

**EXPLORING THE LEARNER CENTRED TEACHING PRACTICES IN SECONDARY
SCHOOLS IN TANZANIA**

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Executive summary

This study explores the learner centred teaching practices in secondary schools in Tanzania. The basis of this research emanated from the problem of the poor performance of secondary school students in Tanzania. The performance of students in national examinations has declined over the past years. This trend shows an increase in the number of students who are failing. The analysis of the examination results indicates that several secondary schools are in a poor situation. Poor performance signifies that many students have failed to acquire the requisite knowledge, skills, and competences to function effectively in society as well as in socioeconomic development. In general, the preceding situation proves that the quality of education has been affected and there is a need for conducting research.

The literature indicates that scholars have been conducting educational research to find effective methods of improving students' performance. To accomplish this aim researchers of IEA (International Association for the Evaluation of Educational Achievement), international organizations, and universities have been carrying out extensive studies to examine students' performance in the areas of science, mathematics, and reading in various national and cultural contexts. Educators have produced results showing that countries such as Finland, South Korea, and Shanghai-China lead the world in terms of student performance. The factors mentioned to account for good performance include hard work by students, positive attitude of students', effective engagement in the classrooms, schools emphasis on academic success, well-resourced schools, well-trained teachers, and favourable working conditions.

Therefore, identifying factors that lead to good performance is fundamental because it helps the education systems to modify and improve the provision of education. The factors give researchers the opportunity to observe and learn from high-performing countries. This process is in line with the comparative education aim to stimulate the development of educational practices by learning from more successful countries and their education systems. Comparative education acts as a science that shows effective ways to improve students' performance. This is to say that, good educational performance observed from one country can facilitate another country to evaluate its education system and practices and consequently improve students' performance.

In order to improve the problem of poor performance, the literature suggested researchers should mainly examine the learner centred teaching practices in the classrooms. This advice is in line with the goals of various educational programs such as World Education Forums, Tanzania Development Vision 2025, Secondary Education Development Program, and Education Sector

Development Program. In addition, the process of transfer and borrowing of policies and practices from Western and European countries to different national and cultural contexts compelled the introduction of learner centred teaching practices. These practices have been supported because they put students at the center of the learning process. They focus on the interest of students and create a positive environment for learning. They facilitate active teaching and learning methods. The practices have a connection to constructivist theory which emphasizes students' construction of meaning and understanding. The characteristics of the theory are preferred because they should improve educational research, curriculum implementation and students performance in different national and cultural contexts.

Despite its effectiveness, educators and practitioners challenged characteristics associated with the constructivist theory. It does not provide thorough instructions on how to employ in the classrooms. In connection to that, it does not guide teachers on the appropriate learner centred teaching practices applied in various stages of the lesson development. It is in this background that the current study identified a research gap and area of contribution. Therefore, the purpose of this study is to explore the manner in which secondary school teachers make use of learner centred teaching practices in various stages of lesson development. Specifically, the study explored teachers' perceptions of the learner centred teaching. It also explored the teachers' practices and perceptions of the learner centred teaching practices in various stages of the lesson development. Likewise, the study sought to examine the kind of support teachers need to facilitate learner centered teaching practices. It should be recognized that practices and perceptions are essential for providing a thorough understanding of these practices in the classrooms.

To achieve the above purpose, this study sought to answer the following research questions:

1. How do secondary school teachers in Tanzania perceive the learner centred teaching?
2. How do secondary school teachers in Tanzania employ the learner centred teaching practices in different stages of the lesson development?
3. How do secondary school teachers in Tanzania perceive the learner centred teaching practices in different stages of the lesson development?
4. What support do secondary school teachers in Tanzania need to enhance their learner centred teaching practices?

Concerning the research methodology, this study consulted previous studies carried out in one country and those in various national and cultural contexts. The purpose was to examine and learn

how past studies were designed, conducted, and achieved the research objectives. The researcher intended to choose the methodology that manages and controls complexities occurring during the teaching and learning in the classrooms and might affect the data collection. The methodology had to produce a thorough understanding of teachers' practices and perceptions. This criterion compelled the study to adopt a qualitative design. Scholars insist that classroom practices be studied properly by qualitative design. This design is effective to provide an understanding of the people, contexts, practices, and interactions. This study applied the ethnographic approach to explore the learner centred teaching practices extensively and in a natural classroom setting. The ethnographic approach enabled examining cultural attributes such as practices and perceptions as manifesting in the classrooms. It facilitated the acquisition of information that produced thick descriptions of learner centred teaching practices.

In sampling, this study focused to select poor-performing schools that implement learner centred teaching. Teachers were chosen purposively to provide rich information needed to fulfil the purpose of the study. The data collection was conducted between November 2014 and March 2015. Afterward, the researcher continued to capture information from teachers to enrich the database. In the period between December 2015 and January 2016, teachers were given the chance to authenticate the findings. During the fieldwork, the researcher executed a series of activities in line with ethical principles. The data collection methods applied participant observations and semi structured interviews. The data was analyzed by thematic analysis and produced findings in terms of themes. Themes have been connected to the implementation of learner centred teaching practices in the classrooms. The analysis followed steps such as organizing the data for familiarization, reading the data thoroughly, writing and coding the transcripts/texts, formulating the themes, interpreting the meaning, and doing a repetition movement between findings and the database.

The main findings of the study reveal that teachers' perceptions of learner centred teaching exhibited various views. The perceptions and practices towards the learner centred teaching in various stages of the lesson development displayed mixed practices. In this view, the findings on practices (what teachers practiced) and perceptions (what teachers reported) fall into three categories: Those aligned with the learner centred are described as discussing, demonstrating, homework, ongoing assessment, higher-order questioning, asking various questions, interactive seating arrangement, passing to groups during the discussion, teaching a small piece of content, and students presentation. Those aligned with the teacher centred are described as lecturing, reading textbooks, end of period assessment, lower-order questioning, neglecting students' views,

and traditional seating arrangement. Also, practices created by teachers include students marking for themselves, slow students acting as indicators of learning and understanding, examining notes, involving few students, performing questions on the chalkboard, watching the entire class, and remedial teaching (these were created due to various reasons).

To support teachers in executing learner centred practices, improvement is needed in the aspects such as in-service training, school based training, teachers' welfare, teaching materials, producing more science teachers, and testing students frequently. The researcher discussed findings by relating and comparing them with various research studies with reference to the implementation of learner centred teaching practices. In general, the research findings showed that teachers display similar as well as different educational practices.

This study realizes the research gap and addresses theoretical and empirical contributions. Regarding theory, the literature indicated that the constructivist theory lacks clear instructions on how teachers should employ learner centred teaching practices in various stages of lesson development. This study addresses the gap by providing a broad understanding of the learner centred teaching practices applied by teachers in various stages of lesson development. To accomplish that aim, the study suggests proper constructivist and learner centred practices for guiding teachers in the classrooms (see Appendix VIII).

In terms of empirical contribution, the previous empirical studies about constructivist theory and learner centred practices reported the practices observed in the classrooms. However, it revealed that the researchers carried out and reported practices focusing on only a few stages of the lesson development. This study addresses the gap by exploring and reporting learner centred teaching practices in various stages of lesson development. This investigation reveals specific practices facilitated by teachers in classrooms. It also fulfilled the purpose of the study of developing a broad understanding of learner centred teaching practices. The study challenges previous studies and wants researchers to explore classroom practices focusing on various stages as possible.

This study contributes to the theory development of comparative education, specifically the international transfer of learner centred teaching practices. The study enables educators to gain a better understanding of these practices and compare them to their home education systems. It produces a database that can be accessed by researchers in different national and cultural contexts. The database is of practical value to researchers because it motivates inquiry into learner centred teaching practices. The study presents the progress of the transfer and borrowing of educational policies and practices from abroad and how they work in recipient countries.

In order to make the data credible, this study utilized purposive sampling, sound ethical issues, triangulation, consistency, member checking, and recording data objectively. Likewise, some limitations interfered with the process of data collection and the findings of this study. They are caused by various components that interact during the implementation of the learner centred teaching practices. It includes aspects such as large class size, the reactivity of teachers and students, small sample, and lack of time for data collection in many schools.

Zusammenfassung

Diese Studie untersucht die lernerzentrierte Unterrichtspraxis an Sekundarschulen in Tansania. Die Grundlage dieser Forschung ging aus dem Problem der schlechten Leistungen von Sekundarschüler/-innen in Tansania hervor. Die Schülerleistung bei nationalen Überprüfungen ist gesunken und der Trend zeigt eine Zunahme der Anzahl von Schüler/-innen, die nicht bestanden. Schlechte Leistung bedeutet, dass viele Schüler/-innen nicht die erforderlichen Kenntnisse, Fähigkeiten und Kompetenzen erwerben, um sowohl in der Gesellschaft als auch in der sozioökonomischen Entwicklung effektiv zu fungieren. Im Allgemeinen belegt die vorstehende Situation, dass die Qualität der Bildung beeinträchtigt wurde und daher Forschungsbedarf besteht.

Die Literatur zeigt, dass Wissenschaftler/-innen Bildungsforschung durchführten, um wirksame Methoden zur Verbesserung der Schülerleistung zu finden. Um diese Zielsetzung zu erreichen, haben Forschende der International Association for the Evaluation of Educational Achievement (IEA), internationaler Organisationen und Universitäten umfangreiche Studien durchgeführt, um die Schülerleistung in den Bereichen Naturwissenschaften, Mathematik und Lesen in verschiedenen nationalen und kulturellen Kontexten zu untersuchen. Pädagog/-innen legten Ergebnisse vor, die zeigen, dass Länder wie Finnland, Südkorea und Shanghai-China in Bezug auf Schülerleistungen weltweit führend sind. Die genannten Faktoren, die gute Leistung ausmachen, beinhalten Fleiß und positive Einstellung der Schüler/-innen, effektives Engagement in den Klassenräumen, Betonung der Schulen auf schulischen Erfolg, gut ausgestattete Schulen, gut ausgebildete Lehrende sowie vorteilhafte Arbeitsbedingungen.

Deshalb ist es von grundlegender Bedeutung, Faktoren zu identifizieren, die zu guter Leistung führen, da dies den Bildungssystemen hilft, das Bildungsangebot zu modifizieren und zu verbessern. Die Faktoren geben Forschenden die Möglichkeit, leistungsstarke Länder zu beobachten und von ihnen zu lernen. Dieser Prozess steht im Einklang mit dem Ziel der vergleichenden Erziehungswissenschaft: die Förderung der Entwicklung besserer Bildungspraktiken durch das Lernen von erfolgreicheren Ländern und deren Bildungssystemen. Die vergleichende Erziehungswissenschaft handelt als eine Wissenschaft, die wirksame Wege zur Verbesserung von Schülerleistungen aufzeigt. Tatsächlich kann gute Bildungsleistung, die in einem Land wahrgenommen wird, ein anderes Land unterstützen, sein Bildungssystem und die Bildungspraktiken zu evaluieren und somit Schülerleistungen zu verbessern.

Um das Problem schlechter Leistung zu lösen, wird in der Literatur vorgeschlagen, dass Forschende hauptsächlich die lernerzentrierten Unterrichtspraktiken in den Klassenzimmern

untersuchen sollten. Dieser Rat steht in Einklang mit den Zielen verschiedener Bildungsprogramme wie World Education Forums, Tanzania Development Vision 2025, Secondary Education Development Program und Education Sector Development Program. Zudem erzwang der Prozess der Übertragung und Übernahme von Maßnahmen und Praktiken von westlichen und europäischen Ländern auf unterschiedliche nationale und kulturelle Kontexte die Einführung der lernerzentrierten Unterrichtspraktiken. Diese Praktiken werden unterstützt, da sie die Schüler/-innen in den Mittelpunkt des Lernprozesses stellen. Sie fokussieren sich auf das Schülerinteresse und schaffen ein positives Lernumfeld. Sie ermöglichen aktive Lehr- und Lernmethoden. Die Praktiken stehen in Zusammenhang mit der konstruktivistischen Theorie, die betont, dass die Schüler/-innen Bedeutung und Verständnis selbst konstruieren sollten. Die Charakteristika dieser Theorie werden bevorzugt, da sie die Bildungsforschung, die Umsetzung des Lehrplans und die Schülerleistungen in unterschiedlichen nationalen und kulturellen Kontexten verbessern sollte.

Trotz ihrer Wirksamkeit haben Pädagog/-innen und Praktiker/-innen einige Eigenschaften der konstruktivistischen Theorie in Frage gestellt. Sie stellt keine genauen Anweisungen zur Anwendung in den Klassenräumen bereit. In diesem Zusammenhang werden die Lehrenden nicht in die entsprechenden lernerzentrierten Unterrichtspraktiken, die in verschiedenen Phasen der Unterrichtsentwicklung angewandt werden sollten, geführt. Vor diesem Hintergrund identifizierte die aktuelle Studie eine Wissenslücke und einen Mitwirkungsbereich. Deshalb ist das Ziel dieser Studie, die Art und Weise zu erforschen, wie die Sekundarschullehrenden die lernerzentrierten Unterrichtspraktiken in verschiedenen Phasen der Unterrichtsentwicklung anwenden. Insbesondere untersuchte die Studie die Wahrnehmung der Lehrenden über den lernerzentrierten Unterricht. Es wurden auch die Lehrerpraktiken und -wahrnehmungen der lernerzentrierten Unterrichtspraktiken in unterschiedlichen Phasen der Unterrichtsentwicklung erforscht. Ebenso bemühte sich die Studie zu untersuchen, welche Art von Unterstützung die Lehrenden benötigen, um lernerzentrierte Unterrichtspraktiken zu ermöglichen. Es sollte anerkannt werden, dass Praktiken und Wahrnehmungen wesentlich sind, um ein genaues Verständnis des Klassenzimmergeschehens zu vermitteln.

Um das oben genannte Ziel zu erreichen, strebte diese Studie danach, die folgenden Forschungsfragen zu beantworten:

1. Wie nehmen Sekundarschullehrende in Tansania den lernerzentrierten Unterricht wahr?

2. Wie wenden Sekundarschullehrende in Tansania die lernerzentrierten Unterrichtspraktiken in unterschiedlichen Phasen der Unterrichtsentwicklung an?
3. Wie nehmen Sekundarschullehrende in Tansania die lernerzentrierten Unterrichtspraktiken in unterschiedlichen Phasen der Unterrichtsentwicklung wahr?
4. Welche Unterstützung benötigen Sekundarschullehrende in Tansania, um ihre lernerzentrierten Unterrichtspraktiken zu verbessern?

Hinsichtlich der Forschungsmethodik wurden dieser Studie vorhergehende Studien, die in einem Land und in verschiedenen nationalen und kulturellen Kontexten durchgeführt wurden, hinzugezogen. Ziel war es, zu untersuchen und zu erfahren, wie diese früheren Studien entworfen und durchgeführt wurden und ihre Forschungsziele erreichten. Der Forscher wählte eine Methodik, die die Komplexitäten, die sich während des Lehrens und Lernens in den Klassenzimmern ereignen, mit minimaler Auswirkung auf die Datenerfassung verwaltet und kontrolliert. Die Methodik musste ein genaues Verständnis der Praktiken und Wahrnehmungen der Lehrenden hervorbringen. Dieses Kriterium zwang die Studie, ein qualitatives Design anzuwenden.

Wissenschaftler/-innen bestehen darauf, dass Unterrichtspraktiken durch qualitatives Design genau untersucht werden. Dieses Design ist effektiv im Bereitstellen eines Verständnisses der Menschen, Kontexte, Praktiken und Interaktionen. Diese Studie wandte den ethnografischen Ansatz an, um die lernerzentrierten Unterrichtspraktiken umfassend und in einer natürlichen Klassenzimmerumgebung zu erforschen. Der ethnografische Ansatz ermöglichte die Untersuchung kultureller Eigenschaften wie Praktiken und Wahrnehmungen, wie sie in den Klassenzimmern sichtbar sind. Er erleichterte den Erwerb von Informationen, die zu präzisen Beschreibungen der lernerzentrierten Unterrichtspraktiken führten.

Bei der Stichprobe fokussierte sich diese Studie auf die Auswahl leistungsschwacher Schulen, die lernerzentrierten Unterricht durchführen. Die Lehrenden wurden gezielt ausgewählt, um reichhaltige Informationen bereitzustellen, die zur Erfüllung des Studienziels erforderlich sind. Die Datenerfassung erfolgte zwischen November 2014 und März 2015. Anschließend fuhr der Forscher fort, Informationen von Lehrenden zu sammeln, um die Datenbank anzureichern. In der Zeit zwischen Dezember 2015 und Januar 2016 erhielten die Lehrenden die Gelegenheit, die Ergebnisse zu authentifizieren. Während der Feldforschung führte der Forscher eine Reihe von Aktivitäten in Übereinstimmung mit ethischen Grundsätzen durch. Als Datenerhebungsmethoden wurden Teilnehmerbeobachtungen und semistrukturierte Interviews angewandt. Die Daten

wurden durch thematische Auswertung analysiert und brachten Resultate in Bezug auf Themen hervor. Die Analyse folgte Schritten wie der Organisierung der Datenaufbereitung, dem sorgfältigen Lesen der Daten, dem Schreiben und Kodieren der Transkripte/ Texte, dem Formulieren der Themen, der Interpretation der Bedeutung sowie der Ausführung einer Wiederholungsbewegung zwischen den Ergebnissen und der Datenbank.

Die Hauptergebnisse der Studie lassen erkennen, dass die Wahrnehmungen der Lehrenden zum lernerzentrierten Unterricht unterschiedliche Ansichten aufweisen. Die Wahrnehmungen und Praktiken gegenüber des lernerzentrierten Unterrichts in verschiedenen Phasen der Unterrichtsentwicklung zeigen gemischte Ansätze. Aus dieser Sicht fallen die Ergebnisse der Praktiken (was Lehrende anwandten) und Wahrnehmungen (was Lehrende berichteten) in drei Kategorien. Diejenigen, die auf die Lernenden ausgerichtet sind, werden so beschrieben: diskutieren, veranschaulichen, Hausaufgaben, fortlaufende Bewertung, Fragen komplexer Ordnung, vielfältige Fragestellungen, interaktive Sitzordnung, Diskussion in Kleingruppen, kleinerer Lehrinhalt sowie Schülerpräsentationen. Diejenigen, die auf den Lehrenden ausgerichtet sind, werden so beschrieben: Vorträge halten, Lesen von Lehrbüchern, Bewertung am Ende eines Zeitraums, Fragen einfacher Ordnung, Nichtbeachtung von Schülermeinungen, und traditionelle Sitzordnung. Von Lehrenden entwickelte Praktiken beinhalten auch, dass Schüler/-innen ihre Aufgaben gegenseitig benoten, dass langsame Schüler/-innen Indikatoren für Lernen und Verständnis sind, das Prüfen von Aufzeichnungen, das Einbeziehen weniger Schüler/-innen, das Durchführen von Fragestellungen an der Tafel, das Beobachten der gesamten Klasse und Förderunterricht (diese wurden aus unterschiedlichen Gründen erstellt).

Um die Lehrenden bei der Durchführung lernerzentrierter Praktiken zu unterstützen, sind Verbesserungen erforderlich in Bezug auf Aspekte wie Weiterbildung am Arbeitsplatz, schulbasierte Ausbildung, Wohlergehen der Lehrenden, Lehrmaterial, Ausbildung von mehr Wissenschaftslehrenden und häufigeres Prüfen der Schüler/-innen. Der Forscher diskutierte die Ergebnisse, indem er sie mit verschiedenen Forschungsstudien bezüglich der Implementierung lernerzentrierter Unterrichtspraktiken in Beziehung setzte und verglich. Im Allgemeinen zeigten die Forschungsergebnisse, dass die Lehrenden sowohl ähnliche als auch unterschiedliche Bildungspraktiken aufweisen.

Diese Studie erkennt die Forschungslücke und befasst sich mit theoretischen und empirischen Beiträgen. Hinsichtlich der Theorie weist die Literatur darauf hin, dass es der konstruktivistischen Theorie an klaren Instruktionen mangelt, wie Lehrende die lernerzentrierten Unterrichtspraktiken in verschiedenen Phasen der Unterrichtsentwicklung anwenden sollten. Diese Studie adressiert die

Lücke, indem sie ein umfassendes Verständnis der lernerzentrierten Unterrichtspraktiken die von den Lehrenden in verschiedenen Phasen der Unterrichtsentwicklung angewandt werden, bereitstellt. Um dieses Ziel zu erreichen, schlägt die Studie geeignete konstruktivistische und lernerzentrierte Praktiken vor, um die Lehrenden in den Klassenzimmern anzuleiten (siehe Appendix VIII).

Was den empirischen Beitrag angeht, berichteten die früheren empirischen Studien zu konstruktivistischer Theorie und lernerzentrierten Praktiken über die Praktiken, die in den Klassenzimmern beobachtet wurden. Jedoch wurde offengelegt, dass sich die Forschenden beim Durchführen und Berichten über die Praktiken nur auf wenige Phasen der Unterrichtsentwicklung konzentrierten. Diese Studie adressiert die Lücke, indem sie die lernerzentrierten Unterrichtspraktiken in verschiedenen Phasen der Unterrichtsentwicklung untersucht und darüber berichtet. Diese Untersuchung zeigt spezifische Praktiken auf, die die Lehrenden in den Klassenräumen unterstützen. Sie erfüllte auch das Ziel der Studie, ein umfassendes Verständnis der lernerzentrierten Unterrichtspraktiken zu entwickeln. Die Studie hinterfragt frühere Studien und möchte, dass Forschende die Unterrichtspraktiken in den Klassenzimmern untersuchen und sich dabei auf so viele Phasen wie möglich konzentrieren.

Diese Studie trägt zur Theorieentwicklung in der Vergleichenden Erziehungswissenschaft bei, insbesondere zum internationalen Transfer lernerzentrierter Unterrichtspraktiken. Die Studie ermöglicht es Erziehenden, ein besseres Verständnis dieser Praktiken zu erhalten und sie mit ihrem heimischen Bildungssystem zu vergleichen. Es wird eine Datenbank erzeugt, auf die Forschende in verschiedenen nationalen und kulturellen Kontexten zugreifen können. Die Datenbank ist für Forschende von praktischem Wert, da sie zur Nachforschung über die lernerzentrierten Unterrichtspraktiken anregt. Die Studie zeigt den Fortschritt der Übertragung und der Übernahme von Bildungsmaßnahmen und –praktiken aus dem Ausland und wie sie in den Empfängerländern funktionieren.

