of 9,087. The area was selected due to its accessibility and besides, there has been no similar research conducted in the similar division.

Figure 3.1: The map of Mjimwema, Kigamboni

Source: Field Data

3.5 Targeted Population, Sample and Sampling Techniques

3.5.1 Target Population

The sample for this study included secondary school teachers in Mjimwema ward based in Kigamboni, Temeke District.According to Ary, Jacobs and Razavieh (1996) the population includes all members of any well defined class of people, objects or events from which possible information about the study can be obtained .It is a group

of units with common characteristics in which a researcher was interested for purpose of study. For the purpose of the study, the target population used are teachers and students from Mjimwema ward,the following are number of students and teachers and their characteristics.

Table 3.1: Number of Secondary School Students in Mjimwema Ward

S/N	SCHOOLS	**STUDENTS**		
		MALE	**FEMALE**	**TOTAL**
1	A/ JUMBE	591	534	1125
2	KIDETE	312	279	591
3	KIBUGUMO	326	258	584
4	KISOTA	483	489	972
	TOTAL	**1712**	**1560**	**3272**

Source; WEO Mjimwema

Table 3.2: Number of Secondary School Teachers in Mjimwema Ward

SCHOOL	**GENDER**		**QUALIFICATION**			**TOTAL**
	Male	**Female**	**Diploma**	**Degree**	**Master**	
A/JUMBE	20	21	10	29	2	41
KISOTA	17	27	12	30	2	44
KIDETE	11	15	06	20	-	26
KIBUGUMO	14	15	06	23	-	29
TOTAL	**62**	**78**	**34**	**102**	**4**	**140**

Source: WEO Mjimwema.

Among those the researcher decided to use the small sample of respondent's population so as to reduce sampling error.

3.5.2 Sample and Sampling Technique

A sample is a small group or subset of population, which a researcher selected for a purpose of this study and which generalization was made about the characteristics of the population (Ary et al, 1996). Sampling techniques referred to the process of selected participants of the study from the population. Sampling in the social sciences does not only help a researcher to reduce expenses of time, effort and money, it also enables the researcher to concentrate on a specific area that may represents other areas.

3.5.2 Simple Random Sampling Technique

The study employs simple random techniques for sampled teachers and students of Mjimwema ward secondary schools. Four schools were sampled and a total of forty (40) participants was be involved in this study.By 2014, Mjimwema ward had four secondary school which are owned by the government. For this study, data were collected from 10 randomly chosen teachers from each school. A list for all four schools namely Aboud Jumbe, Kisota, Kibugumo, Kidete were made available at the Ward Education Coordinator. From this procedure, four schools selected teacher from each school formed a sample of teachers. All the school is co-education and they provided ordinary level secondary education.

Participants in this study were selected through the random sampling methods which deliberately select cases on the basis of specific qualities. This technique individuals are chosen in such way that each has an equal chance of being selected and each

choice is independent of any other choice. These are participants who are likely to be knowledgeable about the research phenomenon under investigation (McMillan & Schumacher 1993). They are selected by the virtue of their positions and are presumed to be well informed of their role in the planning and decision making within the school environment.A sample of table below was Teachers in Mjimwema who were selected as a sample size. Basing on Their Characteristics.

Table 3.3: Teachers Students Sample Size and their Characteristics

Schools	**Gender**		**Qualification**			**Total**
	Male	**Female**	**Diploma**	**Degree**	**Masters**	
AboudJumbe,	3	7	4	5	1	10
Kisota,	4	6	3	7	-	10
Kibugumo,	5	5	6	4	-	10
Kidete	6	4	5	5	-	10
Total	**18**	**22**	**18**	**21**	**1**	**40**

Source: Field Data

Looking at Table 3.3 18 had a diploma in education and 21were graduates and masters were 2.A sample of table below shows the students in Mjimwema who were selected as a sample size.

Table 3.4: Students Sample Size

S/N		**STUDENTS**		
	SCHOOLS	**MALE**	**FEMALE**	**TOTAL**
1	A/ JUMBE	5	5	10
2	KIDETE	5	5	10
3	KIBUGUMO	5	5	10

4	KISOTA	5	5	10
	TOTAL	**20**	**20**	**40**

Source: Field Data

3.6 Instrumentation

This section provides a description of the instruments used in the data gathering process, which included classroom observation and focused group discussion.

3.6.1 Observation

Observation is the social research techniques that involves direct observation of a phenomena in their natural settings. It is suitable method due to its flexibility, the researcher can change their approach as needed, and also it measure behavior directly (Omary,2011).