Um die Daten zuverlässig zu machen, setzte diese Studie bewusste Stichprobenauswahl, fundierte ethische Fragen, Triangulation, Konsistenz, Teilnehmerüberprüfung und objektive Datenerfassung ein. Ebenso gab es Einschränkungen, die den Prozess der Datenerhebung und die Ergebnisse der Studie beeinträchtigten. Sie wurden durch verschiedene Komponenten verursacht, die sich während der Implementierung der lernerzentrierten Unterrichtspraktiken gegenseitig beeinflussen und Aspekte beinhalten wie große Klassengröße, Reaktivität zwischen Lehrenden und Schüler/-innen, kleine Stichprobengröße und Zeitmangel, um Daten in vielen Schulen erheben zu können.

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DEDICATION

I would like to dedicate this Doctoral dissertation to my wife Feliciano and my children Eliya, Elisha, Sarah and Emmy. There is no doubt in my mind that without their continued patience, support and encouragement, I could not have completed this process.

LIST OF ACRONYMS

| | |
|--------|---|
| EFA | Education for All |
| ESDP | Education Sector Development Plan |
| ESR | Education for Self Reliance |
| ETP | Education and Training Policy |
| IEA | International Association for the Evaluation of Educational Achievement |
| MoEVT | Ministry of Education, Vocational and Training |
| NECTA | National Examination Council of Tanzania |
| OECD | Organization for Economic Cooperation and Development |
| PISA | Program for International Student Assessment |
| SEDP | Secondary Education Development Plan |
| SMICT | Science, Mathematics and ICT |
| TIE | Tanzania Institute of Education |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| URT | United Republic of Tanzania |
| ZPD | Zone of Proximal Development |

TABLE OF CONTENTS

| | Page |
|------------------------|-------------|
| Executive summary..... | ii-vi |
| Zusammenfassung..... | vii-xi |
| Acknowledgement | xii |
| Dedication | xiii |
| List of acronyms | xiv |
| Table of contents..... | xv-xviii |
| List of Tables | xix |
| List of Figures | xx |

CHAPTER ONE: INTRODUCTION

| | |
|--|----|
| 1.1 Background of the study | 1 |
| 1.2 Statement of the problem..... | 9 |
| 1.3 Purpose and research questions | 10 |
| 1.4 Significance of the study..... | 10 |

CHAPTER TWO: COMPARATIVE EDUCATION AND TRANSNATIONAL TRANSFER OF EDUCATIONAL POLICIES AND THE LEARNER CENTERED TEACHING PRACTICES

| | |
|---|----|
| 2.1 Introduction..... | 13 |
| 2.2 Comparative education | 13 |
| 2.3 The transnational transfer of policies and practices..... | 17 |
| 2.4 Comparative education in Tanzania..... | 21 |
| 2.5 Curriculum reform in Tanzania | 24 |
| 2.6 The learner centred teaching practices and its empirical research in Tanzania | 28 |

| | |
|---|----|
| 2.7 Comparative education research about the learner centred teaching | 35 |
|---|----|

CHAPTER THREE: THE CONSTRUCTIVIST THEORY AND THE LEARNER CENTERED TEACHING PRACTICES

| | |
|---|----|
| 3.1 Introduction..... | 39 |
| 3.2 An overview of the teaching theory | 39 |
| 3.3 The constructivist theory and its characteristics | 40 |
| 3.4 Learner centered teaching practices | 53 |
| 3.5 Empirical research about the learner centered teaching practices | 70 |
| 3.6 Other aspects related to the implementation of the learner centered teaching practices | 75 |
| 3.7 Teacher centered practices | 80 |
| 3.8 Different stages of the lesson development as applied in teaching and learning practices | 83 |

CHAPTER FOUR: RESEARCH METHODOLOGY

| | |
|---|-----|
| 4.1 Introduction..... | 90 |
| 4.2 Overview of the background of study and the research questions and methodology..... | 90 |
| 4.3 Research design | 92 |
| 4.4 Research approach | 95 |
| 4.5 Sampling methods..... | 96 |
| 4.6 Pilot study | 98 |
| 4.7 Data collection methods..... | 100 |
| 4.8 Data analysis | 107 |
| 4.9 Ethical and consent treatments..... | 114 |
| 4.10 Quality criteria considered in this study | 115 |

CHAPTER FIVE: FINDINGS OF THE STUDY

| | |
|-----------------------|-----|
| 5.1 Introduction..... | 118 |
|-----------------------|-----|

| | |
|---|-----|
| 5.2 Perceptions regarding the stages during the teaching and learning process | 118 |
| 5.3 Presentation of findings that follow the stated cases | 120 |
| Teacher A..... | 122 |
| Teacher B..... | 135 |
| Teacher C..... | 149 |
| Teacher D..... | 162 |
| 5.4 The learner centred teaching practices on the reflection stage | 174 |
| 5.5 How students are involved in the learner centred teaching practices | 178 |
| 5.6 Support to improve the learner centred teaching practices..... | 180 |

CHAPTER SIX: DISCUSSION OF THE FINDINGS

| | |
|---|-----|
| 6.1 Introduction | 183 |
| 6.2 Overview of the discussion of findings | 183 |
| 6.3 Perceptions regarding the learner centered teaching | 184 |
| 6.4 Learner centred teaching practices employed in different stages of the lesson development | 188 |
| 6.5 Learner centred teaching practices employed in the reflection stage | 203 |
| 6.6 How students are involved in the visited classrooms | 205 |
| 6.7 Support to improve the learner centered teaching practices | 207 |

CHAPTER SEVEN: CONCLUDING PERSPECTIVES AND RECOMMENDATIONS

| | |
|------------------------------------|------------|
| 7.1 Introduction..... | 212 |
| 7.2 Concluding perspectives | 212 |
| 7.3 Limitations of the study | 217 |
| 7.4 Recommendations..... | 219 |
| References..... | 221 |

| | |
|---|-----|
| Appendix I: Classroom observation schedule..... | 248 |
| Appendix II: Semi structured interview for teachers..... | 257 |
| Appendix III: Permission letter from regional education officer..... | 273 |
| Appendix IV: Consent letter from teacher A..... | 274 |
| Appendix V: Consent letter from teacher B | 274 |
| Appendix VI: Consent letter from teacher C | 275 |
| Appendix VII: Consent letter from teacher D..... | 275 |
| Appendix VIII: Guidelines to consider for preparing, executing and assessing the learner centered teaching practices..... | 276 |
| Schriftliche Erklärung..... | 277 |

LIST OF TABLES

| | |
|--|-----|
| Table 1: Major theoretical schools of thought underpinning behaviorism and constructivism pedagogic practices..... | 34 |
| Table 2: Pedagogic aspects and their positive or negative examples as reported from different national and cultural contexts | 75 |
| Table 3: Some examples of the transcripts/texts, codes, and themes..... | 111 |
| Table 4: The National Examination performance ranking for secondary school A, 2012-2014 | 124 |
| Table 5: The National Examination performance ranking for secondary school B, 2012-2014 | 137 |
| Table 6: The National Examination performance ranking for secondary school C, 2012-2014 | 151 |
| Table 7: The National Examination performance ranking for secondary school D, 2012-2014 | 164 |

LIST OF FIGURES

| | |
|---|-----|
| Figure 1: Different locations in the Zone of Proximal Development | 49 |
| Figure 2: Didactics triangle..... | 62 |
| Figure 3: Learner centered didactical facts as presented in various diagrams..... | 65 |
| Figure 4: The summary of the stages of data analysis process | 113 |
| Figure 5: Teacher A is facilitating the lesson by chalk talk lecture | 128 |
| Figure 6: The manila sheet attached on the chalkboard..... | 132 |
| Figure 7: The seating arrangement in school A | 133 |
| Figure 8: The teacher is passing to students groups | 141 |
| Figure 9: Student in school B read answers/ideas in front of the class..... | 142 |
| Figure 10: Teacher B is writing questions on the chalkboard | 143 |
| Figure 11: The teacher demonstrates the reaction to students | 155 |
| Figure 12: The teacher is distributing textbooks to students | 159 |
| Figure 13: The teacher is providing solution to students..... | 160 |
| Figure 14: The seating arrangement in school C | 161 |
| Figure 15: The student in school D is doing the question on the chalkboard..... | 169 |
| Figure 16: The teacher is writing on the chalkboard | 170 |
| Figure 17: The teacher is marking students quiz and show the correct answer | 172 |
| Figure 18: The seating arrangement in school D | 173 |

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Studies conducted in different national and cultural settings have provided various research findings in education. Several educational aspects have been presented in the available literature, emanating from the studies conducted worldwide. They are related to educational policy, curriculum implementation, teaching and learning practices, students' performance, educational resources and materials, and the general provision of education. A good number of studies have reported about educational transformations taking place in different national and cultural settings across the globe. One of the ongoing reform processes, focuses on the transfer of classroom activities towards the learner centred teaching practices. This shift is intended to improve educational aspects such as teaching, active learning, students engagement, students participation, critical thinking, performance of students in the examinations, and in general enhancing the quality of education.

Since the introduction of learner centred teaching practices, educators have been conducting research concerning its implementation. The research projects have provided insights to educators on how the teaching and learning practices are conducted in classrooms. The analysis of these reports has motivated educators to invest efforts in research with a view of improving the provision of quality education. For example, Schweisfurth (2013) did several studies about the learner centred teaching. In particular, the study in four countries (Gambia, South Africa, China, & Russia) provided a comprehensive analysis of the concept and practice of the learner centred teaching. In the same light, Ginsburg (2009) conducted a study on the learner centred teaching in Cambodia, Egypt, Jordan, Kyrgyzstan, and Malawi. The scholar reported ongoing plans to promote learner centred teaching, coupled with professional development activities that enhanced teachers' knowledge, skills, and commitment to using active classroom instructions.

Moreover, some educators have reported reforms about the learner centred teaching in different settings. For example, reforms in USA, UK, and Australia have revealed that educators compete to produce and export teaching programs to the less developed nations. These programs contain global views but lack relevance in relation to the cultural settings of the recipients. This has been reported to affect teaching, learning, and students' performance. In support of this view, Alam et al. (2013) argued that programs imported from abroad were not sensitive to local contexts,

values, contents, teaching, and learning practices. This implies that it is challenging to implement the constructivist theory and the learner centred teaching in education.

Likewise, literature about the learner centred teaching from different countries has revealed a gap between policies and practices in Science, Mathematics, and ICT (SMICT) (Cowen & Kazamias, 2009). This means that the shift from teacher to learner centred teaching has not been well implemented in the classrooms. Scholars have revealed that the paradigm shift towards learner centred teaching has not taken roots in classrooms. It has further been reported that the execution of the learner centred teaching is not carried out properly as it is guided in the curriculum. In addition to the same perspective, there are other challenges working against the learner centred. For example, scholars in Doyle (2008) identified eight reasons to show why students resist learner centred behaviors. The reasons are summarized as: old habits die hard, high schools remain teacher centred institutions, learning is not a top reason students give for attending college, students do not like taking learning risks. Other reasons are learner centred teaching does not resemble what students think of as school, students do not want to put forth the extra effort learner centred teaching requires, students mindsets about learning make adapting to learner centred teaching more difficult, many students follow the path of least resistance in their learning (pp18-19).

By referring to the foregoing reasons, it should be summarized that one of the challenges to successfully adopting and applying learner centred teaching is getting students to be ready for the change and switch their learning paradigm. Students should change their old methods of learning and depart from teacher centred. They should take learning risks and perform learner centred teaching smoothly. Therefore, educators should assist students study in a learner centred classroom by emphasizing that this style of teaching is the best possible way to enhance students learning. It incorporates new discoveries that have been made about how the human brain learns (Doyle, 2008). On the other side, teachers are also encountering several challenges in applying learner centred practices in the classrooms. Among them include lack of sufficient knowledge about the learner centred teaching, lack of understanding of the curriculum, lack of teaching and learning materials, some teachers are not ready to change classroom practices towards learner centred teaching. These teachers can easily revert to the teacher centred approach. Educator who observed that teachers were trained to apply learner centred methods confirms this that they still apply traditional teacher centred practices in the classrooms (Wangeleja, 2003).

Another study has constantly demonstrated that learner centred teaching is more effective than teacher centred approach, but unfortunately, the benefits may not be immediate or automatic

(Doyle, 2008). It seems countries take a longer time to try to gain the application of the learner centred teaching. In this case, educators are implementing learner centred teaching however they encounter various challenges. For example, the implementation of the learner centred teaching in Tanzania show some weaknesses. Students have been observed to perform poorly in the examinations and studies have indicated that the performance of ordinary secondary school students in the national examinations in Tanzania has been declining for several years (HakiElimu, 2013; Kalinga, 2008; Sifuna & Sawamura, 2010; Sumra & Katabaro, 2014). The trend revealed an increase in the number of students who failed their examinations. The analysis of students' results suggests that the curriculum implementation and the provision of education are in a poor state such that more efforts are needed to address the situation. One of such efforts is the emphasis for educators to conduct research.

Researchers have attempted to address the issue of students' poor performance in examinations. They have provided insights on how the curriculum has been implemented in various contexts. Several studies conducted in African countries have reported poor performance to be more critical in science and mathematics subjects in both primary and secondary schools (Ogunmade, 2005; Sunzuma, Ndemo, Zinyeka & Zezekwa, 2012; Susuwele-Banda, 2005). The analysis of examination results of secondary schools in Sub-Saharan countries showed that many students are passing though in the lowest grade category (World Bank, 2008). The World Bank projects aimed to expand students' entrance to the primary and secondary schools are reported to have affected classroom practices as well as the performance in different aspects (UNESCO, 2014). In general, the results of the International Association for the Evaluation of Educational Achievement (IEA) tests indicated that the students' performance in Sub-Saharan countries appeared to be below the international standards (Sifuna & Sawamura, 2010).

The performance in national examinations has been considered as the best indicator of the quality of education in the country concerned. If students perform well in examinations, it signifies that they attained a quality education (Sifuna & Sawamura, 2010). However, if students perform poorly, the quality of education is reported to be at a crossroads and education stakeholders would always raise concerns. Indeed, it indicates that something is wrong somewhere in the provision of education. In this regard, educators refer poor performance to a situation where the majority of students have not acquired the requisite knowledge and skills necessary for socioeconomic development (MoEVT, 2005; URT, 1999).

According to the study conducted in Tanzania, Sumra and Rajani (2006) found students completed secondary education without necessary life skills to enable them function well in their

daily lives. Poor performance often calls for the need to conduct an evaluation of various aspects of the educational system, such as teaching, learning, classroom practices, assessment, policy and reform, materials and resources, and the operating curriculum. It is in this perspective that researchers in Tanzania have been conducting studies and providing insights of how the educational practices are executed in the classrooms. Various studies have indicated that the implementation of the competence based curriculum which focuses on the learner centred teaching in primary and secondary schools is not promising. The implementation of learner centred teaching faces several challenges.

In order to improve students' performance, scholars recommended studies to investigate teaching, learning, and curriculum implementation (HakiElimu, 2011; O'Sullivan, 2004; McKinsey & Company, 2007; Sifuna & Sawamura, 2010). For example, one study suggested an investigation on how instructions are delivered (McKinsey & Company, 2007) while others recommended that efforts to improve learning outcomes be closely accompanied with improving classroom approaches (Kane, Taylor, Tyler, & Wooten, 2010; MacGregor, 2007; Ossietzky, 2006). To accomplish their investigation, scholars seem to be impressed with what is taking place in the classrooms. The activities in these settings show the actual educational practices. These are appropriate environments providing an authentic understanding of how teaching and learning practices are executed. In the same perspective, educators should also explore some aspects that contribute to effective educational provision. This idea goes together with the suggestions made by Marzano (2007) and Mykrä (2015) when described elements like a well-articulated curriculum and a safe and well-organized environment form an effective school and learning environment. Educators should put emphasis on examining these aspects.

Other scholars suggested important topics that might contribute to what is needed in reforming the education system. It included topics having influence on the ongoing educational reforms, including the implementation of learner centred teaching. This study has also been motivated by the suggestions provided by such scholars. To conform to education reforms, teachers in Tanzanian secondary schools are precisely guided to facilitate teaching and learning by using learner centred teaching (MoEVT, 2005; TIE, 2009; URT, 1997; URT, 1999; URT, 2004). Similarly, Vavrus, Thomas, and Bartlett (2011) have supported the initiative that the quality of teaching and learning can be improved by focusing on the learner centred teaching. This is considered as the best topic to start in the education reform. In addition to the same outlook, Cowen and Kazamias (2009) considered learner centred teaching as one of the most pervasive educational ideas in the present day in Sub-Saharan Africa and elsewhere.

The foregoing information continues to corroborate that learner centred teaching is essential for the successful provision of education. By referring to this fact, several countries including Tanzania adopted this teaching approach to improve teaching, learning and students performance. According to Weimer (2002), previous research demonstrated that the learner centred teaching is more effective than the traditional teaching approach. Studies support the learner centred teaching as an appropriate path to better student outcomes. In facilitating the improved student outcomes, the scholar integrated the following educational aspects: Engaging in deep learning approaches rather than superficial attempts, independent lifelong learning, increased motivation to learn, meaningful and long-term understanding, and better assessment outcomes especially with conceptual understanding tests (Weimer, 2002). The mentioned educational characteristics show what should be done in the learning environment. Therefore, countries that come across challenges in educational outcomes should improve learning environment by adopting the foregoing educational characteristics. Teachers as the main implementers of the curriculum need to be oriented to learner centred teaching as it should be.

The learner centred teaching has a connection with the constructivist theory as the theory describes how students learn. The constructivist theory emphasizes that students should construct new knowledge themselves by using the knowledge and experience they already have. In such a situation, the teacher's role is to facilitate learning activities and create a context that motivates students to learn successfully (Schreurs & Al-Huneidi, 2012). Likewise, the constructivist theory serves as a guideline for teachers to help students construct knowledge successfully. In this case, teachers facilitate learning activities and help students to refine their understanding. By referring to the foregoing ideas, educators have been supporting the application of this theory in the classrooms and many countries have attempted to implement it. It has been implemented in many countries to improve educational provision.

Psychologists preferred constructivist theory because it enhances active learning and students thinking. The theory requires classroom practices that change students from receiving knowledge passively to actively constructing knowledge. Therefore, the education systems support constructivist theory rather than behaviorist theory. According to Sutton and Seifert (2008), the behaviorist theory is useful to identify changes in the students' observable behaviors, but it is less useful in understanding changes in students thinking. Therefore, as the world continues to change and develop, educators need more cognitive or thinking oriented theory. This point supports the constructivist theory. It is facilitated because teachers normally want to know what students are thinking and want to enrich the students thinking (Sutton & Seifert, 2008). In

providing his reaction to thinking processes, Hattie (2009) sought purposeful interventions to ensure that cognitive change is taking place in students. Based on this fact, the constructivist theory has been adopted.

According to Richardson (1997), a relationship exists between the constructivist theory and the learner centred teaching. In other words, the main contribution of the constructivist theory has been realized in the learner centred teaching. It has become evident that teachers who apply the constructivist theory in the classrooms do essentially employ the learner centred teaching. This theory emphasizes that learning is an active and constructive process. This is to elucidate that learners are required to be actively involved in their learning. The learners in this environment are knowledge constructors. The foregoing descriptions indicate that the learner centred teaching is guided by the constructivist theory. It provides information for teachers to engage students in learner centred classrooms. Therefore, the present study focuses on the foregoing relationships.

In addition, the constructivist theory is useful for providing teachers with proper knowledge and skills to organize and facilitate learner centred teaching practices. This view is in line with Cobern (1996) who described that science educators propounded the constructivist theory to improve curriculum implementation and science education research. Many countries have expectations to benefit in science education by adopting the constructivist theory rather than embracing the behaviorist theory that focuses on teacher centred approach. This has made the constructivist theory to be one of the major theoretical bases of educational reform (Cobern, 1996; Meng, 2009). Moreover, the constructivist theory has been discussed in many schools as the best method for teaching and learning (Powell & Kalina, 2009).

Furthermore, Zemelman, Daniels, and Hyde (1993) attempted to have the constructivist theory integrated into the operating curriculum to help teachers create an environment for students to construct knowledge and meaning. According to Fosnot (1989), when the constructivist theory is applied in the classroom, the students become self-directed and curious in investigating and reasoning. Schreurs and Dumbraveanu (2014) consider knowledge construction as the interpretation of new information using knowledge, experience, and examples they already know. Students are actively involved in making meaning and building knowledge during the teaching and learning process. Therefore, such attributes of the constructivist theory have prompted the researcher to adopt the theory because it is suitable for guiding learner centred teaching practices in the classrooms.

To facilitate its application in the classrooms, theorists stated characteristics of the constructivist learning environment (see section 3.3) which have to be used in guiding teachers (Brooks & Brooks, 1999; Koohang et al., 2009; Mishra, 2007; Murphy, 1997; Yager, 1991). These characteristics are applied in the classroom environment. They show proper learner centred teaching practices for teachers to employ in the classrooms. However, the following scholars are not satisfied with the constructivist characteristics because they did not provide thorough instructions on how teachers can apply learner centred practices in teaching (Baumann et al., 1997; Lamanuskas, 2012; Lowenthal & Muth, 2008; Mishra, 2007; Swan, 2005). Due to the lack of enough knowledge on learner centred practices, teachers have been observed to encounter some difficulties in applying the constructivist theory. The situation might prove that teachers lack skills of how to teach and assist students construct knowledge and meaning.

In addition to the same perspective, Silverthorn (1999) confirmed, “Piaget himself did not design instructional strategies, but educators have interpreted Piaget’s theory to suggest broad instructional principles” (p.3). According to Richardson (2003), the current interest and writing about constructivist teaching raise some questions, which need to be answered. As pointed out, scholars believe that the constructivist theory does not provide teachers with comprehensive instructions on how to apply it in the actual teaching environment. The theory does not provide teachers with specific instructions to facilitate students learning in the learner centred teaching practices, particularly in various stages of the lesson development. This phenomenon is likely to be one of the reasons that have caused difficulties to teachers in implementing learner centred teaching practices. In the same vein, it is also likely that, the problem might have been caused by other factors affecting the education system. It is in this milieu that this study found a research gap to be filled. The knowledge gap created routes for the direct data collection process in view of having an understanding of the practices. To accomplish this, aspects linked to insufficient research, stages of the lesson, and teachers’ characteristics were taken into account.

In terms of insufficient research, the previous studies conducted in Tanzania focused on various educational matters. Concerning learner centred teaching, the literature presents ideas according to several researchers. In this case, Meena (2009) found teachers who agreed to use learner centred teaching practices, however, in the classrooms the real practices showed the teacher centred approach applied in teaching. Msonde (2011) described how Tanzania adopted the application of the learner centred teaching in order to improve the quality of education. Likewise, Vavrus et al. (2011) wanted teachers to attend initial training that helps to employ the learner centred teaching. Also, Vavrus and Bartlett (2013) presented findings of reforms of learner

centred practices in different national or cultural contexts. These scholars (Meena, 2009; Msonde, 2011; Vavrus et al., 2011; Vavrus & Bartlett, 2013) have suggested the need for further studies that address issues related to the learner centred teaching practices. The present study explored how teachers make use of the learner centred teaching practices in the secondary school classrooms.