The observational schedule was designed and used to obtain the first hand information from the selected sample of schools. The prepared classroom checklists were administered by researcher with the help of Academic teachers from the sampled schools. the classroom checklist observation was guided by classroom organization, interaction, time or percentages spent in discussion, teaching methodology generally and critical thinking conveying skills, peer evaluation of learning, content knowledge and relevant.

3.6.2 Focus Group Discussion

Powell and Single (1996) define focus group discussion as a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research. The method was considered a

useful method for selecting information through an organized discussion as it allowed participants to air their view through discussion. The technique involved a number of people at the same time with emphasis not only questions and responses between the researcher and participants but also interaction within the group based on topics provided by the researcher. In addition, focus group allowed the gaining of insight into people's shared understanding of everyday life and ways individuals are influenced by others in a group situation.

The researcher organized FGD and involved ten secondary school teachers and ten students from each school. A discussion was conducted in every school, the researcher introduced the purpose familiarized the participants. The researcher posed questions before allowing the participants to discuss them. Then the researcher recorded the responses manually on the FGD guide and recorded some part the discussion.

3.7 Validation of Research Instruments

The validation of instruments was done through pilot samples. The quality of the data gathered instruments depended on whether the instruments supposed to measure and if items carried the same meaning for all respondents (Kerlinger, 1986; Best &Kahn, 2006:324;Rea &Parker 1997:28-29). Pilot sample helped the researcher to identify ambiguities and unclear questions to be answered for necessary corrections.

The reliability of the instruments was determined by the results of the pilot samples were identified and corrected. The correction based on clarity of wording of the questions.

3.8 Data Analysis Plan

3.8.1 Qualitative Data Analysis

The analyses of qualitative information were subjected to content analysis technique. According to Silverman (2001), content analysis was a systematic procedure design examined and analyzed the recorded information. In the process of coding and analysis, the contents of the same manner. The technique was advantageous because of its objectivity as any bias by the researcher is far from being included in the findings. In addition, the used of content analysis enabled the researcher to establish a set of categories before counting the number of instances that fall under each category.

The procedures to analyze qualitative data for this study included recording the data, sorting the data into categories, formatting of the information into a story and writing the text simultaneously; reduction and interpretation of the data in order to obtain "a larger, consolidated picture". Categories of information were formed from the collected data and these categories formed part and parcel of the story to be told by the researcher. The interpretation was done systematically by summarizing the contents in their relevant themes. With this method, it is easy to generate the units of meanings, classifying, categorizing, ordering and structuring narratives and to describe the contents of the collected data (Cohen et al, 2000).

3.8.2 Quantitative Data Analysis

Quantitative data was through observation and analyzed using descriptive statistics. Researcher used tables for summarizing and present data. The observation data was analyzed to determine teachers' and students' perceptions about critical thinking in

terms of their valuation of integration with content knowledge, obstacles and strategies teachers use in imparting critical thinking.

3.9 Ethical Issues

These involve gaining consent and anonymity. A brief elaboration is provided below

3.9.1 Gaining Consent

Patton (2002) and Cray (2004) argued that the use of the principle of informed permission is necessary for fair research. The researcher was permitted to conduct research by Open University of Tanzania by being given the letter of permission to conduct a research. Then the researcher submitted the same permission letter to Temeke Municipal Council.

Then the Municipal Director gave the r5esearcher four introductive letters addressed the head of four secondary schools of Mimwema ward. In respect of this principle, respondents will be informed about the request for participate in the research. Those who will agree to participate in the research will be included in the study. No dishonesty will be exercised by a researcher to force respondents to be involved in a research (Gray, 2009).

The researcher therefore developed an informed consent to ask respondents to participate in the research project while promising them to keep all information from respondents highly confidential. It is this principle that the teachers and students who preparing for their classroom activities would not approach for research activities.

3.10 Chapter Summary

This chapter presented methodology used in this research, starting with research paradigms. The chapter further delineates the choice of mixed method design research which guided the study. The study used classroom observation checklist and focused group discussions as the major instruments of the data collected. The study sample involvedteachers and students in four secondary schools at Mjimwema ward in Temeke District. Sampling procedure involve random technique. The study utilized content analysis technique of data based on narrative format. The chapter ends with ethical issues like informed the consent and anonymity.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This Chapter presents the study findings. The three research questions that addressed three objectives of the study correspond to three sections of this chapter. These include; teachers' perspectives and practice in inculcating critical thinking to secondary school students. The findings discussed reflect the perceptions of the research participants, which are discussed using the surveyed literature. However, before the presentation of the findings, the profiles of the respondents are presented.

Table 4.1: Social-Demographic Characteristics (n=40)

Variables	Category	Frequency	Percentage
Sex	Male	18	45
	Female	22	55
Qualification	Diploma	18	45
	Degree	21	52.5
	Masters	1	2.5

Source: Field Data

Looking at Table 4.1 45% of participants were male,and 55% of participants were female. Based on qualifications, 55% had a diploma in education and 52.5% were graduates and 2.5% were postgraduate masters. 97.5% of the interviewed teachers had diploma and bachelors which has a highly significant positive implication to the critical thinking.

4.2 Teachers' Perspectives About Critical Thinking in Secondary Schools

The first objective of this study was to examine teachers and students perspectives about critical thinking in secondary schools. The objective sought to determine teachers' perspective towards their daily teaching and their perspectives on building critical thinking in secondary schools.

The questions were; what are the teachers' perspectives about critical thinking in secondary schools in Tanzania. Interview schedules and focused group studies were used to solicit information from 10 teachers and 10 students responded to this question. The following were some of the responses.

Teacher 1: I think that critical thinking will increase and improve learning outcome as they would be able to achieve better performance in their study. It makes students to be active learners.

Above perception tends to support the idea given by Sorial (1998) in his study of high school teacher's perception and practice about critical thinking. The study revealeMost of high school teachers realize and believe the value of critical thinking as academic competence that is crucial for future success and progress.

Another respondent expressed a similar perception with the comment

Teacher 2: I know that critical thinking is ability to translate what students have leant in a classroom then transfer and practice those learning to real life situation

Above findings tend to support the ideal of Choy and Cheah (2009) in their study about critical thinking among students and its influence on higher education. The study revealed that:

> Teacher believed that critical thinking will provide the intellectual stimuli that will facilitate learning among student. They perceive that student's ability to explain concept on their own word is evident that they think critically.

Teacher 3: I think that critical thinking is a situation whereby a person can provide reasonable solution to the social and economic Problems.

Teacher4: I would relate critical thinking to higher standard school experience which students experience while at school including academic gains, attitudinal improvements psychological stability and development of positive leaner attributes. Critical thinking is all about coming out with a level of knowledge skills on subjects of specialization rather than certificates at the end of schooling.

Teacher5: To me critical thinking does not only mean acquisition of bookish knowledge and providing good jobs in employment market, rather it is increase of the leaner's achievements in terms of economic status or increase chances for good life in the future.

The students were asked same question their response were:

Student 1: I think that boys have high critical thinking, girls not perceive themselves to inventor and largely influenced by their environment, girls are discouraging to become creative.

Student 2: Critical thinking is ability to manipulate the task in and out the class that Indicate critical thinking.

Student 3: It is easy for us [arts students] to think critically than those who study science Subjects since our study need explanation and debate.

The results indicate that majority of respondents perceived that critical thinking was a method that would help students enjoys the learning process. This arguments is supported by Sorial(1998) who argued that teachers realize and believe the value of critical thinking as academic competence for students future success and progress.

All of the respondents were certain that practicing critical thinking in their classroom bring positive results.

They also perceive that through critical thinking students would be able to gain in-depth understanding of the subject matter they were learning and apply them in real life. This process according to the respondents maximize the outcomes of the

students' learning experience as they would be able to achieve better result in their courses and perform better in class as well as becoming pro-active learners and independent thinkers. This arguments is supported by Choy and Cheah (2009) who argued that critical thinking will provide intellectual stimulus that will facilitate learning among the students.

The other respondents thought of critical thinking as involving reasoning which helped students analyze their learning. However all respondents did not indicate the depth of learning they wanted the students to attained. This arguments is also supported by Twibell (2008) who said that critical thinking is putting together through information seeking, reflecting, assigning meaning, problem solving, problem solving, predicting,planning and applying.This view extended the philosophical approach as indicated by Facione (1990) who indicated that:

> *"The ideal critical thinker as someone who is inquisitive in nature, open minded, flexible. Fair minded, has desire to be well informed, understand diverse view points, and is willing to both suspend judgments and to consider other perspective"*

From the results obtained, it was seen that some respondents perceived critical thinking enable students to make clear arguments, most of them thought that art subjects is suitable for students to develop critical thinking capacity. Also it thought that boys have higher critical than girls as noted by Rodzalan and Saat (2015) students perceived they have high critical thinking and problem solving skill .It is also revealed that male students perceived better to have better critical thinking and

problem solving skill. Social science students appear to perform better in these skills to science engineering students.