Regarding stages of the lesson, Brophy (2002) found a lack of sequence in the learning activities. Likewise, Widodo (2004) revealed that the sequence of the lesson is a shortfall that demands immediate improvement. As such, the constructivist oriented teaching was recommended to make the learning environment conducive. In addition, the operating curriculum in Tanzania requires teachers to follow specific stages in the course of their teaching. Nevertheless, the analysis of previous empirical research indicates that the lesson development stages are not adequately followed. This study explores the learner centred teaching practices in Tanzania by considering the stages stipulated in the curriculum.

With regard to teachers' characteristics, the researcher is aware that teachers are the primary implementers of the curriculum. This study recognizes the combination of teachers' practices and perceptions as fundamental in understanding the learner centred teaching practices. These characteristics demonstrate what teachers practice and say in the classrooms. Educators are reminded that the foregoing aspects are crucial to learning. They show how teachers interact with students in the classrooms. Thus, teachers' characteristics facilitate the thorough collection of data about teachers' knowledge. This idea is in line with Brophy (2002) who stated that what teachers perform and talk is a product of their knowledge.

Similarly, Kaya (2014) proposed that in order to get authentic results regarding classroom practices, studies should rely on both teachers' beliefs and their classroom practices. This idea is supported by the fact that teachers' characteristics influence their classroom practices. The characteristics have normally been observed during the teaching process. Khader (2012) found the presence of a strong relationship between pedagogical beliefs of teachers, their planning, and decisions for teaching practices. The teachers' viewpoints are significant indicators of the behaviors that are displayed in the classrooms. OECD (2009) added that teachers' beliefs, attitudes, and practices are essential characteristics that the current study should take into consideration. These aspects assist in understanding the learner centred teaching, improving teachers' classroom practices, and helping them in coping with challenges.

At this juncture, it could be stated that the exploration of teachers' practices and perceptions of the learner centred teaching provided a thorough understanding of these practices. Likewise, the information related to support teachers' needs is crucial, as they should reveal the requirements that have to be directed to teachers. It is assumed that the information gathered from this study would provide information relevant to address the actual practices in the classrooms and the problem of poor performance among the secondary school students. Also, the findings of this study would serve as an information platform for educational stakeholders to understand what transpires in curriculum implementation in secondary school classrooms in Tanzania. Likewise, the information has to be shared to educators and researchers from other national and cultural settings to learn what is going on in the implementation of these practices.

1.2 Statement of the problem

Although Tanzania, like most developing countries, has attempted to improve practices under learner centred teaching, the performance of secondary school students in national examinations remains poor (HakiElimu, 2013; Kalinga, 2008; Sifuna & Sawamura, 2010). The poor performance indicates that students do not attain their full academic potential. Thus, it could be deduced that curriculum implementation is unsuccessful in imparting secondary school students with the requisite knowledge, skills, and competences that are essential to the local, national, and international economic development. To deal with the problem of poor performance, some initiatives have been taken in different national and cultural settings. These initiatives have always focused on improving various factors influencing the implementation of the curriculum. The efforts should ensure teachers modify traditional teaching practices and adopt learner centred teaching practices. Educators have recommended learner centred teaching practices because they are potential means for improving secondary school students' learning and performance in the national examinations.

Despite the various efforts made, it appears as if nothing much has been done regarding adopting the learner centred teaching practices in the classrooms. This is evidenced by the persistent poor performance of secondary school students in the national examinations administered in Tanzania. Therefore, improving performance requires educational stakeholders to take various measures, which focus on how education is delivered. In view of this, education stakeholders have conducted research to investigate how teachers employ learner centred teaching practices in the classrooms.

However, there have been no studies conducted in Tanzania to explore how secondary school teachers employ and perceive learner centred teaching practices in various stages of lesson development. Investigating these practices in stages is expected to help collecting needed information comprehensively. The foregoing ideas confirm the knowledge gap discovered from the assessment made on the previous studies. Therefore, the present study has been specifically designed to fill such a gap. It was assumed that the investigation of teachers' practices and perceptions would provide thorough understanding of how learner centred teaching practices be employed in secondary school classrooms.

1.3 Purpose and research questions

The purpose of this study was to explore the manner in which secondary school teachers in Tanzania make use of the learner centred teaching practices in the classrooms. Specifically, the study explored teachers' perceptions of the learner centred teaching. The researcher would like to know the teachers level of understanding of these practices. It also explored the teachers' practices and perceptions of the learner centred teaching practices in various stages of the lesson development. Furthermore, the study sought to examine the kind of support teachers need to facilitate learner centred teaching practices. This study recognizes that the stated educational aspects are essential for understanding the execution of these practices. Therefore, to achieve that the study sought to answer the following research questions:

1. How do secondary school teachers in Tanzania perceive the learner centred teaching?
2. How do secondary school teachers in Tanzania employ the learner centred teaching practices in different stages of the lesson development?
3. How do secondary school teachers in Tanzania perceive the learner centred teaching practices in different stages of the lesson development?
4. What support do secondary school teachers in Tanzania need to enhance their learner centred teaching practices?

1.4 Significance of the study

The present study investigated how learner centred teaching practices are employed in secondary school classrooms. It is envisaged that the findings of this study would be informative to educational stakeholders; especially on matters related to the learner centred teaching practices

in various stages of the lesson development. Specifically, this study has contributed to the existing body of knowledge. It presents the importance on the following aspects:

- **Theoretical contribution**

Literature shows that the constructivist theory scholars (see section 3.3) present characteristics that are applied in guiding teachers during learner centred teaching. However, the characteristics lack thorough instructions on how teachers would employ appropriately learner centred teaching practices in the actual classroom situations. The present study has addressed this challenge by providing insights on classroom practices transpiring in the learner centred teaching environment. In other words, the study enriches the understanding regarding the constructivist theory and learner centred teaching. Furthermore, the present study recommends the appropriate guidelines for learner centred teaching practices (Appendix VIII). These practices have been adopted from various classroom scholars and therefore they are suitable for the teachers to employ in facilitating learning. Actually, they have been introduced in different countries to improve classroom practices and students' performance.

- **Empirical contribution**

The previous empirical studies on the constructivist theory and the learner centred teaching have reported about the observed practices in the classrooms. However, it has been revealed that most of the researchers focused on the classroom practices observed in one or two stages of lesson development. This study has gone an extra milestone to investigate practices and perceptions in all stages of lesson development. These stages instruct teachers on specific classroom practices to implement during the lesson. The stages differ depending on the kind of practices they emphasize for the teacher to follow and execute. They indicate the knowledge, skills, competences that should be imparted to students. They have organized at different times according to the lesson plan. In general, all stages produce broad information related to the implementation of the learner centred teaching practices.

- **Generating knowledge**

This study will generate knowledge on matters related to the constructivist theory, learner centred teaching, comparative education, and transnational transfer of education programs. A broad knowledge base has been generated to enhance the understanding of the learner centred teaching practices, particularly in Tanzanian secondary schools. The foregoing descriptions concur with information emanating from various studies. For example, Bartlett and Burton (2012) defined research as the form of disciplined inquiry leading to the generation of

knowledge. Also, Baumann et al. (1997) suggested research be a means of informing teachers about their beliefs, ideas, and teaching practices to improve teaching. In this study, educational stakeholders have been instructed regarding educational methods of how to implement learner centred teaching properly. Therefore, educators have considered research in the education context as the most reliable method for acquiring new knowledge and suggestions for improvements of classroom practices (Creswell; 2009; Swann & Pratt, 2003). In addition, educational stakeholders gained information on how to implement educational reforms related to learner centred teaching. This is to suggest that the process of conducting research in the educational field helps to improve reforms in educational systems (NRC, 2002).

CHAPTER TWO: COMPARATIVE EDUCATION AND TRANSNATIONAL TRANSFER OF EDUCATIONAL POLICIES AND THE LEARNER CENTRED TEACHING PRACTICES

2.1 Introduction

This chapter discusses the concept of comparative education. It shows how the comparative education has applied as an academic field in examining and enhancing educational practices. It presents different principles and characteristics of comparative education that have used to guide educational practices. This field has considered an instrument for investigating and improving the learner centred teaching practices. In addition, the chapter discusses the transnational transfer and borrowing of educational policies and practices. It elucidates how the transfer and borrowing of educational policies and practices influence the education systems, curriculum, as well as the learner centred teaching practices in the classrooms. Also, the chapter presents information concerning the beginning and execution of comparative education. It explains the curriculum reform and the learner centred teaching practices and its empirical research in Tanzania. It describes the comparative education research about the learner centred teaching practices in various countries.

2.2 Comparative education

A French scholar, Marc-Antoine Jullien made the original establishment of the field of comparative education. This scientist produced a very accurate definition of the usefulness of comparative education (Schweisfurth, 2015). The scholar defines comparative education as the act of contrasting the features and methods of education in different countries (Schriewer & Holmes, 1992, p.3). In its most broad sense, the term means inspecting two or more educational processes to discover how they are similar or different (Thomas, 1990). The educators use this academic field to compare the aspects of education to find out how they work in different countries. They share information to enlighten educational stakeholders about the progress of classroom practices. A good example is an investigation, analysis, and interpretation made on the implementation of learner centred teaching. These processes help to identify the appropriate system of education that implements practices successfully.

Marc-Antoine Jullien was also called the father of comparative education, as he made the initial utilization of the term. The scholar developed the first comprehensive plan of a comparative study of education systems in 1817. He put efforts to apply systematic research on foreign education systems to help shape the reform and competitiveness of education in France (Fraser,

1964 as cited in Crossley, 2012). The scholar documented some initiatives and presented preliminary views of comparative education. He wanted nations to collect data about educational ideas, conditions, and practices. The data should be shared and serve as a reference of formulating educational reforms in various countries (Fraser, 1964 as cited in Cowen & Kazamias, 2009). In connection to that, the scholar described the studies of education in all countries with an intention of perfecting national education systems (Crossley, 2012). The foregoing studies indicate that Marc-Antoine Jullien is interested in the studies that provide information which contribute and improve the reform, practices, and education systems in various countries. These studies have stimulated the purpose of comparative education.

The present study concurs with the scholar above as it investigates the implementation of learner centred teaching practices with an intention to improve learning and students' performance in Tanzania. The information should activate educators to find a solution regarding the proper use of these practices. Educators have to make use of comparative education to learn and understand the progress of learner centred teaching practices. This study should use aspects of comparative education to share findings that benefit many countries. The purpose is to educate educational stakeholders and thus be in a good position to take appropriate steps. The foregoing descriptions have to inspire educators to take a deeper interest and put greater importance on the study of comparative education. This field has been recognized as being more important (Wolhutter, 2015).

The scientific work of Marc-Antoine Jullien influenced scientific thinking until this age. It remains fixed within contemporary survey research carried out by the organizations of comparative education (Schweisfurth, 2015). Since Jullien's pioneering work on comparative education, many scholars/scientists proposed a systematic empirical investigation that is used to facilitate the comparison of educational systems amid nations (Phillips & Schweisfurth, 2008). In evaluating education systems, one must consider the phenomenon in society. This view focus on the demand of scrutinizing economic, political, cultural, and societal factors affecting the provision of education. In connection to that, IEA initiated a series of studies to find answers to questions asked about factors in the school and society. The progress showed an increase in the number of nations involved in the studies of global achievements (Dedea & Baskanb, 2011).

The foregoing process helps to acquire in-depth understanding of the effects of policies and practices in several systems of education. It also embarks upon a series of extensive studies about students' performance in the areas of science, mathematics, and reading (Mullis & Martin, 2013; Wolhuter, 2015). These studies contribute a deep understanding of the educational processes all

over the world. They have been used as a source of crucial data for educators working to enhance students learning at local, national, and international levels (Phillips & Schweisfurth, 2008). So educators in several countries including Tanzania have to get chance of learning educational practices from various sources. The process broadens their understanding and this makes them be in a good position to improve the educational provision.

Furthermore, comparative education is suitable as it addressed the problems that are affecting education systems (Beech, 2006). This process inspires educators to apply comparative education principles to solve problems in education. A good example is the efforts taken to remove barriers in the application of the learner centred in schools. All countries should give full opportunity for the application of comparative education, perform research, and give out information. This study is working to the same purpose by exploring learner centred teaching practices and show what is going on in Tanzanian secondary schools. The findings should inform educational stakeholders on the weaknesses happened and provide suggestions for improvement. Several African countries come across similar challenges and therefore by means of comparative education, scholars get chance to study and compare the learner centred practices from each other. This process widens understanding of these practices and thus helps to solve challenges affecting this educational approach.

According to Phillips and Schweisfurth (2008), comparison is crucial to thinking processes. Continuous comparing and contrasting is a vital part that comparative education carries out. In line with that, the researcher appreciates comparison ideas highlighted by Thomas (1990). They illustrate comparison is essential for identifying the development or progress of teaching and learning. Comparison helps to show the more effective education system. In this case, the scholar emphasized that:

We compare to make choices, to engage in debate, to better understand ourselves, our lives and the environment around us. Comparison can help us to understand, to extend our insights, and to sharpen our perspectives. If we wish to know something well, many writers tell us, we must examine it in comparison. Some argue that there is a liberating quality about comparison. Comparison is integral to the process of cognition and perhaps latent in all human thought. Social scientists tell us that it is a universal method of the social sciences. Thinking without comparison is unthinkable. All scientific analysis is a subset of the general set entitled comparative analysis (p.277).

This study concurs with the point of view of the scholar above because the ideas are still useful today. They could be beneficial to all educational stakeholders who research and develop the education systems in different nations. They are accompanied by characteristics of constructivist theory and learner centred teaching discussed in this study. The ideas show specifically how the comparison augments various characteristics such as understanding, thinking, debate, and scientific analysis. These characteristics have been applied and developed in educational research. Scholars confirm that comparison is a very useful research technique (Edwards et al., 1973). This study presents an understanding of the learner centred teaching practices in the selected secondary schools. The findings are expected to benefit many countries that employ this approach.

The provision of education in several countries encounters some obstacles that affect its effective implementation. A good example is the poor execution of the learner centred teaching practices observed in several countries. This study understands that the principles of comparative education could act as one of the solutions. It gives a chance of comparing the learner centred teaching practices in several countries. Comparison enhances knowledge and skills communal with each other. Furthermore, there is an increase of interest towards the application of ideas related to comparative education. The scholars cited in Schweisfurth (2015) present key issues that crop up and demand attention in comparative education now and in the coming years. Through this field, scholars get an opportunity to examine educational issues and gain a full understanding. It alerts educators researching more on these issues and obtaining ideas and techniques of how to improve implementation of the learner centred teaching.

One of the issues goes further and provides an explanation on the international transfer of policies and practices. It outlines the topic to increase the insights of educators on the progress of the global transfer of educational policies and practices. The global transfer makes some countries receiving programs from abroad that influence the learner centred teaching practices in the classrooms. Educators aimed to apply these practices to improve the provision of education. However, there are challenges that affect the implementation of overseas education programs. The programs meet the educational environments that do not favor its application especially in African countries (Tanzania is not an exception). Educators need more knowledge to control and organize the programs and its implementation in the new environment to ensure they work successfully. Therefore, knowledge about transfer of education programs is required. This is to say that educators in several countries have enabled learning how educational practices have conducted in various countries. This process broadens educators understanding of the learner

centred teaching practices. It provides suitable strategies that put educational stakeholders in a good position to improve these practices. This study is emphasizing the same purpose.

2.3 The transnational transfer of policies and practices

The transnational transfer of educational policies and practices has long been a key theme in comparative education research. It is the umbrella term designs for ways in which policies and practices move from one national setting to another (Schweisfurth, 2015). It includes the movements of scholars across national boundaries to do research on the foreign national educational systems. It makes more educational research activities among educators from various countries. These activities cause the established borders between comparative education and other educational disciplines to become much more permeable (Little, 2010). This is facilitated by the fact that the smooth organization, conduct, and performance of education need influence and ideas from foreign scholars and programs. These programs have prepared to work effectively in the receiving nations. This is the reason why educators open more doors to facilitate interactions that should also benefit the education systems and in particular, the learner centred teaching practices.

In the comparative education field, foreign influences have been studied under the theme of educational transfer. This concept can be defined as the movement of educational ideas, institutions or practices across international borders. The concept can be traced back to the 19th century when the scholar started efforts to create a science of education. It was one of the major concerns in his work and considered as an advantageous process. The educational comparisons create the process of borrowing good and useful programs (Fraser, 1964 as cited in Beech, 2006). Educators have been borrowing programs to improve the education system at home. They show interest in how schools abroad function and how overseas solve educational problems. Thus, comparative education is used as an analytical survey of foreign education systems. It explores the quality of overseas schools and uses it as a means of evaluating one's own education system (Crossley, 2012).

According to Larsen (2010), the educational research explained the transfers were taking place on the global, national, local, and institutional scale. They might occur in all the expected research contexts. Scholars confirmed that the European educational structures and practices of schooling have transferred and been implemented in many societies (Edwards et al., 1973). This is to suggest that many countries borrowed educational programs from Europe because they were discovered to be effective for the teaching and learning process. Education systems that aim to

students' achievement have been implementing programs from overseas. The successful implementation enables education systems to impart to students appropriate knowledge and skills. Students possessing these characteristics are needed for socioeconomic development.

An actual example is the transfer of educational practices emphasizing learner centred teaching. In this case, the scholars stated that the educational debate in the late 20th century is moving increasingly towards the learner centred teaching and how it can best be facilitated. The approach was adopted in many countries to promote and improve teaching, learning, and student's performance in different levels of the education system. This study develops the debate by analyzing, presenting, and sharpening educators' outlooks on the learner centred teaching. The educational practices guiding classroom interactions have been transferring and borrowing by many nations including Tanzania. The ongoing execution of these practices indicates education systems have been encountering several challenges that hinder successful implementation in various countries.

Regarding the process of borrowing, it refers to policy or practice relocation from one nation to another. It is apparently uttered as an intention to adopt a way of doing things as it was observed abroad and normally occurs at any level (local, institutional, regional, national) (Phillips & Ochs, 2004). This study agrees with the idea of borrowing the education policy or practice especially when a system of education encounters challenges or problems. In fact, the system needs a good solution. In this regard, several nations borrow programs that have been expected to work properly in education systems. Therefore, educators accepted learner centred teaching because it is considered to be suitable for improving educational provision. Educators thought that this approach would solve problems in the teaching process, students' learning, and academic performance. Tanzania encounters challenges in the secondary school students performance, so it instructs teachers to make use of learner centred teaching.

Comparative scholars such as Steiner-Khamsi and Waldow (2012) provided profound insights on the matters related to policy borrowing and lending. Scholars discussed some areas that are likely to attract academic inquisitiveness and professional interests in the future of international borrowing and lending. The areas should arouse scholars' interests in these processes. They show possibilities for educators to focus in order to conduct these processes successfully. The important thing is for educators to examine these possibilities and acquire the achievable one according to the context. Tanzanian educators should ask themselves how learner centred approach has borrowed from abroad. This is to advise that scholars should not simplify the borrowing like politicians who visiting other nations and return with the policy. They should

learn and follow the required procedures and then adopt correct methods to conduct policy borrowing successfully (Phillips & Ochs, 2004; Phillips & Schweisfurth, 2008).

Schriewer (2012) stated that educational policies and practices could be transferred from one nation to another, but it needs first to be scrutinized in more detail. The examination is a proper method because “borrowing is not copying” (p.170). It means that the countries borrowing these policies or practices should conduct analysis and not just acquire every aspect/step as it is. This process helps to identify policies or practices and the existing situation and see how to fit in these aspects properly. It helps to avoid problems that might happen during the implementation. This is what Tanzanian educators lack and thus they need knowledge so that to conduct borrowing successfully. For example, Cowen and Kazamias (2009) described the problem of transfer that occurred in South Africa and Namibia. The main problem was how to indigenize the constructivist theory and learner centred teaching. It involves confusion in the meaning, contents, and effects of the planned changes that do not reflect the local classroom cultures and realities.

Despite good intentions to improve the education systems, the reports in different countries revealed that there are many obstacles to transnational transfer and borrowing of policies and practices. Cobern (1996) observed the trend to adopt educational programs in science education caused confusion and controversy in many countries. Schweisfurth (2011) explained one of the reasons for bewilderment is the cultural assumption of learner centred teaching which disagreed with the local context. Other barriers have affected different receiving countries, but more for the so-called lower and middle-income countries (Schweisfurth, 2013). Other programs were misunderstood and badly implemented (Hughes & Urasa, 1997). These trends indicated the presence of complexities facing the transfer of knowledge and educational programs across international and national contexts and borders (Sears & Hughes, 2005).

This study discovers that educators in several national and cultural contexts lack the appropriate knowledge of policy borrowing and lending/advancing. They conducted these processes without a comprehensive analysis on how programs transfer and work in the receiving context. It might be the reason causing poor policy/practices adoption as well as its implementation. Refer challenges occurring in several nations on how to implement policies or practices successfully. Tanzania like other countries is experiencing problems in implementing the learner centred teaching practices. Therefore, this study finds that educators need a correct understanding of policy borrowing and lending. They should adopt policies or practices that have to be implemented smoothly.

Moreover, the transfer of educational practices from one setting to another is found to be a complex matter that comparative educators should put attention to. There should be programs to assist educators on how to engage in the transfer processes (Phillips & Schweisfurth, 2008). This study describes the spectrum of educational transfer as presented by the preceding scholars. They stated purposes, causes, and the agents influencing or organizing the transfer. It might occur in various ways depending on the differences of the educational contexts as well as the education systems. The spectrum of educational transfer provided some possibilities for educators to learn, adopt, and conduct transfer successfully. In fact, this knowledge was needed when transferring learner centred teaching practices in various countries. It should control the challenges that are happening now in many learning environments.

Alexander (2000) admitted that the process of borrowing educational programs from one country to another is effective, but it encounters the problem of focusing a little on cultural matters. This view makes the process to import educational practices as a temptation. Wolhuter (2015) asserted that one of the problems of educational transfer is the immediate borrowing of educational practices without trying to think about the contextual differences between the countries. There might be several factors and components that need enough time to scrutinize and organize so that the educational practices from abroad could be executed smoothly. Similarly, Lor (2015) added that if the context from which the borrowed policies or practices are very different from the context of the recipient country the borrowing might finally fail. The scholar gives an example of the failure of the outcome based education in South Africa. Educators reported similar results that show the poor implementation of the curriculum. For example, O'Sullivan (2004) thought the learner centred teaching as a Western approach, which might not necessarily transfer to countries such as Tanzania where there are limited resources and different learning cultures. Alam et al. (2013) perceived educational programs from abroad lack a link to the local contexts, values, teaching and learning practices. In fact, there are many educational contexts where the implementation of overseas programs, curricula, and practices shown to be unsuccessful.