Therefore, all the respondents perceived that it was important that critical thinking are occurred in classroom. They also perceived that critical thinking needed to be taught in order to help students to perform better. These findings support by the arguments by Minds(2002), Cogrove (2010). Critical thinking enable the learner to make clear arguments, it also thought that male students have better critical thinking as well as social science students perform better in this skill to science engineering students.

4.3 Strategies Teachers Use to Inculcate Critical Thinking to Secondary School

The second objective sought to examine the strategies teachers use to inculcate critical thinking in secondary school. The researcher visited 4 government schools, In first school, the researcher observed ten teachers and attended their teaching fully in the class , the researcher had enough time to observe strategies which teachers use in imparting critical thinking to the students , the researcher observe the following.

It was mathematics period form two students, the class was overcrowded, the teacher could not use participatory approach instead used lecture method due to the greater number of students, and the teacher combined three classes due to the shortage of science teachers.

When the researcher attended the another class, it was physics period for form four,which was also a two classes combined, similar situation to the first classroom.When a researcher attended the third class which was not combined [form three history periods] at least a teacher tried to use debate method. Here the students were grouped into two and the issue was provided to take sides and debate. Here a challenge was the language of debate, English. The researcher could vividly see hesitation in responding to other side due to limited knowledge of the language. When the teacher tried to ask the same question in Kiswahili, the students responded quickly and majority of students seemed to participate more confidently in Kiswahili. A researcher another school and find students participating in a debate some students tried to participate by contributing their view although were not competent in English language

At the same time a researcher find the project study to the academic office. The projects have been done by students concerning to various title in various discipline like environmental, democratic, gender issues etc. Students in group participated doing projects by doing projects through collecting data and information.

At the same school, it was biology period in a biology lab where a researcher observe students doing practical concerning to food taste,and find out a lot of specimen like human skeleton, heart, kidney, alimentary canal and so on. The lesson was very interesting since many students participated well.

All the rest classes the researcher attended the situation was similar as observed

Focused GroupA researcher also conducted focused group and interviewed teachers about strategies do teachers employs inculcating critical thinking to students. It seem that most of teachers prefers participatory approach as one of respondent noted the following

Teacher 1: I prefer discussion in small group since big number of students participates on Subject matter by giving their views and opinion concerning the topics discussed in class. This views help students to be rational when expressing different issues and also help them to be aware on working within their area of community in solving different matters when faces them hence will be the active member in the society.

Teacher 2: For me debate and assignment presentation are appropriate method .These Methods make the learners to develop. Different learning skills such as listening,Speaking ad reading .It also builds the self confidence to the learners since and them involves presentation before the audience.

Teacher 3: Experimentation and demonstration method is a good method because it helps the students to keep longer memory and help the students to understand well the subject matter since they learn by seeing the real things therefore help the students to apply the knowledge obtained in real life problems like playing cards in probability experiments, fiction force heat etc.

Teacher, 4: I prefer study tour, since students can learn through observing, smelling, touching and hearing hence increasing critical thinking, for when we prepare a study tour to Bagamoyo the students can learn various

discipline like Geography ,history, physics, chemistry, biology and Kiswahili.

Teacher 5: I teach English and usually use lecture method because it is difficult to use participatory methods due to the big number of students in a class. So it is difficult to use method like group discussion as need more space and time. Each class has more than 60 students while capacity of class is 40 students.

The results from the observation and focus group revealed that majority of teachers still use lecture strategies in their teaching due to big class size, teaching load and many school responsibility, although such approach is not suitable in imparting critical thinking to the students as Paul (1992) discuss in his study that students fail to thick critically because of typical school instruction does not encourage the development of critical thinking. Typical school instruction, with its emphasis on the coverage of content is designed as thought recall were equivalent to knowledge students memorize materials without understand the logic of materials that they leant. Although Alexander et al (2010) suggest that lecture method should use the four question techniques to enhance quiz performance as part of face to face learning environment that will promote critical thinking.

Despites of majority of teachers use of lecture approach, some few teachers are using participatory approach like group discussion, role play, presenting, experiment, debate. Participatory approach play a significant role in increasing students' critical thinking. This arguments is supported by Cheong (2008) who said that the use of online discussion is common in Singapore university and many schools in Singapore

have begun to introduce online forum for discussion beyond the classroom. Some enhanced scaffolding strategies for online discussion participants and guide, on designing good questions are recommends fostering critical thinking skills.

Osalusi (2012) maintained the same status when he said that social study teachers should employ cooperative learning strategies in their teaching to enhance then development of critical thinking. Likewise Suleiman (2012) supported the same argument by saying that open ended question revealed cognitive and effective domain were used for students ….presentation and experiments increase critical thinking skills.

As some students supported debate as a good method of promoting critical thinking among students although many of them are facing with language barrier. The above findings tend to support the idea given by Scott(2009) who said that the debate process help to understand the topic better, learn new knowledge and gain understanding of debate process. Kimaro,(2001) and Alexander et al (2010) supported the same argument.

In a nutshell, this objective can be concluded that strategies that teachers use to impart critical thinking to the students. The most teachers are still employing lecture strategies in their teaching. The study shows that few teachers are using participatory approach like group discussion, project, debate, experiment, presentation etc.

4.4 Challenges that Teachers Face as they Teach Critical Thinking

The third objective was to assess the challenges that teachers face as they tried to inculcate critical thinking in secondary school classrooms. Through the Focus Group Discussions (FGDs), Respondents (teachers) explain some challenges. Some of the responses are as follows:

Majority of respondents discussed various challenges teachers' faces as they teach critical thinking, as a researcher noted them that as a result from nature of school, students, teachers and poor government policy. For example one of teachers explained about class size and noted the following:

Teacher 1: It is very difficult to teach for critical thinking. For example, I combine three classes in one and I am expected to cover the syllabus. How can I engage students in questions and in group discussions in such a big class?

Teacher 2: I don't think critical thinking will work in Tanzania where students don't even know what they are learning. Most of our students are struggling to understand the language before they start to think about the content. Language of instruction is a major challenge.

As result indicated that it is difficult to inculcate critical thinking in a country using two instructional language as Tanzania we use Kiswahili as medium of instruction in most primary school and English language in secondary level this mismatch classroom interaction in most secondary schools.

This idea is similar with idea of Miu,v and Chi,I[2010]as indicated in literature review. They said that Asian students appear not good as Western counterpart, the different related to language ability rather than cultural determined factors. Behavior manifestation such as debate, argumentation or even writing argumentative essay requires appropriate use of language.

Teacher 3:I know what is important to help students to think critically,but I wonder if it is real happen, I do not know if it is really takes places because teachers themselves may not able to think critically .You cannot have someone who does not know how to think critically to teach critical thinking.

Teacher 4; Education yes, but for what? Clarity of targets is one thing, but setting the right target is another thing .Target setting in Tanzania suffers from the major problems. It focused on quantities aspects and on

Inputs but not quality of outputs.

Teacher 5; The is that large number of students enter in secondary schools poorly prepared for academic success .Some of students who are joined form one , they do no how to write ,read and count.

The aboveata from both interviews and focus group discussion revealed that it is difficult to impart critical thinking to big number of students combined in a one class. This situation has been discussed in literature review by Hamilton et al (2010)

in his study also discussed the same problem by saying that …the quality education appeared to be impacted negatively by difficult school environment like ever crowded classroom and lack of school materials.

In course of collecting data the researcher discover that English language as medium of instruction for secondary schools play a contributory role to the problem. This observation was also discussed by Elder and Paulo (2006), Miu and Chi (2010 when they said that …In relation to International education in teaching of Asian students in critical thinking could be difficulty due to students using English language as a second language in the academic discourse.

While a researcher interrogated the teacher 3,4 and 5 ,discovered that incompetent teachers also is a big problem that hinders teaching of critical thinking ,this findings also supported by Cogrove (2010) in his study he said that "one of the main impediments of critical thinking of our students is that many professor and teachers do not have much significant experience of investigating ideas explicitly and deeply have, not significant time and energy to the consideration of how to foster it within classroom".

Data from both interviews and focus group discussion revealed that government education system and political interference is one of the causes of the problem. This findings is also supported by Hamilton et al (2010) in his study he maintained the same status, when he said that…Teachers are not well prepared in the use of pedagogies, some teachers do not know applying some context-based approach there poor performance in mathematics and science subjects, measure to address these

issues have not fully implemented and \or have been poorly articulated within a policy /program.

When a researcher interviewed 6, 7, and 8 as well as students 9, he discovered that the major challenges in imparting critical thinking to students are few books, few equipments in laboratory as well as lack of teachers motivation, Their findings are supported by Hamilton at el (2010) when he said that …Resources are lacking in most every aspect of education including insufficient number of qualified teachers, inadequate equipments and materials textbooks and facilities. Sheinberg (2007) maintained the same by saying that "Teachers survival and quality of education impacted negatively by lack of attention and response to teachers' welfare. Teachers psychology well being is impacted negatively by low recourses like low salary earned and difficulty school environment.