In this case, the training of teachers who are going to implement new programs is very fundamental. Their roles in students learning are significant. Therefore, training will impart appropriate knowledge and skills. It would make the transfer and adoption of learner centred teaching practices take place easily without causing confusion to teachers and students. This view is in line with Hughes and Urasa (1997) who supported the transfer of programs by having highly qualified and experienced teachers, continuing in-service training, teachers' awareness of the new approach, good students understanding, and students' positive response to the new approach.

The foregoing ideas confirm the support that should be directed to teachers to implement overseas programs. In general, the education systems should organize the learning environment that provides favorable conditions to all education stakeholders for effective implementation of the learner centred teaching practices.

The researcher knows that if teachers possess the appropriate knowledge, skills and competences are able to implement the curriculum and learner centred teaching practices successfully. To accomplish that, this study cites famous scholars and presents descriptions of the constructivist theory and the characteristics and principles of the learner centred teaching practices (refer to sections 3.3 and 3.4). It presents findings and discusses how teachers facilitate learning in the classrooms. It also provides guidelines that assist teachers to carry out learner centred teaching practices in different stages of lesson development. Therefore, this study orients teachers to teaching methods fitting for learner centred classrooms. It influences teachers to gain knowledge and skills that help them to become well-trained, committed and good facilitators. The foregoing aspects are fundamental for teaching, learning and students performance and thus influence teachers training and behavior.

Overall, the analysis of the transnational transfer of policies and learner centred teaching practices reveals complexity. It shows the lack of agreement between the incoming programs and the existing learning environment. Incoming programs were found to lack an appropriate environment to work successfully. It makes the implementation of learner centred teaching practices meet obstacles in the course. Scholars provided suggestions to control the transfer and borrowing of these practices to improve educational provision. In addition, ongoing research about the implementation of the learner centred teaching practices is essential to disclose areas of difficulty and challenge and suggest a solution. This study explores the learner centred teaching practices in the classrooms. These practices have been transferring from abroad and adopted in Tanzania to improve teaching, learning, and student's performance. This study facilitates and contributes to the foregoing matters.

2.4 Comparative education in Tanzania

The beginning of comparative education in Tanzania is linked closely with the establishment of a department of education at the University of Dar es Salaam in 1964 (Anangisye, 2013; Wolhuter, 2011). The matters related to the Ideology of Socialism, Education for Self-Reliance and Globalization shaped the forces of comparative education in Tanzania. The teaching of comparative education is a possible channel to a better understanding of the international

education trends and local reactions (Anangisye et al., 2009; Anangisye, 2013). Scholars observed that the forces of globalization and the changing role of the state influenced several countries to compare the systems of education repeatedly (Bray, Adamson, & Mason, 2007; Ali, 2016). The reports showed that scholars have been witnessing a growing interest in the comparative approaches (Nóvoa & Yariv-Mashal, 2003). They found that all the disciplines in education might now and then fall under the umbrella of comparative education (Bray, Adamson, & Mason, 2007).

Another aspect that develops comparative education in Tanzania occurred when university academicians returned from abroad (West and East). They showed efforts in comparative education by bringing various educational outlooks that found a place in different curricula of education studies (Anangisye et al., 2009; Anangisye, 2013). This indicates that there were efforts focusing on developing the field of comparative education. They were accompanied by the introduction of courses that described themes which are related to this field. The above initiatives in Tanzania were in accordance with the scholar observation of many countries to begin a university-based comparative education unit that focuses on epistemology and modes of academic understanding (Schweisfurth, 2015).

Comparative education has been accompanied by the introduction of several courses at the undergraduate level. The courses attempted to deepen the understanding of the students in this educational field. Among them is the course called Contemporary Problems of Education in East Africa. This was the first education course to represent the elements of comparative education. It addressed problems that come across education systems in the East Africa region. More specifically, the course focused on problems of the classroom, curriculum, school organization, and education administration. Afterward, the development of comparative education continued to be observable academically in various educational components. It had represented at different times through a variety of courses. They intended to provide knowledge, skills, and understanding to students regarding comparative education. Courses observed to have various educational titles such as: History, Theory, and Practice of Education; Contemporary Education in East Africa; Comparative Education; Philosophy of Education-Comparative Practice; Development and Trends in Teacher Education; Historical and Comparative Approach; Education in Developing Countries; International and Comparative Education (Anangisye et al., 2009; Anangisye, 2013; Wolhuter, 2011).

The progress of comparative education in Tanzania has presented in different dimensions as explained by Anangisye (2013) when reflecting on comparative education teaching in Tanzania.

The educator described a range of aspects that guide the execution of comparative education at the University of Dar es Salaam. They include activities carried out in the educational component such as adjusting institutional infrastructure. This was caused by the expansion of undergraduate and postgraduate degree programs. Also, the curriculum review happened in comparative education at the undergraduate and postgraduate programs. It was intended to provide university students with the right competence and performance skills relevant to the demand of local and international markets.

In connection to that, comparative education at undergraduate and master's levels aimed among others to familiarize education students with theories of education and development. The courses defined comparative education and give reasons for study, and analyzed and assessed the history and methodologies of comparative education as a discipline. They examined educational innovation in selected developed and developing countries. In addition, the courses addressed education related agendas such as comparative analysis of education systems and educational processes in various countries. Educators analyzed educational reforms in Tanzania and how it is impacted by the world education trends and global comparisons of educational trends. They examined problems and prospects of education in the economic, social, political as well as cultural development of Tanzania and East African Region (Anangisye, 2013).

Other educational aspects that guided the execution of comparative education at the University of Dar es Salaam included curriculum, textbooks, and teaching methods. The curriculum was prepared to fulfill the comparative education aims. The aims facilitated the preparation of content organized into several teaching and learning modules. The effectiveness of comparative education teaching depends on the availability of relevant and up-to-date textbooks. They have remained as the reliable means that support comparative education teaching and learning. In addition, the choice of appropriate teaching methods depends on factors such as the level of the program, the target group, the subject matter, and the environment. At the undergraduate level, the teaching methods used are lectures, private study, students' seminar presentations, and discussions. At the master's level, the teaching methods used are research paper presentations, interactive discussions, book/article critiques, case studies, library visits and if possible internet search is employed (Anangisye, 2013).

Although the content of comparative education has been in the curriculum of higher education for decades, it is still unpopular (Anangisye, 2013). Observation disclosed challenges such as no efforts to develop and strengthen this field in various structures of educational organization and provision. The field has been observed to be limited to a few universities in Tanzania. Based on

the foregoing, the challenge ahead is to begin this academic field to all universities. Also, educators ought to reflect on the conduct of comparative education teaching in the Tanzanian context. They should ask to what extent educational stakeholders implement comparative education. Likewise, educators put efforts into carrying out research related to comparative education. This field guides educators to collect information and describe the progress of education in various countries. Educators show how classroom practices are carried out and suggest effective practices that should benefit many education systems. In connection to that, this study explored and described the implementation of the learner centred teaching practices and show the findings obtained from the selected secondary schools. The findings provide understanding to educators regarding these practices in Tanzania. This study fulfills the purpose of comparative education by giving a chance for educators to learn from each other. It also provides an understanding of how to manage these practices in the education systems.

In general, the status of comparative education in Tanzania is not encouraged compared to some countries in the developed world. Many countries come across educational challenges and barriers to implementing learner centred teaching practices. Challenges affect the performance of all education stakeholders. Indeed, they need correct understanding acquired from comparative education. For that reason, something should be done to improve the activities of comparative education. This study suggests educators learn and adopt effective practices from developed nations. Tanzania's education system needs this field to boost up the learner centred teaching practices and student's performance. The challenge now is for educators to sit down and think deeply about how to organize and develop comparative education so that it works and provides required services to education stakeholders and in general to the education system. They should study how developed nations administer the implementation of comparative education.

2.5 Curriculum reform in Tanzania

In order to impart students the appropriate knowledge and skills, it should be structured from the curriculum. The curriculum reform in Tanzania has gone through several transformations since independence. It reflects different demands that occur in society at various times. These claims need to be reflected in the curriculum. According to Chikumbu and Makamure (2000a), the curriculum is a plan or program of all experiences that the learner encounters under the direction of a school (p.7). Similarly, Chikumbu and Makamure (2000b) define a school curriculum as a program of selected content and learning experiences offered by a school and capable of either modifying or changing learner behavior (p.7). This study builds on preceding views and establishes that all activities in the school are well stated and organized in the curriculum.

Therefore, to ensure students receive a quality education, teaching should be organized in the curriculum.

This study recognizes the reforms made in the curriculum at different times to support the provision of education. It insists that curriculum, as a guide for educational activities, has to be dynamic. It should change according to various innovations taking place in the economy, social, political, science and technology. The curriculum needs to undergo constant review to make sure it always responds to social demands and produces people with the appropriate knowledge and skills. It should prepare people who work successfully and improve social and economic development. Likewise, reforms occurred in different countries to avoid problems that might affect the system of education. A good example has been observed on the reforms in the education of the Western world since the 1980s. They were similar to reforms explained by Marc-Antoine Jullien regarding the French education. In this case, the government became more involved because schools provided flawed education (Karras & Synodi, 2012).

Some drastic changes were introduced in the education system and curriculum in 1967 when the philosophy of Education for Self-Reliance (ESR) was adopted to guide the provision of education in Tanzania. The policy highlighted the meagerness of the inherited education system and suggested several necessary reforms (Mushi, 2009). The ESR focused on the development of a democratic society characterized by high-minded individuals who are creative, problem solvers, who can adapt to different environmental and socioeconomic contexts. The policy proposed education that promoted students critical and independent thinking. It needed the curriculum transformation in both content and pedagogical approaches. There was a need for a curriculum to be modified on the teachers and students daily life. Teachers needed to engage students actively during the teaching and learning process (Kawishe, 2016).

Another step to revamp the provision of education in Tanzania was done by the Presidential Commission on Education (Makweta Commission) in 1982. The commission intended to investigate the education system and come up with recommendations on curriculum, subject structures, assessment criteria, and curriculum reforms (URT, 1982). The recommendations together with the goals of the world Declaration on Education for All (EFA) and other international conventions necessitated the government to take initiatives to improve policies and programs of education. One of them was the Education and Training Policy (ETP). The policy outlined a vision of education to enable students to develop self-confidence, inquiring mind, and the skills necessary for improving the quality of life (URT, 1995). The ETP policy has later updated and elaborated in a new phase of a government policy called the Education Sector

Development Program (ESDP). This program aimed among others to transform the education system into the outcome based education (URT, 1997).

Therefore, to achieve the international goals of educational reforms, the government of Tanzania initiated the Development Vision 2025 (URT, 1999). This program is intended to equip people with knowledge, skills, attitudes of improving productivity and competitiveness. The vision proposes to have people with higher and better levels of knowledge and expertise who can respond and adjust well to the challenges and opportunities of the world of work (URT, 1999). The vision sees education as a tactical change agent and states that “education should be treated as a strategic agent for mindset transformation and for the creation of a well-educated nation, sufficiently equipped with the knowledge needed to competently and competitively solve the development challenges which face the nation” (p.19).

The vision insisted on the structuring of the education system and curriculum. It influenced the competence based curriculum. Specifically, the curriculum insisted on the application of learner centred teaching practices in the classrooms. In this case, students should be engaged actively in their own learning. They should be given opportunities to demonstrate their abilities to perform what they have learned. In order to achieve implementation of the learning approach and improve students’ performance, the curriculum should incorporate some pedagogical changes in teaching and learning to accommodate the outcome based learning. It puts an emphasis on what students should be able to do by the end of the lesson (Sumra & Katabaro, 2014; TIE, 2009). This is to confirm that competence based curriculum and learner centred teaching put emphasis on the outputs. The educators wanted to see the outputs from schools and universities have the appropriate knowledge, skills, attitudes, and experiences applying for socioeconomic development.

In the year 2005, Tanzania officially introduced a competence based curriculum that guides the development of competences during the teaching and learning process. The new curriculum attempted to improve the quality of education that enabled students to develop competences relevant to life (Komba & Mwandanji, 2015). To achieve that the education sector has been addressing issues such as teaching approaches and the emphasis was on the learner rather than the teacher (Salema, 2015). Learner centred teaching is linked to educational characteristics of inquiry-based science teaching, student’s intrinsic motivations in science learning, and student’s engagement in critical thinking skills. These aspects support students being involved in active learning. Teachers are required to respect the authorities and engaging students better in critical

thinking skills. The classroom context needs to be less restrictive and allows students to engage in various ways using resources from their surroundings (Mkimbili, 2018).

Learner centred teaching which follows a constructivist approach has been embraced by most educational policies implemented in Africa. The approach emphasizes the student's interactions during the learning process. According to the curriculum in Tanzania, the teaching and learning methods include the following: classroom based problem solving and enquiry, demonstration, posing problems as well as solving those set by the teacher, practice of technical or laboratory skills, debates, group discussions, and analyzing case studies (MoEVT, 2005, p.30). These teaching and learning methods are learner centred insist students active participation in learning. It is the responsibility of the teacher to ensure students are facilitated successfully.

The curriculum encompasses several components such as the student, the teacher, teaching and learning methods, anticipated and unanticipated experiences, outputs, and outcomes in the learning institution. Also, it includes factors such as the resources/materials, school environment, culture and ideology, interest groups, instructional supervision, and assessment (Chikumbu & Makamure, 2000 a&b). These components and factors work together to accomplish the educational objectives. In order to function properly these aspects ensure that all activities are applied successfully. They influence each other during the implementation when teachers meet students and help them learn and acquire prescribed knowledge and skills. Therefore, teachers are considered the main implementers of the school curriculum.

Chikumbu and Makamure (2000b) added that teachers need to understand the curriculum broadly to implement it effectively in the classrooms. This is because the curriculum might have a good purpose and instructions, but if teachers are not informed and possess a better understanding of what it requires then its implementation will not be successful. It is where several countries are meeting challenges as they failed to coordinate programs for orienting all teachers to the new curriculum and appropriate teaching methods. In this situation, teachers have been complaining about a lack of training programs for orienting to understand the curriculum changes they are likely to implement (HakiElimu, 2011; Kafyulilo et al., 2012). This is connected to the fact that teacher education falls back to preparing and familiarizing teachers for effective execution of the learner centred teaching practices (Vavrus & Bartlett, 2013).

2.6 The learner centred teaching practices and its empirical research in Tanzania

Various programs have been established in different countries to see how the learner centred teaching would be implemented into their educational systems. In Tanzania, a program of Tanzania Development Vision 2025 insisted the learner centred teaching to produce a well-educated and learning society (URT, 1999). Programs like Secondary Education Development Program (SEDP) and Education Sector Development Program (ESDP) planned to establish the quality of education and apply the learner centred teaching to produce people who have knowledge and skills that enable them responding to development challenges and thus compete well in the global economy (URT, 1999; MoEVT, 2005). In an effort to fulfill the students' attainment of knowledge and skills, the educational policymakers in many African countries including Tanzania attempted to see how to improve how teachers conduct teaching and learning practices in the classrooms. More specifically, they wanted teachers to employ classroom practices that engage students and make teaching and learning processes become more interactive (Vavrus et al., 2011).

In Tanzania, teachers have been implementing a curriculum that supported learner centred teaching practices. In this case, it was stated clearly by the ministry responsible for education that the implementation of the curriculum should emphasize learner centred teaching practices. This is to say that, teachers in the classrooms have been instructed to facilitate classroom practices promoting this approach. It was mentioned to be appropriate because it can assure effective teaching and learning practices. This shall enable students to acquire the requisite knowledge and skills and hence improve their performance in the national examinations (Inter-agency Commission, 1990; Doyle, 2008). Nevertheless, Schweisfurth (2013) showed that learner centred teaching has not thus far proved to be a simple approach applying in teaching. It has been confirmed by previous studies which report problems encountered during the implementation of this paradigm in various national and cultural contexts. Several characteristics linked to the education environment have been stated as the cause of these problems.

To ensure effective implementation of the learner centred teaching in the secondary schools in Tanzania, the Ministry and other agencies responsible for the provision of education support, guide, and monitor the process by providing instructions to stakeholders to help perform their duties well. The stakeholders make sure schools have fitting resources and infrastructures to translate and transfer the curriculum goals into real educational practices (MoEVT, 2005, 2009). In addition, the ministry of education employs qualified teachers for teaching purposes. Teachers are typically trained in different areas of education to impart them with theories and principles

of education, foundations of the school curriculum and psychology, knowledge, and skills in teaching, mastery of the subject matter, and classroom management (URT, 1995).

The curriculum implementation process considers teachers as the main agents who are required to do and follow some guidelines to achieve the lesson objectives. They have an obligation to perform various functions every day in the school and classrooms. These functions include: identifying students learning needs, planning the lesson, designing and using teaching and learning materials, preparing the subject matter, and applying proper teaching methods. Also, assess the progress of students learning, ask if students acquire the intended knowledge, skills, and attitudes, and reflect on how well they facilitate learning practices. Teachers are required to translate the curriculum into the teaching and learning experiences, select and decide the materials to teach, and help students achieve the learning outcomes (MoEVT, 2005, 2009).

The education systems in Sub Saharan Africa usually emphasize on quality education, but the educational outcomes in government schools are very low (Westbrook & Kyenune, 2013). Specifically in Tanzania, since it introduced outcome based curriculum the national examination performance of form four students has been deteriorating for several years. Educational stakeholders have mentioned several reasons as the cause. Among them, is the misunderstanding of the new curriculum and syllabus, lack of enough materials such as books and science laboratory equipment, weakness in the school inspectorate department (HakiElimu, 2013). One of the reasons for poor understanding of curriculum is the teachers did not participate in the curriculum development process. They directly received instructions from the experts (HakiElimu, 2013; Meena, 2009; Komba & Mwandanji, 2015). Educators cited in (Nihuka & Ambrosi, 2012) argued that the curriculum reform of teacher education applied mainly the top down method and teachers were not fully involved. This study concurs with the educators above because it is true that if teachers are not properly involved in new educational innovation, it might be difficult for them to build good knowledge as well as employ proper methods in the classrooms. Teachers as the primary implementers need effective orientation to gain an understanding of what they are required to execute. This problem is happening in many countries including Tanzania, and surely, it affects teaching, learning and students performance.

The progress of learner centred teaching indicates that teachers encounter various challenges in the course. The educational approaches from abroad bring problems to teachers. In this regard, Paulo (2014) observed pre-service teachers did not execute competence based and learner centred teaching and assessment properly. Westbrook and Kyenune (2013) found neither pre-service nor in-service teacher education programs prepared teachers to interpret the curriculum

properly to work within the classroom contexts. In addition, Vavrus et al. (2011) argued that teachers teach the way they were taught. Therefore without proper initial training, it might be difficult for them to change and apply the learner centred teaching. The foregoing difficulties affected many teachers and further observations indicated that there are little efforts to assist teachers to gain correct teaching methods.

On the same token, Meena (2009) found teachers who agreed to use learner centred teaching practices, but in the classrooms, they performed differently. In interviews, they claimed to employ learner centred practices though the observations from the real practices showed that the teacher centred approach still dominated teaching. Nihuka & Ambrosi (2012) discovered that teachers normally like to apply learner centred teaching. For example, they agreed to ask questions, employ jigsaw and discussion methods. However, real classroom observation showed teaching is mostly chalk and talk methods. Wangeleja (2003) clarified that although teachers were trained to use learner centred teaching; they still apply traditional practices (Kafyulilo et al., 2012).

Correspondingly, both teachers and students in public and private secondary schools had a positive attitude in the implementation of the learner centred teaching. They understand that this approach is appropriate for teaching and learning. Scholars established that learner centred teaching causes good performance. However, observation showed that students and teachers in private secondary schools were more active in the implementation of this approach compared to their complements in public secondary schools. Despite teachers more positive attitude on the learner centred teaching; they did not apply authentic assessment methods like a portfolio, classroom/field observation, oral presentations, projects, interviews, and self/peer assessment (Salema, 2015).

Additionally, Hardman (2009) proved challenges happened and how they affected the implementation of the curriculum. The scholar advocated the new pedagogic approaches as learner centred, group work, role-play, project, and debate. However, there was little evidence of the real application of these practices in the classrooms. Nihuka and Ambrosi (2012) added that even the time for classroom interactions was not enough, as the participatory method is time consuming. This reason might be connected to the overloaded syllabus, and teachers lack skills and good conditions to speed up the teaching and to learn from the participatory methods. Hardman (2009) found teachers were frustrated because of low morale caused by uncertain promotion prospects, lack of policy on teacher education, poor remuneration, and working conditions (Hardman, 2009).

Concerning with the teaching materials and resources, HakiElimu (2011) and Kafyulilo et al. (2012) discovered the curriculum changes to learner centred teaching did not match or cope with changes in teaching materials and resources. This deficiency affected the utilization of this approach. In addition, Jidamva (2012) reported about the teachers' lack of innovative/creative skills of improvising the teaching materials. Teachers added that they do not know how to gain these skills. Furthermore, Kalinga (2008) revealed that many schools lacked essential information resources like libraries. In this case, school libraries were found to be deficient in local textbooks reflecting the Tanzanian context for teachers and students to update their knowledge (Nihuka & Ambrosi, 2012). This is to say that, many of the textbooks have been ordered from overseas. They did not explain clearly, what will be the circumstances in the case of Tanzanian environment. As a result, knowledge connecting to the Tanzanian context has been missing.

Scholars showed their reactions to what is going on in Tanzania regarding the policy transformation towards learner centred teaching. It is as if nothing much has been improving in the education system as it had presumed. Based on this situation, Vavrus and Bartlett (2013) stated that "Tanzania, like many countries, appears to be strong on policy development and weaker on policy implementation" (p.24). This fact is to perceive that countries adopt policies and practices from abroad but the problems happen during the actual implementation. The learning environment showed failing to support programs from overseas. In some areas, teachers and students are observed to be not ready to apply learner centred teaching. In this case, Jidamva (2012) emphasized that in order to attain quality education there are circumstances, situations, and challenges that need improvement. A good method is to share information from various researchers that describe appropriate learner centred practices to improve teaching, learning, and students performance. Thus, research should have considered as one way of dealing with educational difficulties. The present study facilitates the same purpose.

In a study of the implementation of learner centred methods within the constraints of a shortage of instructional resources and facilities (Kawishe, 2016) the findings showed that lack of funds is the main cause of poor implementation of these methods. In this case, projects and field trips are applied, but they are very rare because of its expenses. Based on the foregoing situation, teachers tried to use methods like group discussion, debate, and subject clubs and apply field trip when materials are within or close to the school. In addition, teachers used to improvise the available materials and produce the suitable educational materials. Therefore, the methods used by teachers are working to improve students' success. The methods are more of the learner

centred, and thus they should be serious improvements to help learning approach facilitate learning as it should be.