Another problem that hinders teaching of critical thinking as respondents shared their views is education is too theoretical instead of being practical hence it is difficult to students to participate fully in real life situation. This idea is supported by Paulo Frere (1970) who said that the concept of learning in the traditional way becomes an act of depositing in which the teacher make deposit that the students patiently receive, memorize and repeal, hence moving away from the concept of critical thinking.

Interview and classroom observation revealed some challenges. The researcher discovered that poverty, distance from home to school, and punishment effect

students learning outcomes as students 1, 2, 3, and 4 said. The poor students often cited isolation, exclusion and loneliness as source of psychological stress. The situation is similar to their teachers as Sheinberg (2007) said that Teachers' survival and quality of education appeared to be impacted negatively by lack of attention and response to teachers welfare.

Data from two respondents revealed that poor prepared of students from lower classes is the one of factor hinder development of critical thinking to secondary school students. Some students from primary schools are incapable to write and read. This argument is similar to Elder and Paul (2006) who said that there strong connection between ability to think and ability to write well. However, the source of this is teachers are not prepared well as Hamilton et al (2010) Said that teachers in schools are not well trained in the use of appropriate pedagogies.

Also it has been noted that challenges teacher's faces when inculcating critical thinking is grounded in the consequences on quality of education that currently the Tanzanian education seem to lag behind in the provision of quality education due to un stable curriculum as some of objectives seem to be stated in Tanzania Education Training Policy, TETPO (1995) but lacks resources to furnish stated projects and other need to achieve the required goal.

This objective deals with challenges face teachers and students as they teach and learn critical thinking, the results revealed some challenges that teachers are facing are big class size, language barriers for students, lack of critical thinking skills, high

school enrollment, poor policy, program and political interference, as well as lack of teachers motivation and teaching and learning materials.

4.5 Chapter Summary

This chapter presented data presentation, analysis and discussion, which based on three objectives: Teachers' and students perceptions about critical thinking; strategies that teachers employ in teaching of critical thinking; and challenges that teachers and students face in teaching and learning critical thinking.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This Chapter provides summary, conclusions and recommendations of the study on teacher's perception on critical thinking in secondary school in Tanzania specifically in Mjimwema Ward at Kigamboni Division as the case study.

5.2 Summary of the Study

This study investigated on teacher's perception on critical thinking in secondary school in Tanzania. The study had three research questions that corresponded to three specific objectives which included the following: Examine teachers' perspectives about critical thinking in secondary schools; Assess strategies teachers use to inculcate critical thinking to secondary school; and Explore challenges that teachers face as they teach critical thinking in secondary schools in Tanzania.

Findings provided useful information that generated new knowledge on teacher's perspectives on critical thinking in secondary school in Tanzania. The study presented the finding that Critical thinking issue are embedded with numerous variables of in and out of the class thus the perception tend to differ in regarding to different school of thoughts of depending ones need and locality criterion. For this study the teacher's perceptions on critical thinking in secondary school differ in stand in understanding critical thinking as some view as critical thinking as purely the work Mind and observable facts whereas other sees as inquisitive in nature, flexible, fair and open minded.

Related literature was reviewed with the purpose of providing the researcher with knowledge about the research problem as well as revealing gaps in the literature. Literature study revealed that teacher's perception on critical thinking and its challenges that teachers encountered in their work.

The study used a case study design. Data were collected using classroom observation checklist, focus group discussions. The population sample involved 40 respondents who were selected using simple random sampling and purposive sampling. 10 randomly chosen teachers from four schools namely Aboud Jumbe, Kisota, Kibugumo, Kidete and ten selected teachers from each school. All the schools are co-educational and they provide ordinary level secondary education.

5.3 Summary of the Main Findings

The study identified some main findings that reflected general teacher's perspectives towards enhancing critical thinking. The following were the main findings from the study based on the main research questions:

5.3.1 Teachers' Perspectives about Critical Thinking In Secondary Schools in Tanzania

With respect to teachers' perception towards critical thinking, it was revealed that many teachers had different stand in understanding critical thinking as well in practicing at classes as some teachers stand on traditional philosophical approach basing on the quality of thought and thus application of logic, while others base on Psychological approach basing on observable facts dealing with mental process and other basing in contradictory view as mixing up Philosophical, Psychological and Educational approach.Also the study reveals negative relationship basing on teachers gender, age and experience on inculcating critical thinking as from the study reveals vagueness in all aspects quality in teaching methodologies and teacher's skills in conveying critical thinking skills

Also the study revealed that apart from training do teachers got from collages teachers lacks strategies, skills and methodologies on how to inculcate critical thinking to their students as well they lack clarity on what ways they could opt to instill critical thinking and this generally expose on the absence of in service training, upgrading course and workshop to train teachers to meet with the ever

changing of science and technology and thus every teacher do in his or her way in teaching their class as well their classes.

As well the study revealed a big problem in regarding to teaching and learning aids most of the available are out fashioned and not creative made, frequently changes of Text books and other Supplements Teaching materials while the likely educators (teachers) were not informed, incompetent teachers as well Lack of modern facilities in panacea of Education in Tanzania

5.3.2 Conclusions and Recommendations

From thediscussion and interpretation of the findings it the following are the conclusion made:

In our basic concept of critical thinking should be rooted as simple. Teachers are to be successful in encouraging the development of critical thinking skills, explicit instruction in critical thinking needs to be included in the curriculum, whether that instruction occurs as a stand-alone course, is infused into subject-matter content, or both. Cooperative or collaborative learning methods hold promise as a way of stimulating cognitive development, along with constructivist approaches that place students at the center of the learning process. Teachers should model critical thinking in their instruction and provide concrete examples for illustrating abstract concepts that student will find salient, we can take charge of our lives; we can improve them, bringing them under our self command and direction, and this require self-discipline and the art of self-examination. This involves becoming interested in how our minds work, how we can monitor, fine tune, and modify their operations for the better. It

involves getting into the habit of reflectively examining our impulsive and accustomed ways of thinking and acting in every dimension of our teaching.

Stimulus materials should attempt to embed contradictions or inconsistencies that are likely to activate critical thinking.

Finally, such assessment tasks should make student reasoning visible by requiring students to provide evidence or logical arguments in support of judgments, choices, claims, or assertions.

5.3.2 Recommendation

Both government and its international partners recognize the need to improve teacherjob satisfaction Educators have long seen critical thinking as a desirable educational outcome. More recently, the Partnership for 21st Century Skills has identified critical thinking as one of several skills necessary to prepare students for post-secondary education and the workforce.

First, instruction should represent a fusion of preparation in general critical thinking principles, as well as practice in applying critical thinking skills within the context of specific domains. Second, transfer of critical thinking skills to new contexts is unlikely to occur unless students are specifically taught to transfer by sensitizing them to deep problem structures and are given adequate opportunities to rehearse critical thinking skills in a variety of domains.

Furthermore, the newly created Common Core State Standards reflect critical thinking skills. Although a concrete definition of critical thinking on which most

researchers can agree remains elusive, common areas of overlap exist among the various approaches.Critical thinking entails cognitive skills, or abilities, and dispositions. These dispositions, which can be seen as attitudes, or habits of mind, include open- and fair-mindedness, inquisitiveness, flexibility, a propensity to seek reason, a desire to be well-informed, and a respect for and willingness to entertain diverse viewpoints.

A national strategy is needed that lays out in a comprehensive and coherent manner the steps to take to improve teacher Educators are urged to use open-ended problem types and to consider learning activities and assessment tasks that make use of authentic, real-world problem contexts. In addition, critical thinking assessments should use ill-structured problems that require students to go beyond recalling or restating learned information and also require students to manipulate the information in new or novel contexts. Such ill-structured problems should also have more than one defensible solution and should provide adequate collateral materials to support multiple perspectives.

5.3.3 For Further Studies the Researcher Recommend

This study suffered from some methodological limitations including limited sample size and having only covered a limited number of secondary schools because of limited time and fund for conducting research. As such generalizations from this study should be done with great caution. Future studies should attempt to cover a bigger sample size and expand the number of schools so that results could be generalized to other schools and the country as a whole.

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APPENDICES

Appendix I: Classroom Observation Check List

TITLE: **TEACHERS' PERCEPTION ON CRITICAL THINKING IN SECONDARY SCHOOL IN TANZANIA. CASE STUDY MJIMWEMAWARD**

Introduction

I am Mkomele Kuruthum Issa pursuing Master degree of Med Apps Applied, Open University of Tanzania, and conducting research in Dar es Salaam city to learn about

Teachers' perception on critical thinking in secondary school in Tanzania. Case study at Mjimwema Ward.

I kindly ask you to participate in this important research by giving your knowledge, views and opinions on this very important aspect in education. All information which you will provide will be confidential between me and you, and will be used for the research purposes only. Please write answers in provided open spaces of the questions. Do not write your name in this paper.

Section A: Respondent preliminary information and demographic characteristics

Please circle or fill in the appropriate answer.

1. Sex:

(i). Male ……..

(ii). Female …. ….