From the same perspective, Paulo (2014) conducted a study of pre-service preparedness to implement learner centred teaching methods. The educator indicated that despite pre-service teachers awareness of the teaching methods applied in the implementation of competence based curriculum, the majority of them were not able to employ most of the prescribed learner centred teaching methods. Kafyulilo et al (2012) found that despite the high level of awareness on the competence based teaching approaches, pre-service and diploma teachers were unable to facilitate teaching using the approaches they aware with (Salema, 2015). Such behavior of teachers failing to apply the suggested learner centred teaching methods has occurred to many teachers in several countries. It might be caused by numerous reasons among them include lack of deep understanding of these methods, teachers are not ready to use new methods, lack of resources and facilities, students prefer traditional methods, in general the learning environment does not favor/support the learner centred teaching methods.

According to Kawishe (2016), learner centred method is an approach that focuses on helping students to construct an understanding of concepts and principles using prior knowledge and day-to-day experiences. The teaching practices are adapted to students' lives and teachers encourage students to analyze, interpret and predict information. The learner centred methods involve effective dialogue and students active participation in the classroom practices. Therefore, the effective learner centred methods result in the students' knowledge construction. Students should be involved in the activities that stimulate creativity, critical thinking, and problem solving skills. These activities have been stated to be in accord with what was emphasized by the constructivist theory.

Also, the findings by Mkimbili (2018) revealed that students meet various challenges in learning science. It includes limited resources, a large amount of content to be covered, teachers insufficient understanding of the nature of science, and an unfamiliar language of instruction. Others are students experiments in science classrooms were more instruction based tasks focused on students memorization of facts preparing them for examinations. This learning environment was difficult for students to be engaged in critical thinking skills such as problem solving, open-mindedness, backing claims with evidence, and asking questions for clarification due to contextual cultural challenges. With all the above research and efforts, scholars have confirmed that teaching in Tanzania has generally characterized by didactic and teacher centred methods that use rote memorization as the main method (Barrett, 2007; Vavrus, 2009; Kawishe, 2016).

The education system has been continuing to emphasize that schools and teachers should employ the learner centred teaching practices as stated in the syllabus. The learning environment needs to be organized to boost the use of these practices.

After describing the empirical research regarding various teaching and learning practices, this study explains the relation of the learner centred paradigm with the concept of pedagogy. According to Alexander (2000), pedagogy involves both the ideas and the practices of teaching and learning and the related aspects such as learning theories, curriculum, assessment, culture, and society. It is viewed in this study as the field that provides and organizes how a human being acquires knowledge, skills, and experiences. Thus, the concept of pedagogy facilitates the purpose of the present study as it shows various characteristics of teachers and students manifested in connection with the learner centred teaching practices.

Therefore, a study by Westbrook et al. (2013) compiled and gave comparisons of pedagogic practices as observed in various national and cultural contexts. The scholars summarized the major theoretical schools of thought underpinning behaviorism and constructivism together with their associated pedagogies. They provided a comparison of the examples of pedagogic practices applied in teaching and learning (see Table 1). These practices are reported based on what has been observed in developed and developing countries. In general, they established from the behaviorism and constructivism educational theories. In this case, the fundamental principle of the teacher centred approach is guided by the behaviorism theory. It accompanies the teacher roles of acting as the presenter of the knowledge. The teacher is believed to know more compared to students. The constructivism theory attends with the teacher roles of acting as the facilitator of the knowledge. The teacher gives chance for students to contribute and share ideas. According to the literature constructivist theory accompanies with the learner centred teaching practices. It has been stating to be effective in the classrooms and argues that students construct knowledge and meaning from their daily experiences.

Table 1: Major theoretical schools of thought underpinning behaviorism and constructivism pedagogic practices

| Broad theoretical school of thought | Associated pedagogy | Examples of pedagogies in developed countries | Examples of pedagogies in developing countries |
|--|--|--|---|
| Behaviorism | Teacher centred learning. Performance visible pedagogy. | Whole class teaching, working together as a collective (Japan, the Pacific Rim). Focus on mastery of skills in a particular sequence. | Lecturing, demonstration, direct/explicit instruction, rote learning, choral repetition, imitation/copying, master-classes (eg learning music or dance). |
| Constructivism | Child centred learning. Competence or invisible pedagogy. | Project work, individual activity, experiential, Montessori, Steiner, Pestalozzi in US and Europe. | Activity-based learning in Tamil Nadu. Bodh Shiksha Samiti schools in India. |
| Social constructivism | Learner/student centred learning. | Reciprocal teaching of reading in US. Communicative learning. Cooperative learning. Group work element in national strategies, England. | Small group, pair and whole-class interactive work, extended dialogue with individuals, higher order questioning, teacher modeling, showing, problem solving, inquiry based, Nali Kali in India, Thematic curriculum in Uganda. |

Source: Westbrook et al. (2013, p.12)

The present study found it is important for educators to understand these theories and their pedagogic practices. It is because teachers are usually applying these practices in the classrooms. However, education systems have been instructing teachers to change practices from behaviorism to constructivism, which is to discourage students from receiving knowledge passively and to enhance students thinking and active learning. Thus, teachers need to have been building a proper understanding of the real practices used for facilitating the construction of knowledge. This idea is where the learner centred teaching practices have been emphasized. One thing to remember in this situation, is the classroom environment for learner centred teaching should contain materials needed for facilitating teaching and learning. In fact, the classroom has to be improved to provide appropriate support to students and teachers.

2.7 Comparative education research about the learner centred teaching

In this section, the present study gives explanations of the comparative research focusing on the aspects of learner centred teaching. It is possible that educational aspects such as teaching, learning, and students performance are taking place in one country is similar or different to another country. The educational systems differ in some aspects but are similar in other aspects. In this regard, the prospective studies have been selected based on the idea that they identify, analyze, and explain similarities and differences concerning learner centred teaching. The studies present information that instructs educators about what is going on in various countries. They support the idea of improving education systems by learning and understanding how others are operating.

Schweisfurth (2013) compared how the learner centred teaching is conducted in classrooms in four countries (Gambia, South Africa, China, & Russia). The scholar summarized the perceptions and practices as collected from these nations regarding the learner centred teaching. Findings from the Gambia unveiled that teachers preferred democratic approaches in their classroom practices. However, the lack of materials/resources, good infrastructure, and electricity made the desire hard to happen. In South Africa, teachers are motivated to adopt changes that led to the learner centred teaching to make lessons interesting using teaching aids. However, the real practices in the classrooms were executed poorly. While in China, teacher centred practices mainly dominate the classes and the students learn partially by memorizing the subject matter. Some cultural practices are reported to help to boost students performance. In Russia, the classroom practices adopted effective students' engagement. They found it to be impressive and this made Russia to have a good status worldwide concerning the learner centred (Schweisfurth, 2013).

The findings of case study in five countries (Cambodia, Egypt, Jordan, Kyrgyzstan, & Malawi) reported that teachers implemented the recommendations of applying the learner centred teaching (Ginsburg, 2009). The scholar described what was taking place during the teaching and learning process. For the case of Cambodia, the traditional approach that apply teacher centred is used in the teaching processes, although there are some signs of active teaching practices that emphasize student centred. In Egypt, the active pedagogies of teachers are empowered by professional development activities. Teachers in Jordan reported having a good grasp of practices used to foster the learner centred teaching. In Kyrgyzstan, teachers are hampered by the scarcity of teaching materials. In Malawi, the learner centred teaching faced obstacles caused by high-stakes examinations testing memorization of content as opposed to critical thinking (Ginsburg, 2009).

The teachers in the foregoing countries were instructed to apply learner centred teaching, however, they encountered a number of challenges during the implementation process. In this case, the teachers in Cambodia, Kyrgyzstan, and Malawi encountered different challenges that made them adopt and employ teacher centred teaching. Teachers in Egypt and Jordan showed to receive the support of educational aspects to perform learner centred teaching. This study found that some countries that intended to implement the learner centred teaching are facing problems that hinder the accomplishment of this purpose. Based on the challenges teachers have observed to continue with teacher centred approach.

Other developments in learner centred teaching have been reported in the work compiled by Cowen and Kazamias (2009). In this case, the profiles of countries presented by Science, Mathematics and ICT study showed that the learner centred teaching are greatly varied. The summaries of what was collected from various countries indicate that: Tanzania, Uganda, and Ghana, teaching is observed to revolve around traditional, teacher centred and old-fashioned curriculum. While in Botswana, the read-regurgitate-recite learning cycle dominates under the competence based curriculum and learner centred teaching. In Namibia and Nigeria, teachers implement learner centred curriculum, but actual classroom practices are far from the real learner centred teaching. In Senegal, the assessment is examination driven which leads to recall and memorization rather than student understanding. For the case of South Africa, learner centred goals on outcome based education are hard to achieve in real practice (Cowen & Kazamias, 2009).

The foregoing studies discussed how the learner centred teaching practices have been conducted in the classrooms. Many countries have agreed and adopted practices guided by this approach. However, the actual implementation of the curriculum in classrooms is reported to come across some challenges. Teachers were observed to be successful in a few learner centred practices, but they continued to apply teacher centred approach in other aspects. Failure to apply learner centred was caused by several factors in the education system. These factors are hindering teachers to execute these practices. Teachers in various countries including Tanzania come across the same problem. It leads to poor students' learning and performance in examinations. Based on this situation, educators are emphasizing teachers to apply effective classroom practices. Teachers should adopt implementation carried out in successful education systems. The systems ensure good use of the learner centred teaching practices according to the curriculum.

Moreover, there are educational practices reported in the studies executed in various nations and cultures. Alexander (2000) presented a good example of a study carried out in five countries (France, Russia, India, USA & England). The observations made in classrooms indicated that lessons in France, Russia, and India were centred on the whole class methods while England and USA (Michigan) relied on individual and group work. Based on the foregoing practices teachers in France, Russia, and India showed to utilize the whole class methods that are conducted through teacher led instruction. The teachers present the lesson to the whole class without looking into the particular student. These methods do not enhance students' learning; in fact, they have been discouraged in the classrooms (section 3.7 in chapter 3 explained the weaknesses of teacher centred methods). While teachers in England and USA (Michigan) employed learner centred methods as encouraged to apply in the classrooms. These methods put emphasis on the students learning. They engage students and help them become active participants in their learning. Scholars have been identified these methods to be effective and teachers should use them (section 3.4 in chapter 3 described the strengths of learner centred approach).

In another study, Anderson-Levitt (2004) reported various educational practices applied by teachers in three countries (France, Guinea, & USA). Practices such as whole class reading, word study, and giving exercises were observed in France and Guinea. While in the USA, the scholar found small group reading, comprehension questions, and giving worksheets as common classroom practices. The analysis shows that: teachers were found to use mixed classroom methods in facilitating teaching and learning. Teachers might employ various methods depending on the situation of classroom environment including students abilities. They focus on

the methods that help students learn successfully. This study understands that the effective application of the learner centred teaching practices should put into operation.

The preceding paragraphs serve to explain that different national and cultural contexts exhibited a variety of teaching and learning practices. Teachers in various countries attempt to use methods that fit to accomplish their lesson objectives. They apply methods that intend to meet needs of students attended in the classroom. Likewise, teachers in most cases have been guided by cultural, political, economic, and theoretical traits advocated, adopted, and executed in a particular context. The foregoing arguments facilitate that teachers can exhibit various teaching methods. They should focus on the learner centred teaching practices.

In addition, scholars in Tanzania and Uganda compared the practices of experienced teachers and newly qualified ones (Westbrook & Kyenune, 2013). Their findings suggest that the experienced teachers possessed a good understanding of the use of the participatory approach compared to newly qualified teachers. Experienced teachers used language and formative assessment well in classrooms and integrated the teaching aids to support students learning. This is to say that the experienced teachers are considered as innovative and successful because they applied some characteristics of the learner centred teaching. Based on the preceding realities this study considers experience as an essential character in the application of learner centred teaching practices. This view is facilitated by the fact that, teachers learn new knowledge, skills, and strategies every day they conduct teaching. It is important to know that a classroom is an unpredictable place. Therefore, anything might happen during the teaching and learning process. To control such an environment needs experience on the part of the teacher. Thus, the more years' teacher spends in the classroom, the more teacher receives feedback, methods and thus gain more experience in teaching. The experience should also favor the application of the learner centred teaching practices.

CHAPTER THREE: THE CONSTRUCTIVIST THEORY AND THE LEARNER CENTRED TEACHING PRACTICES

3.1 Introduction

This chapter starts by showing the value of the teaching theory for teachers. It discusses different perspectives that accompany the constructivist theory including the theories presented by two prominent psychologists ie Jean Piaget and Lev Vygotsky. In this case, the theorists developed individual and social constructivist theories. They explain how learning takes place and how a human being constructs meaning and understanding during the teaching and learning process. The chapter outlines the characteristics of the constructivist theory used to guide students learning. It discusses principles and methods of the learner centred teaching practices and how they are adopted in various countries. It explains previous empirical research on the implementation of the learner centred teaching practices. Furthermore, the chapter presents some educational aspects linked to the implementation of the learner centred teaching practices. It describes the teacher centred practices and the different structures of the lesson development applied in various national and cultural contexts.

3.2 An overview of the teaching theory

Teachers are usually expected to possess knowledge of the theories that guide them to facilitate teaching and learning successfully. This study joins with the educators who supported the importance of theory in facilitating learner centred teaching practices. The theory gives teachers knowledge and skills of how to operate in the classrooms. This view is in line with the suggestions presented by Ross, Cornett, and McCutcheon (1992) and Moore (2000) who stated that teachers have to be guided by personal or practical theories that structure their everyday teaching and learning practices. To teach successfully, teachers are supposed to ensure they adopt theories that guide and influence planning, teaching, assessment, perceptions, and practices (Ellis, 2002; Hargreaves & Fullan, 1992).

According to Smith (1961), the theory of instruction helps to show the relationship that exists between the teaching and learning process. The two processes depend on each other because when there is teaching it is expected in the normal condition there will be learning taking place. Smith asserts further that learning should be considered as an outcome of teaching. To facilitate the learning practices, teachers have to adopt a teaching theory that helps to provide knowledge, skills, and principles of how to plan, organize, and develop appropriate practices in the classrooms. Likewise, Sutton and Seifert (2008) added that several ideas and priorities are

affecting how teachers think about teaching and learning. To guide teachers, psychologists have developed theories relevant to classroom practices to give guidance to teachers. The theories provide appropriate practices needed to apply during the teaching and learning process.

In similar veins, Uljens (1997) found that educational theory provides teachers with a conceptual instrument enabling them to reflect and communicate their pedagogical experiences in a steady manner. It offers a tool by which teachers are enabled to understand the practice more thoroughly. Teachers' theories of learning affect the way of teaching. According to Alexander (2000), the goal of theoretical thinking is to develop a clear description of pedagogical practices that take into account the art and science of craft of teaching, the values and ideas by which teaching is informed. Therefore based on the preceding fact, this study perceives theory to be essential for guiding teachers in executing their practices consistently. Teachers need to build an understanding of appropriate theoretical principles to apply in solving challenges they face.

This being the case, it is evident that the constructivist theory is found to be suitable. This theory has been promoting the ongoing educational reform that shifted teaching from teacher centred to learner centred teaching. It facilitates ways of identifying more effective or less effective teaching practices for use in teacher education and professional development (Richardson, 2003). This view is in line with Cobern (1996) who opined that the constructivist theory is expected to benefit different national and cultural environments in science education and curriculum development. Scholars such as Jean Piaget (1896-1980) and Lev Vygotsky (1896-1934) demonstrated that this theory is one of the best practices for learning. It has extensive impacts on teaching and learning methods. The theory helps students exchange ideas, learn successfully, retain knowledge and develop thinking and understanding. Based on the aforementioned benefits, the theory becomes indispensable in the teaching and learning process.

3.3 The constructivist theory and its characteristics

- **The constructivist theory**

Researchers of constructivist theory discovered the roots of this theory in the work of ancient philosophers such as Confucius, Plato, and Aristotle. However, different theorists are connected to this theory such as Kant, Vico, Kuhn, Dewey, Bruner, Piaget, and Vygotsky (Henson, 2003; Ware, 2006; Koohang et al., 2009; Lowenthal & Muth, 2008; Meng, 2009; Zierer & Seel, 2012). The philosophers (Confucius, Plato, Aristotle) developed ideas that insist knowledge is not transmittable (Tafrova-Grigorova et al., 2012). Later on, psychologists expanded this theory and it became well accepted in various educational contexts (Cowen & Kazamias, 2009; Henson,

2003; Vavrus & Bartlett, 2013). Also, constructivism is considered as an epistemological and psychological theory about how people learn by actively and consciously bringing past experiences and understandings into a collaborative exercise with other students (Nyback, 2013). Furthermore, Sutton and Seifert (2008) look at the constructivist theory as a perspective of learning that focus on how students actively create or construct knowledge out of experiences. The theory maintains that, student construction of knowledge, meaning, and understanding based on the previous knowledge (Kaya & Dönmez, 2010; Koohang, Riley, Smith, & Schreurs, 2009).

This study supports the idea of constructing knowledge and understanding by considering what students already know. They come to the classroom with already previous knowledge, ideas, and understandings. Prior experiences act as raw materials for students learning or creating new knowledge. This is to say that in a classroom, different students will acquire knowledge based on the level of understanding they already possess. As a result, the teaching and learning process is simplified and students' understanding of the subject matter is enhanced. According to Vygotsky (1962), the purpose of learning in constructivist classrooms is for the student to construct their own meaning and not to recall the right answers or regurgitate meaning provided by another person. It is maintained in the constructivist classrooms that students create knowledge and meaning by themselves and not simply by being given or knowledge being transmitted by the teacher (Lowenthal & Muth, 2008; Tafrova-Grigorova et al., 2012; Ültanir, 2012; Weimer, 2013). Thus, students should be actively involved in the learning processes rather than passively absorbing information from teachers and textbooks (Vanada & Adams, 2015). Scholars added that, biology, neuroscience and cognitive psychology inform us learning is understood as deep understanding, it cannot be imparted; it is a constructive social process. Thus, students become active constructors and discoverers of knowledge. Learner centred classrooms are inherently constructivist in theory. Carl Rogers (1902-1987) concluded that human beings are constructive in nature. In this respect, educators should create conditions that enable constructiveness to become effective (Motschnig-Pitrik & Derntl, 2002).

Cognitive theorists focus to improve ways of students thinking. They wanted to see classroom practices that change and improve students thinking processes. They concentrate on learning how to think and understand. While behaviorist theorists' focus on changes in the students' observable behaviors and changes in what people say or do. Thus, learning occurs when the new behavior has been acquired and manifested (Sutton & Seifert, 2008). The process helps teachers to know what students are doing, learning, and achieving in the classrooms. However, it is not enough for identifying how students are thinking and how they develop thinking skills. It does not explain

how students construct knowledge during the lesson. This study supports a constructivist theory based on the view that students construct knowledge out of experiences. Students in this case are considered as active creators of meaning. They are asking questions, exploring, assessing what they know, enjoying learning and learning more. By referring to the foregoing practices, then one would affirm that the theory facilitates and prepares students to have relevant knowledge and skills. These attributes help students to cope with the challenges as well as functioning well in the society.

Various scholars and educators confirm the implications of constructivist theory in various teaching and learning contexts. For example, Brooks and Brooks (1999) established that, in order for students to succeed in the constructivist theory, they should perform learner centred practices. Also, Bimbola and Daniel (2010) and Mishra (2007) say that the theory is successful because it facilitated students' deep understanding of the subject matter. Likewise, Zemelman et al. (1993) proved the theory productive for designing suitable environments for teaching and learning. Furthermore, Ellis (2005) insisted on using the constructivist theory by using a range of classroom practices such as discussion, demonstration, reflection, sharing of ideas, and brainstorming. As such, for educators or instructors to be able to apply constructivist theory in a learner centred learning environment to enhance the performance of students, they need to learn and understand how the constructivist theory guides teaching and learning practices.

This study adopts constructivist theory to guide the exploration of learner centred teaching practices. The front view is founded on the fact that the characteristics of the theory are more applicable in the process of teaching and learning. They indicate appropriate learner centred teaching practices for teachers to employ in the classrooms. The constructivist theory has enriched the descriptions of how teachers engage students in the learner centred environment. Teachers should ensure that the learning environments, opportunities, interactions, tasks and instruction foster deep learning.

The analysis made by theorists guides them to reach the consensus that, the most influential constructivist theory was the one presented by renowned psychologists such as Jean Piaget and Lev Vygotsky. This study discusses the constructivist theory by focusing on the work done by these two theorists. In this case, Piaget developed constructivist theory focusing on the cognitive characteristics while Vygotsky developed constructivist theory by focusing on social characteristics. Thus, a human can use two ways to know and build an understanding of information. It can be in an independent venture (individual context of learning or individual constructivism) or in a social process (social context of learning or social constructivism).

Lowenthal and Muth (2008) confirmed this when they found that all students construct knowledge and meaning individually and socially. Therefore, in a teaching and learning environment teachers should create individually and socially meaningful learning contexts.

In both individual and social constructivism, students can construct knowledge and meaning through the learner centred classroom. Learning is a complicated process so students can construct knowledge and meaning in an environment that fits at that moment. Constructivists believe that teachers or technology cannot transmit knowledge and understanding, but students must construct them. Students interpret activities by relating to their prior experiences (Ware, 2006). Learning may well occur both individually and cooperatively in small teams and large groups. These ideas provide flexible circumstances for students to learn in their capability. It is for these bases that teachers need to create an appropriate environment that favors the use of a range of learner centred teaching practices. This study inspires because the learning theories guide students learning and cover teaching methods, curriculum, and education reforms. All these aspects underpin this study.

- **Individual constructivism**

Individual constructivism as a theory of cognitive development is a scientific work introduced by prominent psychologist Jean Piaget (1896-1980). According to Piaget, an individual constructs new knowledge from prior learning or experiences. The person learns by manipulating materials in the physical environment regarding developmental stages and learning styles (Nsamenang & Tchombe, 2011). Learning is constructed within the individual who attaches meaning using previous knowledge and experience. In the process, the internal change in cognitive schemata occurs when students are linked to the current environment (Nyback, 2013). Similarly, Brophy (2002) added that students construct knowledge by actively relating the new information to their individual experiences and current mental structures. According to Piaget, learning is considered as an active process that involves learning by doing where students must cognitively manipulate the subject matter to the cognitive connection from the new information to their previous knowledge (Sawyer, 2008).