2. Name of school ……

3. Age…… (Years)

4 Education qualification …….

Classroom Observation Check list

Teacher No……

Observe by rating Number 1, 2 and 3

Respond to each statement using the below scale. Please circle or fill in appropriate answer.

1 = Not observed (NO). 2 = More Emphasis Recommended (MER). Accomplished Very Well (AVW)

Classroom organization and Quality of Classroom interaction			
Presented overview of lesson	1	2	3
Paced lesson appropriately	1	2	3
Presentenced topics in logical sequence	1	2	3
Related today's lesson to previous/ future lessons	1	2	3
Summarized major points of the lesson	1	2	3
Interaction, Time/Percentages spent in discussion and teacher's accept of Students			
Actively encouraged students questions	1	2	3
Asked questions to monitor students understanding	1	2	3
	1	2	3
Waited sufficient time for students to answer questions	1	2	3
Listened carefully to students questions	1	2	3
Responded appropriately to students questions	1	2	3
Restated questions and answer when necessary	1	2	3
Teaching Methodologies generally and critical thinking conveying skills			
Explained major /minor points with clarity	1	2	3
Defined unfamiliar terms, concepts and	1	2	3

principles			
Used good examples to clarify points	1	2	3
Showed all the steps in solution to homework problems	1	2	3
Varied explanation for complex or difficult material	1	2	3
Emphasized important points	1	2	3
Writes key term on blackboard	1	2	3
Integrates materials from real world	1	2	3
Active, collaborative and cooperative learning favoured over passive learning	1	2	3

Your comment in Areas of Strength (Briefly explain) …….....

…….

…….

Summary Comment…….

…….

…….

Signature …… Date……

Focus Group Discussions

1. What is critical thinking?
2. What is the significance of critical thinking in learning?
3. What factors influence students to think critically?

4. What strategies do teachers use to inculcate critical thinking in classroom situation?
5. What are the challenges a teacher may face in fostering critical thinking in classroom?

Appendix II: Research Project Permit

TEMEKE MUNICIPAL COUNCIL

[All letters should be addressed to the Municipal Director]

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P.O.BOX 46243
Mandela Road
DAR-ES-SALAAM
TANZANIA

Ref.No.. TMC/ED/SI C/U.21/2/35

Date.. 18th MAY/2015

The Headmaster/Mistress,
ABISA GIRLS SECONDARY,
KITUNGUNA AREA
TEMEKE.

RE: RESEARCH PROJECT PERMIT FOR ..KASUTHANI J. MKONGE..

Please refer to the heading above.

Kindly allow KASUTHANI J. MKONGE from OPEN UNIVERSITY OF TANZANIA to conduct research on ..TEACHERS PERCEPTIONS ON.....
CRITICAL THINKING: A CASE STUDY OF MGUMBEMA WARD.

Please give them necessary assistance to achieve his goal.

DONALD S. CHAVILA
SECONDARY EDUCATION OFFICER
TEMEKE.

ABISA GIRLS SECONDARY
MANDELA RD - TEMEKE

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF RESEARCH, PUBLICATIONS, AND POSTGRADUATE STUDIES

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18/07/2014

Mnunicipal-Director
P.O. Box .
Temeke Municipal

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an act of Parliament no. 17 of 1992. The act became operational on the 1st March 1993 by public notes No. 55 in the official Gazette. Act number 7 of 1992 has now been replaced by the Open University of Tanzania charter which is in line the university act of 2005. The charter became operational on 1st January 2007. One of the mission objectives of the university is to generate and apply knowledge through research. For this reason staff and students undertake research activities from time to time.

To facilitate the research function, the vice chancellor of the Open University of Tanzania was empowered to issue a research clearance to both staff and students of the university on behalf of the government of Tanzania and the Tanzania Commission of Science and Technology.

The purpose of this letter is to introduce to you **Ms Mkomele Kuruthumu Issa Reg. No. HD/E/447/ T.13** who is a Master student at the Open University of Tanzania. By this letter, Ms Mkomele Kuruthum Issa has been granted clearance to conduct research in the country. The title of her research is **"Teachers'perception on critical thinking in secondary schools in Tanzania: A case study of Mjimwema ward".**The research will be conducted in Temeke Municipal.

The period which this permission has been granted is from 18/07/ 2014 to 18/09/2014.

In case you need any further information, please contact:
The Deputy Vice Chancellor (Academic); The Open University of Tanzania; P.O. Box 23409; Dar es Salaam. Tel: 022-2-2668820

We thank you in advance for your cooperation and facilitation of this research activity.
Yours sincerely,

Prof Shaban Mbogo

For: VICE CHANCELLOR

THE OPEN UNIVERSITY OF TANZANIA