Powell and Kalina (2009) opined that knowledge construction occurs by cognitive processing of interactions in the environment and the construction of mental structures to make sense from those practices. For Piaget, social interactions can occur as the learning process, but it is the individual who constructs knowledge based on his/her experience. Therefore, student knowledge and experience are indispensable in the process of learning. The student uses this opportunity to

construct knowledge of the world. It involves the individual constructions of knowledge discovered in interaction with the environment (Bonk & Cunningham, 1998 as cited in Ware 2006). Hattie (2009) made more clarifications on an individual when he said, “learning is a personal journey for the teacher and the student, although there are remarkable commonalities in this journey for both” (p.23). This study agrees on one hand that students can construct knowledge individually out of their experiences. However, it argues that students will benefit more when the learning environment allows interactions with teachers, content, and materials. Teaching and learning are social activities, so to learn well an environment of interactions has to be created. This study supports the fact that, students learn successfully in an interactive environment as advocated in the learner centred teaching practices.

Under individual constructivism, knowledge construction involves processes called assimilation and accommodation (Piaget, 1977). Learning proceeds by the interplay of assimilation (ie adjusting new experiences to fit prior concepts) and Accommodation (ie adjusting prior concepts to fit new experiences) (Sutton & Seifert, 2008). More clarifications of these processes are explained by (Silverthorn, 1999), according to scholars assimilation occurs when people transform incoming information so that it fits within their existing schemes or thought patterns and accommodation occurs when people adapt their schemes to include incoming information (p.2).

Piaget (1977) adds that assimilation and accommodation work together to develop students thinking and to create a cognitive equilibrium, which is a balance between current and new knowledge. He elaborates these processes by looking into three stages. First, students are satisfied with their thinking method; they are in a state of equilibrium. Second, students become aware of the deficiency in their existing thinking process and become dissatisfied and thus experience cognitive conflict, they are in a state of disequilibrium. Third, students adopt a more sophisticated method of thinking that eliminates the deficiencies; they are in a state of stable equilibrium (Silverthorn, 1999, p.2).

Scholars described the concepts assimilation and accommodation by considering how they work in the classrooms. Nsamenang and Tchombe (2011) explained these ideas occur when students in the classroom assimilate or learn new knowledge, which means students have incorporated the new knowledge into their current mental structure without changing it. The harmony or agreement implies understanding or acceptance of the new knowledge. However, disharmony occurs when there is a lack of understanding, and this can be resolved by creating an equilibrium

that brings harmony. This view is the accommodation, which is the process of adjusting the mental structure to fit new knowledge (Nsamenang & Tchombe, 2011).

Based on the above descriptions, the learner centred teaching practices conducted by teachers are expected to play the role of changing or adjusting the mental structure of students learning new concepts. Teachers are responsible for reconciling the students' mental structures during assimilation and accommodation. They should facilitate appropriate learner centred practices that promote students' cognitive abilities. This view follows Bächtold's (2012) argument that learning practices should involve assimilation and accommodation processes to make reorganization and stabilization of students cognitive structures used to learn new concepts. The current study interprets that the processes of assimilation and accommodation occur during the teaching and learning process. Nevertheless, the concepts do not give precise information about how teachers should apply these practices. The procedures do not provide practical instructions on how it works in teaching and learning contexts. The information seems to be more theoretical than practical. In fact, teachers need appropriate instructions guiding how to apply the learner centred teaching practices in different stages of the lesson development.

- **Social constructivism**

Social constructivism is explained much by the work of the social cognitive theorist Lev Vygotsky (1896-1934). His ideas formed the basis of this theory (Vygotsky, 1962) which emphasizes the importance of social interaction and culture in the construction of knowledge and learning. According to Vygotsky knowledge and learning are constructed when people interact with each other. The scholar considered the role of social interaction as a characteristic of learning. Nyback (2013) added that learning is constructed in a social environment. It occurs when students dialogue about problems in a social environment. Students are active participants in the learning process. Powell and Kalina (2009) insisted that students should not work with teachers only, but they should also focus on working with fellow students. It is because students have a lot to communicate with one another and in so doing gain knowledge. They meet various ideas in many ways and so must have something to share.

Under a constructivist or learner centred environment, the role of the teacher is to prepare the context at which all students feel free to question, discuss, interact, and learn rather than receive answers from the teacher. This is to say, classroom practices should be structured in a way that students learn from the teacher and peers. In line with the preceding idea, Brophy (2002) established that learning is a result of participation in a social environment. On the same token,

Powell and Kalina (2009) considered the Vygotsky social interactions as necessary for student effective learning. This is accompanied with the fact that people are social and intellect improves in a social environment.

Learning is not merely the assimilation and accommodation as Piaget presented it (Vygotsky 1962). It is the process of gaining new knowledge through real relationships between students and teachers. Vygotsky's model promotes collaborative learning between peers and other adults. It emphasizes the importance of the relationship between students and teachers in the learning process (Nsamenang & Tchombe, 2011). This study perceives the relationship between teachers and students as important. Therefore, teachers have an obligation to make sure they build a positive relationship to support students. They should motivate students to work properly and help them learn successfully.

During the learning process, the student first meets with new knowledge in social contexts. Vygotsky referred to these interactions as occurring on the social plane that constituted a teacher facilitating students in the classroom and scaffolding them to learn. The students get support or assistance from an expert that enables them to complete a task or solve the problem. It means that social interactions organize the shift of learning from a social plane (between people) to an individual plane (inside the student) where the new knowledge is internalized (Abell & Lederman, 2007). Therefore, the construction of ideas is primarily occurring inside the head of students. It means that students interact with others but must construct knowledge for themselves. They should make their sense of what the teacher is teaching based on their prior experience (Brophy, 2002).

Social constructivism theory puts premier on the role of social and cultural factors. It insists that the core condition for students' learning is based on the social use of tools (eg speech, signs, text, language) which are essential parts of social, cultural, and cognitive development (Harassim, 2012). According to Garton (1992), the theory assumes that cognitive development does not occur in isolation, but it occurs together with language, social, cultural, and physical development. The theory promotes social and communication skills that occur in the classroom environment and insists on students making cooperation and exchange of ideas (Garton, 1992).

This study presents information by referring to Vygotsky concerning with the sociocultural theory. In this case, the theory looks at important contributions that society makes to human cognitive development. It suggests that human learning is largely a social process. It stresses the interaction between people and culture. Each culture provides cognitive tools needed for

development. The tools allow students to use their basic mental abilities in a way that is adaptive to the culture in which they live. Scholar places a greater emphasis on how social factors and interactions influence cognitive development. The route of development and thinking in one culture might be different to that of another culture. How we learn and think is primarily a function of the social and cultural environment. These processes are facilitated by society in the form of parents, teachers and peers.

By focusing on the relation between cultural contexts and learner centred teaching practices, it was confirmed by findings reported from various educational contexts. These aspects show a range of practices. As a result, there is no way research could exclude culture from classroom studies. This is because culture influences learner centred teaching practices performed by teachers in their everyday life. The fact is in line with Pepin (1998) who explained that teachers and students perform classroom practices by following cultural ideas (values, beliefs, behaviors) and these are powerful determinants influencing developments in education systems (Alexander, 2008). Even the differences in the approach to teaching are likely to be caused by the differences in the teachers' cultural beliefs and the learning contexts (Richardson, 2003).

Culture has an impact on various practices operating inside and outside the schools. In a study by Meng (2009), Chinese and American educators found that native culture greatly influences teachers' knowledge of teaching and students' learning. A good example is cited from Hiebert and Stigler (2004) who opined "teaching can only change the way culture change" (p.13). Furthermore, Medin and Bang (2014) stated that "culture is everywhere in our schools and classrooms, including in places we least expect it. It influences everything about student learning including how children see themselves in relation to nature" (p.64).

Alexander (2000) in the comparative study of five countries discovered how teaching and learning practices are shaped by school values, organization, local pressure, history as well as culture. Likewise, Schweisfurth (2013) asserted that pedagogy incorporates cultural processes that develop attitudes, perceptions, understanding, and teaching practices. Therefore, to be successful in the efforts of educational stakeholders to research, describe, and improve teaching practices and performance, the researchers must put into consideration the cultural attributes. The researcher considered this idea in designing this study because students and teachers follow a particular culture to perform their learner centred practices. In this regard, the study uses an ethnographic strategy to make a close and extensive observation of these practices in the visited classrooms. The approach helps to capture many practices including authentic cultural practices. In fact, the ethnographic strategy provides descriptions about culture.

In addition, Vygotsky stipulates further that the development of students' higher mental process depend on the presence of mediating agents in students' interaction with the environment (Kozulin et al., 2003). These agents can be either human or tools. The human mediator can be the teacher, mother, and father. Therefore, the student can be mediated at home (unstructured) or in school (structured). The mediation made by tools may involve symbols, signs, texts, counting fingers, etc. Vygotsky clarifies that tools act as mediators used by students in the context of particular sociocultural activities. These tools reveal information about how students think, reason, and form concepts and the most important of which is formal education (Kozulin et al., 2003).

This study concurs with the idea of making classrooms conducive where students and teachers interact in social and cultural ways. It is because effective learning needs an environment that inspires students to become active and talk, perform practices, and cooperate in various and flexible ways. Students come into the classrooms with their prior ideas. Teachers create environments that assist to connect to new knowledge. What students need is the appropriate setting that promotes active interactions. Teachers should present many learning opportunities that help students to construct knowledge. This situation supports the application of learner centred teaching practices.

The process of instructing and guiding students learning socially and culturally is described well in the area called Zone of Proximal Development (ZPD). The concept ZPD is defined as the distance between the actual developmental level as determined by independent problem solving and the potential developmental level as determined through problem solving under adult guidance or in collaboration with more capable peers (Richardson, 2001, p.1057; Schweisfurth, 2013, p.23). It just refers to the gap appearing between what student can perform without help (alone) and what student can perform with a teacher's support (Doyle, 2008). Or is the difference between what students can achieve independently and what students can achieve when they get support. The descriptions above confirm that students' learning in the classroom is directly dependent on the support provided by the teacher (Abell & Lederman, 2007).

Furthermore, Lui (2012) illustrated the levels in the ZPD. The actual development level refers to the independent level that covers skills students already mastered and helps to carry out learning practices independently. The potential development level relates to the practices students could not be able to do independently, but students are capable of doing them under the guidance of teachers. In between the actual and the potential levels, there is what is called the ZPD. It is not

a permanent state, but it is the next step for students to be able to do something on their own (Lui, 2012; Vygotsky, 1962).

More clarifications are made on the two levels as connecting to the concepts of prior and new knowledge. These concepts are very crucial for determining students learning. In this case, Swan (2005) opined that all the learning practices occurring in the ZPD intend to bridge the gap between what is known by a student (current knowledge) and what is known through a teacher (new knowledge). The teachers' task at this zone is to help students reach their goals by stimulating the learning practices. Teachers guide students, manage their activities and direct their learning. They perform various classroom practices to assist students in solving problems by themselves and working on projects (Kozulin et al., 2003). The teacher in this case means helping students to learn. Therefore, effective teaching should be focused on the ZPD.

Lui (2012) attempted to show and describe how different locations in the ZPD are working during the learner centred teaching and learning practices (see Figure 1).

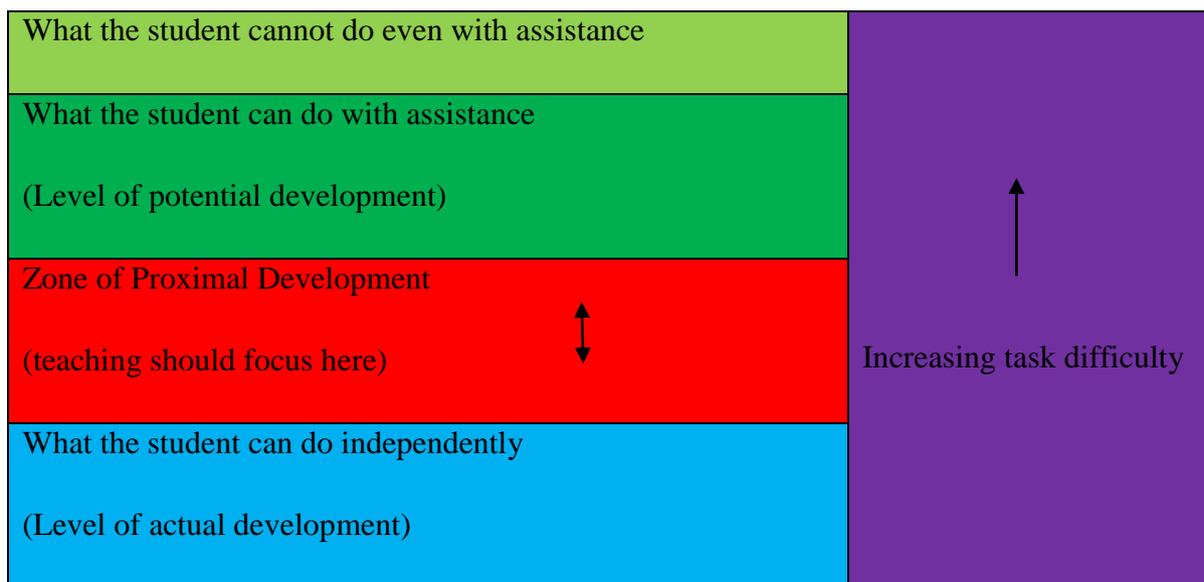


Figure 1: Different locations in the Zone of Proximal Development

Drawing from various scholars, the concept of ZPD seems to be imperative in education. It is regarded as the zone in which students can accomplish a task with the assistance or accompaniment of a more knowledgeable other (eg a teacher). Providing appropriate assistance should boost students to achieve the learning practices successfully. The assistance in the ZPD needs to be accompanied by learner centred teaching practices. The students should work actively in the learning process. It is the area where the student's maximum learning is occurring.

Vygotsky is using the ZPD to advise educators that the teaching practices should be planned and executed focusing on the knowledge provided at this zone. The scholar believes that students acquire the framework of thinking from the teachers who provide students with assistance and gain greater understanding. Teachers have been instructed to employ these practices but they lack appropriate training to make them competent. In fact, teachers need proper training, motivation, commitment, and improvement of the learning environment to assist students successfully. Therefore, the education system should ensure teachers are connected to the foregoing attributes to carry out learner centred teaching practices accurately.

This study joins with the theorists and suggests that the learner centred teaching practices should be performed successfully at the ZPD. It requires teachers to give proper assistance to students and help them learn the subject matter. Normally effective teachers focus learning activities at this zone. This study, however, observes that the ZPD lacks precise information on how to go about teaching and learning in the real classrooms. It does not have a direct connection to teaching methods that teachers are supposed to apply to promote learner centred teaching practices in different stages of the lesson development. Teachers need more instructions on how to employ the appropriate classroom practices.

The characteristics of the constructivist theory

The constructivist theory is being applied in an educational environment to facilitate students learning. To use it in an educational setting, scholars have provided the characteristics that guide the learner centred teaching practices to assist teachers in designing the appropriate teaching and learning environment. There is the presence of a plethora of literature that focuses on the characteristics of the constructivist theory (Brooks & Brooks, 1999; Koohang et al., 2009; Mishra, 2007; Murphy, 1997; Yager, 1991). These characteristics elucidate different ways in which the constructivist theory can be functional in the classrooms. Such features are relevant to this study because they are underpinning the connection that exists between the constructivist theory and the learner centred teaching practices. Various theorists have stated characteristics that appear to be different and others are the same. For similar characteristics to appear frequently, it confirms that they are essential for the learning process to occur. It is important to note that, all features lead to how students learn the subject matter. Therefore, teachers' interpretation of these characteristics is essential for effective application in the classroom. However, teachers need to have a deeper understanding of these characteristics.

In the first place, there is a group of scholars, who presented characteristics such as (a) Teachers serve as facilitators. (b) Knowledge construction is emphasized. (c) Favor cooperative learning. (d) Learning practices encourage reflection. (e) Students play a central role in controlling learning. (f) Learning environments are authentic. (g) The prior knowledge is considered in the construction of new knowledge. (h) Higher order thinking skills and deep understanding are emphasized. (i) Students seek knowledge independently. (j) Assessment is authentic and conducted during teaching (Jonassen, 1994; Murphy, 1997; Koohang et al., 2009; Perkins, 1991).

Other educators stated guiding principles of the constructivist theory that have been applied in the classrooms. Brooks and Brooks (1999) summarized the principles that are presented under the constructivist view of learning by Vygotsky (1962). The principles include the following: (a) Learning is active (mental or physical). (b) Learning involves language. (c) Learning is a social activity. (d) Learning takes time. (e) Learning needs knowledge. (f) People learn to learn as they learn. (g) Learning is contextual (p.93). In addition, when students ask questions they produce a constructivist classroom. In this case, students want to get an answer to construct knowledge or build understanding. According to Brooks and Brooks (1999), constructivist theory believes that: (a) Learning is perceived as an active, not a passive, process where knowledge is constructed and not acquired. (b) Knowledge construction is based on personal experiences and the continual testing of hypotheses. (c) Each person has a different interpretation and construction of knowledge process, based on past experiences and cultural factors. (d) Constructivists such as Piaget had overlooked the essentially social nature of language and consequently failed to understand that learning is a collaborative process.

Moreover, there are guidelines suggested in conducting constructivist classroom teaching practices. Teachers could use these guidelines to prepare practices that assist students in learning the expected subject matter. Mishra (2007) summarizes them as follows: (a) The teacher needs to use various didactics methods to teach concepts. (b) Encourage students' problem solving. (c) The teacher must know the present knowledge of the students to challenge students. (d) Encourage reflection by giving students the opportunity to talk about their views. (e) Students are allowed to raise questions. (f) The students should be responsible for presenting and defending their ideas to the rest of the classroom members.

Walters et al. (2014) stated several practices related to constructivist and learner centred environments. These practices might be organized well to guide teachers in assisting students to learn effectively. They can be structured to help students construct understanding during the curriculum implementation process. They include: (a) Questioning focuses on why and how. (b)

Allowing multiple teaching methods. (c) Encourage students to explain their solution strategies. (d) Challenge students to reason and help students to critique others. (e) Make the connections between subject matter and real-life experiences. (f) Encourage the use of different tools/technology to explore and solve problems. (g) Support students to advance (Walters et al., 2014).

Furthermore, Jonassen (1994) proposed that there are eight characteristics of the constructivist learning environment that apply in both perspectives. So constructivist learning environments: provide multiple representations of reality; emphasize knowledge construction instead of knowledge reproduction; emphasize authentic tasks in a meaningful context rather than abstract instruction out of context; provide learning environments such as real world settings or case based learning instead of predetermined sequences of instruction. Other characteristics include, encouraging thoughtful reflection on experience; enabling context and content dependent knowledge construction; supporting collaborative construction of knowledge through social negotiation, not a competition among learners for recognition; and multiple representations avoid oversimplification and represent the complexity of the real world (Jonassen, 1994).

Yager (1991) states other characteristics of the constructivist theory focused on constructivist teachers. Later they have been stated in a paper presented by Kim (2005). The characteristics guide teachers in the classroom practices that assist students to construct knowledge and meaning properly. Therefore, teachers are advised to adopt and use these characteristics to improve classroom interactions that result in effective learning and performance. In this case, the teachers: (a) Accept and encourage students' invented ideas. (b) Encourage students' cooperation and presentation of ideas. (c) Modify students' practices based on their experiences and interests. (d) Encourage free discussions. (e) Invite students' questions, answers, and ideas. (f) Encourage students to challenge the ideas of others. (g) Use cooperative teaching. (h) Allow students sharing ideas and learning tasks. (i) Welcome the reflection of new experiences.

Overall, characteristics of the constructivist theory described by various scholars provide ways employed by human/students constructing knowledge and meaning. These characteristics support constructivist processes such as assimilation, accommodation, and zone of proximal development. These processes are presented in this study to establish how they are linked and guide the learner centred teaching practices taking place in the classrooms. It is an absolute fact that teachers need to get a clear understanding of how to incorporate these characteristics in the teaching process. However, the analysis supported by several educators discovered that these characteristics have not clearly linked to facilitating the learner centred teaching practices in the

classrooms. The problem may be caused by a lack of proper understanding of the theory among teachers. The foregoing facts could be the reasons for ongoing challenges occurring in the implementation of constructivist teaching.

3.4 Learner centred teaching practices

- **Understanding the learner centred teaching practices**

The constructivist theory is essential for facilitating the learning of all students. The theory is about how students learn and understand. It emphasizes that learning is an active and constructive process. Students individually or socially are constructing meaning through active participation and interaction during the lesson. According to Ebanks (2010), the constructivist theory is said to have a direct connection to learner centred teaching practices. It is surely a learner centred theory. Henson (2003) also supports this point when he asserted, “the constructivist theory is also called a learner centred educational theory” (p.8). From scholars such as Fosnot (1989), Gray (1997), and Richardson (1997) it can be inferred that the productive constructivist environment incorporates the learner centred teaching practices. The classroom is usually encouraging students to utilize active learning techniques and practices.

This study works closely on learner centred teaching practices. It perceives these practices as appropriate for education provision. They should be taken as the solution to the problem of poor performance of the students observed in the national examinations. In addition to the same perspective, it is argued that effective integration of the learner centred teaching practices in the classrooms depends much on teachers’ knowledge, skills, and experiences of interpreting the characteristics of constructivist theory appropriately into the classrooms. The interpretation and execution are also supposed to be influenced by the teacher’s knowledge gained from the formal educational training and other educational programs.

Scholars have been defining learner centred teaching according to their point of view. Brackenbury (2012) defines learner centred teaching practices as a collection of instructional practices that shift the emphasis of courses from the instructors’ goals and methods of delivery to the knowledge and skills that the students develop (p.12). Collins and O’Brien (2003) define learner centred teaching as an instructional approach in which students influence the content, the activities, the materials, and the pace of learning. This learning model places the student (learner) at the center of the learning process (p.339). Similarly, the learner centred teaching maintains the shift of focus from teaching to learning. The emphasis shifts from the teacher and the content towards students. The scholar state what the teacher and facilitator perform in the learning

environment. A teacher tells, a facilitator asks; a teacher lectures, a facilitator provides support to students; a teacher gives answers according to curriculum, a facilitator provides guidelines and creates the environment for the student to arrive at his/her own conclusions; a teacher mainly gives a monologue, a facilitator dialogue continuously with students (Nyback, 2013). The preceding points continue to insist that under the learner centred environment, a teacher works as a facilitator. In this case, the level of learner activation grows. This means that the application of the learner centred teaching practices gives a high level of activation among students. Teachers can only facilitate learning and help students to increase motivation and engagement through curiosity (Mykrä, 2015).

To achieve the lesson objectives, teachers are encouraged to make sure that they employ learner centred practices to help students learn the subject matter successfully. Scholars have stated these practices to support students learning the subject matter. The practices focus on the students and take them as important in the learning process (Ang et al., 2001; Ültanir, 2012). They place interest on students rather than on other people participating in the education system. They focus on what students do rather than what teachers do (Gibbs, 1995; Pulist, 2001) and they place the students at the center of the learning process (Attard, Di Ioio, Geven, & Santa, 2010; Bransford et al., 2000; Chegenizadeh, Nikraz, & Zadeh, 2012).

In short, the learner centred paradigm shifts the educational provision from putting emphasis on teaching to learning. It means that in the classroom, the teacher should focus more on facilitating students learning the subject matter effectively. The teacher should talk with students and encourage reflection and active participation. Also, students should solve and answer questions, discuss, explain, debate, brainstorm in class, and work in teams. According to Gray (1997), Meena (2009), and Namangolwa (2013), the teachers' facilitative roles in this way are shifting teaching to the process of improving students learning. Effective learning makes students' knowledge deep, and this enables them to link between previous and new knowledge (Blumberg, 2008). The foregoing practices are expected to result in active learning that is more likely related to the higher quality learning outcomes and the achievement of the educational programs (Biggs & Tang, 2007, 2011; Prosser & Trigwell, 1999).

For students to benefit in the learner centred environment, teachers need to be well acquainted with the learner centred practices. They should possess proper knowledge and skills on how to guide students learning the subject matter successfully. Students taught by teachers possessing these competencies are in a good position to learn and acquire the subject matter allocated in the competence based curriculum. This idea corroborates Collins and O'Brien (2003) who stated that

accurate implementation of the learner centred practices leads to the increase of deeper understanding, greater retention of knowledge, learning motivation, and a more positive attitude toward the subject matter. As such, these are among the reasons causing education systems to implement the learner centred practices.

In the same perspective, the American Psychological Association (1997) published 14 learner centred principles that describe the emotional and environmental conditions that confirmed to increase students learning and achievement. The principles are connected to educational engagement. They should assist teachers and students to implement curriculum successfully and thus improve educational performance. To carry out these principles, educators need to interpret them and enable educational stakeholders to utilize them effectively. The principles are organized into seven learner domains such as cognitive, metacognitive, social, emotional, developmental, affective, and individual factors that influence learning (Ware, 2006).

According to Ware (2006), the following principles emphasize the active and reflective character of learners in learning and the psychological factors that are controlled by the student internally rather than through conditioned behavior or psychological aspects. These principles focus on the relationship of external contexts and environmental factors to the internal factors inside the student. The 14 learner centred principles as presented by the American Psychological Association (1997) are as follows:

- i. The nature of learning process: The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.
- ii. The goals of the learning process: The successful learner over time and with support and instructional guidance can create meaningful, coherent representations of knowledge.
- iii. Construction of knowledge: The successful learner can link new information with existing knowledge in meaningful ways.
- iv. Strategic thinking: The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.
- v. Thinking about thinking: Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.
- vi. Context of learning: Learning is influenced by environmental factors, including culture, technology and instructional practices.
- vii. Motivational and emotional influences on learning: What and how much is learned is influenced by the learner's motivation. Motivation to learn, in turn, is influenced by the learner's emotional states, beliefs, interests, and goals, and habits of thinking.

- viii. Intrinsic motivation to learn: The learner's creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control.
- ix. Effects of motivation on effort: Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learner's motivation to learn, the willingness to exert this effort is unlikely without coercion.
- x. Developmental influences on learning: As individuals develop, there are different opportunities and constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.
- xi. Social influences on learning: Learning is influenced by social interactions, interpersonal relations, and communications with others.
- xii. Individual differences in learning: Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.
- xiii. Learning and diversity: Learning is most effective when differences in learners linguistic, cultural, and social backgrounds are taken into account.
- xiv. Standards and assessment: Setting appropriately high and challenging standards and assessing the learner as well as learning progress including diagnostic, process and outcome assessment are integral part of the learning process.

After the American Psychological Association (1997) presented the learner centred principles, educators have organized them to apply in the teaching and learning environment so as to improve the students' learning and performance. In addition to the same perspective, Weimer (2002) and Weimer (2012) presented student centred principles and characteristics. The observations showed that the principles and characteristics of student centred teaching have gained extensive use in all levels and disciplines of education. They are crucial for reminding educators and supporting their teaching and learning process. They insisted to apply it in the classrooms to improve students' learning and performance. All countries (including Tanzania) that need teachers and students to succeed in education, have been adopting these principles and characteristics. The important issue is to make sure they should be incorporated into the education systems to help educators/teachers apply successfully.

To accomplish the foregoing purpose Weimer (2002) presented the principles as follows:

- i. Student centred learning shifts the balance of classroom power from teacher to students thus fostering active learning and engagement among peers.
- ii. Student centred learning enables critical thinking and is a means to develop knowledge rather than a collection of facts by building upon and challenging prior learning.
- iii. Student centred learning situates the teacher as facilitator and contributor rather than authoritarian and director of knowledge. The teacher facilitates learning and not forcing it.
- iv. Student centred learning returns the responsibility for learning to the students, so students are able to discover their strengths and weaknesses and take part in directing their own knowledge gain. It creates environments conducive to effective learning.
- v. Student centred learning employs effective assessment to provide learning and inform future practice. It deploys a variety of assessment items to promote learning.

Later, Weimer (2012) added that the student centred characteristics guide the teachers on how to facilitate teaching and learning in the classrooms. The scholar described what teachers should do in the classrooms. He stated that:

- i. Student centred teaching engages students in the hard, messy work of learning (teachers should guide students to do many learning tasks).
- ii. Student centred teaching includes explicit skill instruction (teachers have to teach students to develop general learning skills).
- iii. Student centred teaching encourages students to reflect on what they are learning and how they are learning it (teachers should help students reflect on how to take responsibility for changing their learning strategies according to their needs).
- iv. Student centred teaching motivates students by giving them some control over learning processes (teachers should discover ethically responsible ways to share power with students/power is redistributed to students).
- v. Student centred teaching encourages collaboration (teachers have to recognize and research consistently confirms that students can learn from and with each other).

The analysis of the foregoing principles and characteristics proves that student centred teaching has attempted to guide teachers on how to help students learn successfully. Teachers should respect and apply these principles and characteristics accordingly. The education system, teacher training and school based training have to instruct and motivate teachers applying learner centred teaching. Further to that, teachers should understand and apply specific methods that might be

incorporated into different stages of the lesson development. To facilitate learning teachers have to ask key questions such as “what will I do to help students effectively interact with new knowledge?” (Marzano, 2007, p.57). The teachers are required to use different teaching methods to help students learn and achieve the expected outcomes (Mykrä, 2015).

To accomplish the foregoing, educators have been stating various teaching methods used in the learner centred classrooms (see Brooks & Brooks, 1999; Quist, 2000; Kim, 2005; Jones, 2007; Byrd, 2008; Hardman, 2009; Sunzuma et al., 2012; Namangolwa, 2013; Mykrä, 2015). These are discussion, question and answer, role play, debate, jigsaw, demonstration, project work, observation, experimentation, field trips, problem solving, brainstorming, gallery walk, and drama. Other practices include interactive methods, discovery learning, cooperative practices, challenging students’ answers, assessing classroom practices, sharing ideas, and modifying teaching practices based on students’ experiences and interests. In fact, teachers are motivated to facilitate learning by using several learning methods. They are required to be flexible and apply methods that are suitable for engaging students. Due to its effectiveness learner centred teaching practices should be recommended in many learning contexts. However, educational stakeholders have to note that its implementation needs a favorable learning environment. The one that includes qualified and committed teachers, adequate teaching and learning materials, suitable curriculum and examination system, motivated students, and other supporting factors.

Based on the principles, characteristics and methods described above, this study cautions teachers about the learner centredness. Teachers have to guide classroom interactions and perform their duties entirely. They should not allow students to perform everything. They have to act as good guides or facilitators who provide chances to students to learn actively by themselves. It is in line with Sutton and Seifert (2008) who assert that learner centred teaching practices do not mean that teachers are handing over the organizational work of teaching practices totally to students. They are still the expert figures in the classrooms and still have the responsibility to guide learning practices in an efficient manner. Educators such as Armbruster, Patel, Johnson, and Weiss (2009), Bransford, Brown, and Cocking (2000), and Sutton (1991), all advised teachers to organize practices and encourage an environment that favor students to become independent and critical thinkers.

In order to guide classroom practices properly, this study suggests teachers know their position, roles, and duties clearly. They should work and create an environment for teachers to support and manage students learning. Hattie (2009) asserted that teachers have to know whether learning is correct or incorrect, to experiment and learn from experience, to monitor, seek and give

feedback, and to try alternative learning strategies when others do not work. Westbrook et al. (2013) added that teachers should know students as important clients who guided well and assisted in learning the subject matter profoundly. Teachers have to provide feedback, attention, and learning support, illustrate the students' backgrounds and experiences, and create a safe environment.

Another aspect for teachers to consider in the learner centred environment is to put emphasis on engaging students. It is in line with teachers focusing on guiding all students learning by performing several practices. Students are motivated to be more involved in the classroom practices. According to Marzano, Pickering, and Heflebower (2010) engagement means to motivate students on attending to the teaching and learning practices occurring in the classroom. There are various practices teachers can do to engage students and capture their attention and enhance the understanding of the subject matter. Teachers need to consider practices that enhance students' engagement in the learner centred environment.

Marzano et al. (2010) provided questions for teachers to consider when engaging students in learner centred classrooms. There are four questions: (a) *How do I feel?* Teachers should use various means to know how students feel when they are in the classrooms. (b) *Am I interested?* Teachers need to capture the attention of the students and make them build interest in the practices they are engaged in. (c) *Is this important?* Teachers have to make students aware that the practices are important. They should link practices to school goals, students' goals, academic and real-world applications, as well as students' ambitions. (d) *Can I do this?* Teachers should motivate students to do the practices correctly. Students should believe that it is possible to learn and perform challenging tasks (Marzano et al., 2010).

The importance of learning engagement in influencing students' academic achievements is obvious among educators. Therefore keeping students engaged during the learning process is one of the most important considerations in the learner centred education. To achieve students engagement, the teacher-student relationship must be enhanced (Marzano, 2007). One of the strategies is for the teacher to choose effective teaching methods applied in learner centred education. The various teaching methods and techniques must support different stages of the lesson development. Also, positive learning experiences are expected to improve student learning. The foregoing aspects give a better chance for maintaining and enhancing student engagement (Marzano 2007; Mykrä, 2015).

This study supports the engagement of students in learner centred classrooms as a vital process. Actually, it has been supported and implemented in various learning contexts. However, the experience shows that many teachers did not consider applying learner centred appropriately. Perhaps they did not understand these practices properly. This view might be the reason why there are poor teaching, learning and performance among the students in many schools. Based on this fact, it is important for teachers to know this scenario. Therefore, teachers should put effort into how to involve students successfully in the learner centred teaching.

In a similar vein, one of the well-known practices used by teachers for engaging students under the learner centred paradigm is the group discussion method. Experience showed that many teachers prefer this method as the major in learner centred teaching practices. It is to perceive that the teachers meaning of the learner centred teaching has frequently focused on the discussion method. In this case, teachers and students interact equally, group work is encouraged and students learn to collaborate and communicate with one another. Students should be more interested in learning and participate actively. Together with their preference to use group discussion, teachers still need more knowledge and skills on how to employ this method successfully. They need to know how to use it in the classrooms where there are challenges such as overcrowding and poor language mastery among students.

The present study found the following guidelines presented in the form of questions helpful to teachers. In this regard, a scholar provided questions for guiding teachers in preparing, organizing, and executing group discussions in the classrooms. Analysis of these questions indicates that they might be adopted in the teacher education colleges to improve teachers' knowledge about the group discussion. The questions are: When is it best to organize small group discussion? How can students be organized to listen and value each other's contributions? How can the learning be maximized? How does the teacher estimate the time for the practices and when to intervene on the ideas? What will be done if students do not talk in their groups? (Moore, 2000). These questions provided some techniques that might guide teachers to employ group discussion effectively. It is important to note that students benefit from learning in groups. However, observation indicates that teacher education has not adopted these techniques or teachers do not employ them during teaching.

Moreover, learner centred teaching has been stated as a strategy to promote students' activeness. This paradigm sometimes is called an active learning method. It engages students and encourages them to be at the center of learning. They think hard instead of receiving information from the teacher. Students play an important part in the learning process. In general, the learning activities

should engage students in active learning. Likewise, learner centred teaching helps students to make meaning through active learning and is supported by vast research base indicating its effectiveness (Bransford et al, 2000; Doyle 2011; Vanada & Adams, 2015; Weimer, 2002). When students are actively engaged, they learn better and make knowledge more meaningful (Orchard, 2007). Also, active learning is engaging and intellectually exciting, it encourages students to succeed in higher education, it makes students become lifelong learners. By referring to the foregoing ideas, students should be actively engaged in processing information and the teaching and learning process should involve interactions among teacher, students and content (Marzano, 2007; Mykrä, 2015).

In order to acquire a good understanding of active learning, scholars reported domains for facilitating active learning. They have included strategies that might be applied by teachers in teaching such as: (a) Activating students' prior knowledge: teachers are advised to consider prior knowledge and interest of the students to encourage learning. (b) Activating students' minds: teachers should activate students' minds by creating cognitive conflict in the subject matter they discuss. (c) Activating hands: students should be guided to perform hands-on practices and practical. (d) Activating cooperation: the practices should promote and motivate student-student or cooperative learning. (e) Activating communication: the communication between students should provoke meaning making and shaping concepts in the students' minds (Kapanadze & Eilks, 2012).

By considering the preceding guidelines for students' engagement, group discussion, and active learning, this study agrees that these aspects are necessary for the learner centred teaching. However, it argues that they are insufficient. This is because to work successfully in the classrooms, teachers need to accompany various teaching methods. It takes cognizant that the classroom is an environment that normally encompasses students with different learning abilities. This environment is complex to some extent. Teachers' hold of a repertoire of practices is vital, as it would help to provide them with an ample chance to address the learning needs of the students.

According to Hudson et al. (1999), the teacher is supposed to think and decide how to handle the classroom practices. This view helps to accomplish the goal of educating all students according to their level of understanding. Kansanen and Meri (1999) said that every teacher is known to have a didactics of his/her own. This study agrees with scholars because teachers are unique. Therefore, they should teach according to the knowledge and skills they have acquired. This view makes the teacher's own theoretical background and pedagogical skills fundamental for students

learning the subject matter successfully. To improve these facts educators should conduct teachers' assessment/inspection and provide appropriate techniques for improvement.

In performing their learner centred teaching practices, teachers are observed to interact with various components. One of the models that might be suitable for conceptualizing these practices is the didactics triangle (das didaktischesdreieck). According to Hudson and Meyer (2011), this model presents the discussion of the pedagogical relationship between teacher, student, and content/subject matter. It shows building blocks interacting independently and alternating with each other in any didactics system. These blocks have been expected to form the educational practices in the classrooms. This model facilitates the analysis of the three components called *teacher (Lehrer)*, *student (Schüler)*, and *content/subject matter (Gegenstand)* (see Figure 2).

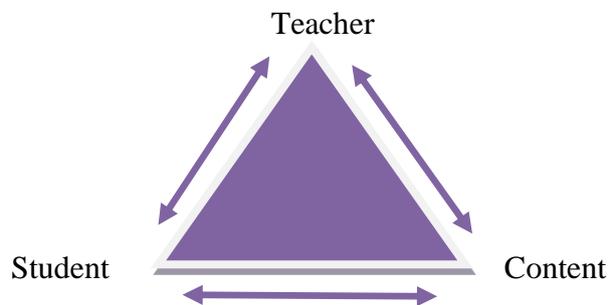


Figure 2: Didactics triangle

According to Zierer and Seel (2012), the didactics triangle provides descriptions of various relationships that might occur between the three elements. It could be between student and teacher, student and content, teacher and content. The arrows stand for relations between these elements as they appear in the institutional instructional teaching and learning process. The didactic triangle is a systematic representation that enables the analysis of its elements and other levels of relations and aspects of instruction. The scholar brings out further evidence to show that the didactic triangle as a theoretical tool is still alive; it is useful and could be developed further. Based on this fact, there are some educational aspects that can be incorporated and interact in the triangle. They can be used to discover new and relevant research questions in the field of science education. More and more relations between the elements emerge when the triangle is studied further (Kinnunen, 2009).

Uljen (1997) clarified further that the triadic relation occurs between somebody who teaches (teacher), somebody who is taught (student), and something that is taught (content/knowledge). Moreover, Sunkel (1996 as cited in Kraft, 2014) presented information focusing on the didactic triangle where the student and the teacher show interest in the topic. They build a joined attention

towards the subject matter. It is the knowledge needed to conduct lives independently and responsibly, including habits, knowledge, skills, and attitudes. The teacher interventions operate when the student displays active interest in the topic. When teachers teach successfully, the student is enabled to demonstrate what has been instructed. Teachers utilize the formal component of the learning process to assist students and produce anticipated results (Kraft, 2014).

Therefore, didactics triangle is acting as a proper frame used for conceptualizing, theorizing, and analyzing teaching and learning processes. By referring to the roles of didactics triangle, educational stakeholders could use this model to analyze the implementation of the learner centred teaching practices. For the foregoing practices to function effectively in the classrooms, the components in the didactics triangle have to work properly. They should function in a balance manner. It means that each element has to fulfill its function and influence the other in a continuous way. If one part fails to perform its function, then the whole system is likely to be affected. Among the three elements in the triangle, the teacher remains the principal in coordinating the learner centred teaching practices. In the classroom, the teacher should engage students properly with the intention of enabling them to develop good understanding of the subject matter. The teacher needs to be an expert in teaching content area and simultaneously to have skills of helping students learning the content.

Despite its benefits in educational practices, the didactics triangle shows weaknesses in its formulation. The model is inadequate because of the lack of important components needed for improving the lesson execution. It is inadequate in describing the factors influencing teaching, learning, school, and classroom. These factors transpire in the classrooms (see OECD, 2010; Mullis & Martin, 2013; Scheerens, 2000). It is added to the views presented by Hudson and Meyer (2011) that the instructional process cannot work alone to fulfill the teacher-student-content interactions. It needs to consider the influence of school and the surrounding society including the cultural attributes that permeate into the classrooms. In addition, didactics triangle has attracted several criticisms. Gruschka (2001) as cited in Zierer and Seel (2012) stated some of them. First, it is reductionist: it misses various important aspects, and it is too simple for a holistic approach to teaching and learning. Second, it is not specific: the advocators argue that the idea of the didactics triangle is also popular in rhetoric, media, communication science, and other disciplines and contexts. Third, it is not theoretically grounded: there is no theoretical background for the concept of a didactics triangle. It is only based on the descriptions without a scientific basis.

It was noticed further that the didactics triangle provided information that is misleading to some extent. It promised practices that were discovered to happen in rare moments in teaching. It incorporates in its variations the anomalies of instruction (Jürgen Diederich as cited in Gruschka, 2005). In this case, the model shows the facts of the classroom practices involving the interactions between the components (teacher, student, content/subject matter). The scholar criticized the assumption that the three components are necessary for learning. Several observations made previously in the didactics triangle indicate that nothing is harmoniously controlled (Gruschka, 2005).

There is an assumption in the didactics triangle that is not applicable in the learner centred environment. Didactics triangle suggests that students can only learn when teachers teach them. The premise shows narrow focus because it ignores other aspects such as time, space, and interaction (Uljens, 1997; Zierer & Seel, 2012). The argument in the triangle is not good because teachers themselves repeatedly hinder students in their learning practices (Gruschka, 2005). Thus, teachers do not represent everything in the classroom. They need other materials to assist them in teaching. In addition, Uljens (1997) opined that the teacher is a necessary but insufficient component of students learning. The present study connects this argument to the learner centred teaching as a student learns using a range of styles without depending much on the teacher. Therefore, a student learns in many ways, while the teacher's function is mainly to facilitate student learning practices.

Furthermore, it is important to note the variations of meaning constructed by educators regarding the didactics triangle. In this case, Kansanen and Meri (1999) observed the character of relation in the didactics triangle and organized it in various ways. It shows that educators had given almost complete freedom to construct interactions in the triangle. In addition, Jürgen Diederich (1988) summarizes various constructs that have been describing didactical interactions occurring in a suitable way using several examples. One of the constructs are linked to the learner centred teaching practices that have been discussing in the present study.

Therefore, Gruschka (2005) applied the triangle to discuss various didactical facts. There are facts used to explain the learner centred teaching practices manifested in the classrooms. It is demonstrated that learner centred meanings can be made through the didactics triangle. These meanings are created based on the relationships between teacher, student, and content/subject matter. The diagrams in Figure 3 labeled with letters (a to f) present some observations of the interactions in the learner centred teaching practices. The description of each diagram is

presented below. The letters S, L, G stands for Schüler (student), Lehrer (teacher), Gegenstand (object/content/subject matter) respectively.

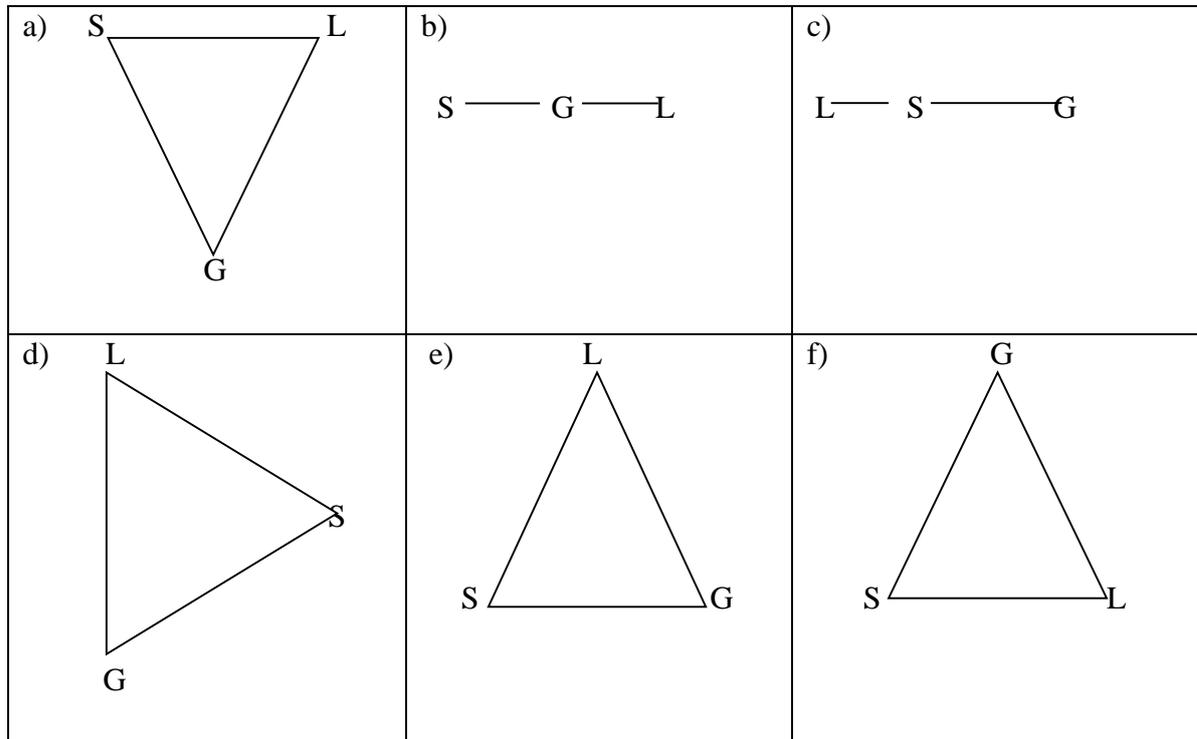


Figure 3: Learner centred didactical facts as presented in various diagrams

- (a) Students and teacher view an object/a picture/a film/talk about the object equally. Both appear to possess the same level/power.
- (b) Students and teacher argue about the object. Both view the subject matter in different perspectives.
- (c) Students and teacher discuss, however, no one knows more exactly what. They do not have a good idea regarding the object.
- (d) The teacher observes as students perform the learning practices or examine the object.
- (e) The teacher supervises classroom practices.
- (f) For science-oriented instruction, the object is situated above what the teacher and students do. It probably presents a cultural aspect of which both (teacher and students) has to react with reverence.

- **The adoption of the learner centred teaching practices**

Since 1990, the goals and purposes of education in Sub-Saharan Africa have been reshaped by four interconnected developments (Cowen & Kazamias, 2009). These issues are stated as: globalization, the changed focus of international aid agencies towards development assistance, the adaptation of Sub-Saharan African countries to the new world order with its new political

emphasis, and the spilling over of new pedagogical ideas from the USA and Europe into the region (p.690). These developments influenced the countries to concur with what is emphasized by the international organizations/developed nations. This study is connected to the issues that focus on the new pedagogical ideas from abroad that demanded Sub-Saharan countries (including Tanzania) to adopt the learner centred teaching. This is to say that the teacher dominated approach is replaced by an alternative approach the learner centred teaching.

In connection with the above developments, the educational programs initiated in many countries seemed to support the international educational and organizational initiatives. These programs work as the major means that provide people the opportunity to acquire knowledge, skills, attitudes, and values needed to uphold their life development. In this case, the World Education Forums held in Jomtien-Thailand and Dakar-Senegal (Inter-agency Commission, 1990; UNESCO, 2000), Millennium Development Goals and international organizations, instructed countries to adopt the learner centred teaching (Adams & Sargent, 2012; Ginsburg, 2009; Schweisfurth, 2013; Westbrook & Kyenune, 2013). In fact, the changes from the traditional approach towards learner centred teaching have occurred throughout the world (Labuschagne, 2004). This study holds that the adoption of the new paradigm is an essential way to support educational practices and reforms intended among others to improve classroom practices and in general the provision of education.

From the same perspective, Vavrus and Bartlett (2013) presented findings of reforms of learner centred practices in different national or cultural contexts. The educators described what was taking place during the reforms process. In Ghana, the reforms restructured the curriculum of teacher training to make teacher education more practical regarding the learner centred practices. Similar reforms occurred in Mali teacher training which improved the competence based curriculum and introduced the active learning practices. Gambia and Guinea adopted learner centred practices and active learning in pre-service primary teacher education. In South Africa, reforms linked competence based curriculum with learner centred practices (Vavrus & Bartlett, 2013).

The movement of educational reforms in different countries was also explained in a program that insisted on the adoption of the learner centred teaching practices in the Middle East and the Gulf States. This program (Science Technology, Engineering, Arts, and Mathematics) puts emphasis on making science and mathematics teaching to be more focused on hands-on and problem solving practices than on memorization (Mendizabal, 2014). In China, the official curriculum reform mentioned the adoption of learner centred teaching practices. However, scholars

discovered that passive transmission is useful for students' learning and performance. This phenomenon raised debate because many of the Asian classes continued to be teacher centred (Schuh, 2004; Zhao et al., 2014).

Furthermore, there were studies conducted that emphasized the adoption of learner centred teaching practices from different perspectives. Studies stated various reasons for the adoption. For example, Adams (1993) and UNESCO (2000) insisted on the need to adopt processes that ensured trained teachers were using learner centred practices in the classrooms. Likewise, Wenglinsky (2001) wanted schools to be efficient by adopting the policy supporting active as opposed to passive teaching. Similarly, Vavrus (2009) and Tabulawa (2013) both insisted on the adoption of the constructivist approach that privileges active and inquiry based learning. Vanada and Adams (2015) stated that teaching practices at the college level would require new models of teaching and learning that move away from lecture style pedagogies. In this case, learner centred teaching practices were found to have this potential.

In connection to that, Flores (2005) observed the roles of schools and teachers have been changing incredibly to prioritize useful principles to all education systems. In this case, international trends in educational provision showed a shift from teacher centred to student centred teaching. In this environment, the students are expected to construct their learning through pertinent learning activities. They should explore, discuss, explain, negotiate, collaborate, cooperate, investigate, formulate questions of their own, answer questions, and solve problems in the social learning environment. In general, they should interact with the physical and social environment to develop social and interpersonal knowledge and skills (Schreurs & Dumbraveanu, 2014). It is important to know that a school is a place where students are prepared to participate successfully in the society. During the learning process, students' knowledge and skills are continually tested, evaluated, and socially compared. The goal of learning is to facilitate learning outcomes. Teachers are preparing students for the real world where they can use skills gained at school and outside of school. They can be intellectual skills, cognitive strategies, attitudes, or motor skills (Gagné & Driscoll, 1988 as cited in Mykrä, 2015).

The scholars above provided descriptions supporting the adoption of learner centred teaching practices. These practices are valuable because if they are actualized are believed to improve students' learning and performance. The problem comes when these practices are emphasized to be adopted by the educational system, but they lack a favorable environment to work successfully and accomplish envisaged educational goals and objectives. Thus, it is a good idea for educators to think about modifying the learning environment, factors, and goals that influence the adoption

of these practices. The purpose is to make them more favorable for the learner centred teaching practices.

To accomplish the implementation of the learner centred teaching practices, scholars presented goals that characterize this approach to teaching and learning. It is a participatory style in all aspects of learning and decision making. The approach provides a climate of trust in which curiosity and the natural desire to learn can be nourished and enhanced. It facilitates students to achieve results they appreciate and consider worthwhile to build their self-esteem and confidence, while at the same time keeping to the curriculum. The approach uncovers the excitement in the self-initiated discovery that leads to becoming lifelong learners. It helps teachers to grow as people who find rich satisfaction in their interactions with learners. It develops in teachers the attitudes of realness, authenticity or transparency, acceptance or respect, and empathic understanding that research has shown to be most effective in facilitating learning (Motschnig-Pitrik & Derntl, 2002).

Citing other scholars, Cowen and Kazamias (2009) reported that the learner centred education has been adopted officially in many African countries since the 1990s (p.692). Vavrus et al. (2011) explained about the reform that initiated learner centred programs in Sub-Saharan countries. In Tanzania, the ministry responsible for education adopted the application of the learner centred teaching for the first time in 1997 to improve the quality of education (Msonde, 2011; Wangeleja, 2003). Programs such as the Education Sector Development Plan (ESDP) (URT, 1997), Tanzania Development Vision 2025 (URT, 1999), Secondary Education Development Plan (SEDP) (URT, 2004) were initiated to support the improvement of educational reform and underscored the application of the learner centred teaching practices.

This study was motivated to adopt the learner centred teaching practices because they are efficient and useful in enhancing teaching, learning, and students performance. By adopting these practices, the students will enjoy a more positive learning experience which will help them develop a greater passion for learning and lead to more success in their learning endeavors. The study by the World Bank (2008) insisted on the adoption of the learner centred teaching as “effective antidote” to the power of traditional teacher centred approach in Sub-Saharan Africa (p.43). This study perceives that learner centred teaching practices are superior to teacher centred. In connection to that, the research evidence for some years supports the learner centred teaching practices as an educational paradigm that helps to produce better student outcomes compared to teacher centred methods. The outcomes might include characteristics such as meaningful and long-term understanding, independent and lifelong learning, engaging in deep learning

approaches rather than superficial attempts, increased motivation to learn, better assessment outcomes especially with conceptual understanding tests (Weimer, 2012).

Therefore, education systems continue advising teachers to focus on the learner centred approach. The purpose is to make sure classroom interactions are conducted successfully. The efforts result into citizens with the appropriate knowledge, skills, and competences. In fact, these people are needed in the development of various sectors of life such as social, economic, cultural, and educational. This study recognizes the learner centred classroom interactions apply in various programs of education that give priority to students learning. Students are empowered, realize their full potential, and engage with teachers and subject matter effectively. Schweisfurth (2013) indicated the importance of researching and operationalizing the learner centred classroom interactions. The scholar suggested ways of reconciling to involve the local and global transformation of these educational interactions.

Despite the promotion and development of adaptation of the learner centred teaching practices, there are challenges occurring in the process. In this case, Schweisfurth (2011) summarized a review of 72 studies and found that learner centred approach implementation has failed. The educator gives four main reasons for the failure. (a) Governments often have overly high expectations of reforms to learner centred approach and try to make changes too quickly. (b) The reforms in teaching are not joined up with changes in the curriculum and examination system. (c) Practical problems like classes of 50 students and a lack of appropriate teaching materials. (d) There is a cultural mismatch. This is to say that the learner centred approach from Western has failed to work in some cultures. In fact, it does not fit in education systems that prefer to employ the teacher centred approach in the classrooms. In some cases, teachers are not ready to shift to learner centred methods. Many teachers find it easier to revert to teacher centred methods.

Additionally, there are some obstacles teachers face in adopting the reforms and implementing the learner centred teaching practices. This study presents obstacles explained by Weimer (2012). They come from two groups' students and teachers/faculty. Students resist because learner centred teaching requires more work, it is threatening, it involves losses, and some students are not ready for certain approaches. In order to prevent students' resistance, teachers can use the following strategies: To explain the rationale behind what teachers are asking the students to do. To enact strategies that motivate students to accept the responsibility for their learning. Teachers should continue to try new techniques until they support students. After understanding the benefits, students will appreciate the learner centred teaching. On the other side, teachers/faculty can resist learner centred teaching because of the belief that teachers will not cover enough

content, only very advanced and mature students will benefit from this approach, faculty can feel threatened when shifting the responsibility for learning to students (Weimer, 2012). It is important to note that, the adoption and implementation of the learner centred teaching practices have not been accomplished successfully. The educational environments in many societies have failed to support these practices as it was intended.

By referring to the foregoing resistances/obstacles that usually affect the provision of education; this study maintains the fact that learner centred teaching practices are essential. Therefore, teachers and students need to improve aspects linked to the teaching and learning process. One of the suggestions is to change their attitudes, beliefs, perceptions, and practices. Teachers and students should build a positive understanding regarding the implementation of the learner centred teaching practices. They must possess appropriate knowledge and skills that assist to achieve curriculum smoothly. They should avoid compromising with the challenges and obstructions in the education environment. Students and teachers need to join with scholars/educators/practitioners who have been recommending that principles, characteristics, and methods of learner centred are effective for successful teaching and learning process.

3.5 Empirical research about the learner centred teaching practices

Scholars have been conducting empirical research concerning the learner centred teaching practices. These studies attempt to provide a picture of what was observed by researchers in different countries. Studies show what is going on regarding the implementation of these educational practices. In this regard, Ogunmade (2005) investigated the status and quality of secondary science teaching and learning in Nigeria. The findings of the study unveiled a gap of science teaching and learning between actual and ideal school science in various aspects. The results described characteristics occurring in the actual school science classes as teacher centred, overcrowded, lots of copying notes, assessment on written tests, and recall of science content. In the ideal school science classes, the key features rely on learner centred teaching, manageable class sizes, less of copying notes, assessment based on projects, practical work, and understanding of science concepts.

The analysis of findings above reveals differences happened during the curriculum implementation process. In this case, schools in the same state indicate a gap between actual and ideal school science. The actual school science displayed teacher centred and ideal school science exhibited learner centred. So ideal school science is observed to comply with the ongoing world educational reforms towards learner centred teaching. To improve this situation it needs

the application of the knowledge of comparative education. It might help the educators to exchange knowledge and learn from each other.

In Kenya, Hardman et al. (2009) found confusions that occur when the system of education adopted the learner centred teaching. It is due to the challenges that impinge on the smooth implementation of this style. Notably, the lessons were dominated by the lecture method that does not involve students entirely. The classes seemed to use a traditional classroom arrangement where students' desks face the chalkboard (Hardman et al., 2009; Schweisfurth, 2013). On the same token, Mellado et al. (2007) reported contradictions in the teacher conceptions of the nature of science teaching and learning. In this case, the teacher classroom practices were found to be more of the traditional approach to teaching and learning science than the teacher conception of the constructivist approach. On the same viewpoint, Namangolwa (2013) found that teachers employed learner centred methods rarely during the teaching and learning processes. However, in their comments, teachers showed to have an interest in learner centred methods such as role play, drama, class discussion, brainstorming, debate, field trips, and discovery learning.

The authors above revealed further that there is a lack of connection between what teachers said and what teachers practiced in the classrooms. This point is to say practices in the classrooms did not match with the teachers' instructional beliefs or their perceptions. Kaya (2014) found that teachers used a more teacher centred approach in classroom practices than their instructional beliefs supported the preceding view. On the same token, Alexander (2000) reported the differences that occurred in India between teachers' adopted theory and their theory in use. Almost all teachers interviewed stated that they employed learner centred teaching, although their actual lessons and videotapes showed that students were not active and the traditional practices dominated.

In another viewpoint, Chaka (1997) discovered the perceptions of lecturers and student teachers about the learner centred teaching to show a slight discrepancy although in the actual sense the teachers had been observed to support its implementation in the Namibian schools. Their practices in the classrooms were found to be similar to their perceptions. This phenomenon is rarely to happen for teachers to practice what they agree to believe. Scholars confirmed that there is a presence of a strong relationship between the pedagogical beliefs of teachers, their planning, the decision for teaching, and classroom practices. Teachers' beliefs are significant indicators of the behaviors exhibited in the classroom (Khader, 2012; Levin & Wadmany, 2005). In addition to the same outlook, studies by Kaya (2014), King (2000), and OECD (2009) suggested the strategy to improve teaching practices and get authentic results should start at the teachers'

beliefs and attitudes level. It is because these traits are vital for guiding practices of the teachers that in turn influenced the students learning and achievement (McCombs & Whisler, 1997).

Likewise, a study on curriculum transformation (Adams & Sargent, 2012) found that the teaching and learning practices have been shifting over time. The changes seemed to reflect practices that promote the new curriculum (learner centred). Observation showed positive changes in students' engagement in the practices such as questioning and discussion and a decrease in lecturing. Likewise, Matsau (2007) showed a range of learner centred practices that helped students with mixed abilities to work together and cooperatively in pairs or groups. In these practices, the previous experience was considered crucial in assisting students to form and build new knowledge. Garrett (2008) found teachers who relied more on applying learner centred practices have managed to engage students successfully and build good learning environment. This study considers the findings by the educators (Adams & Sargent, 2012; Garrett, 2008; Matsau, 2007) as enthusiastic. This is because several studies have been indicating challenges and failures of the learner centred paradigm. Nevertheless, the preceding studies show positive and useful results that can be adopted to improve teachers' understanding and engagement. They verify the practicality of the theories guiding teaching and learning. This is where research in education might be used to update teachers' knowledge and skills.

Moreover, Widodo (2004) investigated whether the teaching practices of German physics teachers meet essential characteristics of the constructivist learning environments and teaching sequences. The author found that teachers address the criteria of these features only to a limited extent. He stated important practices that meet the characteristics of the constructivist approach such as an exploration of students' previous knowledge, situating lessons within students' daily lives, and opportunities for students to organize their learning. In South Africa, Booyse (2010) indicated how the constructivist theory could promote various learner centred practices in the classrooms. The scholar found that the knowledge of theoretical foundations based on instructional design and assessment practices enhanced planning, choices of teaching practices, and the setting of assessment practices. The scholar explained further that in conducive teaching, learning, and evaluation environment, language and prior knowledge are crucial mediating tools enabling students to broaden their understanding.

The preceding demonstrated that the constructivist theory is used to promote several elements constitute teaching, learning, and assessment. The theory provides principles which if followed properly might result in effective learner centred practices. This fact is the reason why the theory is preferred and recommended. However, this study challenges the author above for being

supportive of the constructivist approach without mentioning its weaknesses or the problems it causes during its implementation in the classrooms in various contexts. That knowledge might also be interesting to the community of scholars.

Similarly, a study conducted in Korea discussed the effectiveness of constructivist teaching in mathematics in the aspects of academic achievement, self-concept, and learning strategy (Kim, 2005). The researcher found that constructivist teaching is more effective than traditional teaching for students' academic achievement. Nevertheless, it is not effective for students' self-concept and their learning strategies. This study supports the effectiveness of constructivist teaching. However, it questioned why the constructivist teaching failed on these students' attributes (students' self-concept and learning strategies). Lack of effectiveness suggests that there are other factors affecting its implementation. Educators should conduct research to reveal factors that cause the failure of the constructivist teaching.

Other studies focused on the perceptions and practices of teachers in assessing students. In this case, Susuwele-Banda (2005) found that teachers' perceptions towards classroom assessment influenced their classroom assessment practices. Many teachers in Malawi perceived classroom assessment as tests given to students at specified time intervals. Likewise, Koloï-Keaikitse (2012) examined classroom assessment practices in Botswana and found that teachers' beliefs on assessment practices related to their level of education, the level of assessment training, and teaching experiences. By the same token, Sethusha (2012) investigated challenges affecting South African teachers' assessment practices. The author discovered obstacles that impact assessment practices such as policy interpretation, overcrowding, lack of resources and materials, classroom implementation, communication, and assessment planning.

This study considers assessment as an essential practice in the implementation of learner centred teaching practices. Through assessment, the teacher gets feedback on what students have learned and what still needs assistance. To perform this practice well, teachers have to build proper beliefs, perceptions, and practices regarding the assessment practices. This idea is because these characteristics affect their classroom practices significantly. This study does not support testing carried out at specific times but prefers continuous assessment for authentic results. Effective assessment goes together with teaching and learning practices in the classrooms.

Moreover, Kane et al. (2010) tested whether the classroom observation methods carried out by skilled professionals using an elaborated set of principles can identify teaching practices most likely to promote students' achievement. Findings provided the strongest evidence that

classroom observation methods can capture elements of teaching practices related to students' performance. They can provide information regarding the types of teaching and learning practices that are most effective at raising students' achievement. This study also considers and uses classroom observation as the main method for exploring the learner centred practices employed by teachers in the visited secondary schools. It aims to provide information that might improve students' performance.

Westbrook et al. (2013) reported other pedagogic aspects from various national and cultural contexts. In this case, the scholars summarized various pedagogic aspects together with their positive or negative examples (Table 2). The pedagogic issues are considered in this study as essential because they include some practices under the learner centred teaching. These elements provide and organize how human beings acquire life skills and experiences. According to Alexander (2000), pedagogy involves both the ideas and the activities of teaching. It relates to the aspects of learning theories, curriculum, assessment, society, and the character of culture.

The preceding descriptions are in line with the purpose of the present study as it investigates the learner centred teaching practices in secondary schools in Tanzania. The analysis made on the examples of pedagogic aspects showed that they represent features connected to the teaching and learning practices. Positive examples seem to represent the characteristics of the learner centred approach. In this case, the learner centred teaching practices are applied to engage and make students active. In a classroom, students are more interested in learning activities when interacting with one another. In this environment, learning deepens, widens, expands and takes irregular paths rather than following a linear progression (Weimer, 2002). Learner centred teaching practices have been instructed by educators to be adopted during the reform of education in various countries. They are expected to improve educational practices and thus teachers should have to opt for these practices. For the negative examples, they are based on the characteristics of the teacher centred approach. They are consistent with traditional or transmission methods to instruction where students are not allowed to express ideas themselves. Educator alludes that teacher centred is associated with top down, hierarchical pedagogy and it reinforces passive learning and rote memorization (Otukile-Mongwaketse, 2018). What educational stakeholders need to do in this situation is to make sure that all the hindering factors and the negative examples are controlled and therefore improving the educational provision.

Table 2: Pedagogic aspects and their positive or negative examples as reported from various national and cultural contexts

| Pedagogic aspects | Positive examples | Negative examples |
|--------------------------|---|--|
| Student characteristics | Students backgrounds, prior knowledge, and local examples drawn upon to make lesson content relevant | Lesson content overly abstract and irrelevant for students |
| Group work | Verbal interaction in small mixed or ability groups, sharing tasks and resources, monitored by the teacher | Permanent rows and little peer interaction |
| Use of questions | Open and closed, expanding and probing responses, encourage student questioning | Frequent closed questions, choral responses, one word answers |
| Language | Use of local language gives access to lesson content and encourages verbal interaction | Unfamiliar language leads to rote learning and incomprehension |
| Classroom environment | Lively, warm and friendly teachers encourage participation. Absence of corporal punishment makes students feel safe | Teachers do not encourage participation. There are corporal punishment |

Adapted from Westbrook et al. (2013, p.39)

3.6 Other aspects related to the implementation of the learner centred teaching practices

- **Factors for the school effectiveness as linked to the learner centred teaching practices**

This study considers factors for school effectiveness as fundamental for quality education. These factors demonstrate how they might influence the learner centred teaching practices. They are presented in this study to show how schools and classrooms can be a conducive environment for the implementation of learning practices. In addition, the factors help educators to discover what is missing and what is needed to improve the system of education. They provide a good solution for educational systems that encounter a poor performance of the students. Secondary schools in

Tanzania experience this situation and thus make this section relevant to educational stakeholders. It provides techniques to use and raise the performance of students.

Various studies presented factors that are believed to support the proper provision of quality education. They confirmed how best performing schools depend on these factors. Scheerens (2013) explained an overview of the studies on school effectiveness in developing countries. According to the scholar, the following factors characterize effective schools. It includes high-level school resources, low pupil-teacher ratio, extra instructional materials, well-trained teachers, positive classroom climate, students tested regularly, and schools with a high level of parental involvement.

Likewise, Mullis et al. (2012) described qualities that enhance the effectiveness of the school. They are related to good students' performance in mathematics and science and are usually linked to schools that emphasize academic success backed by thorough curricular goals, students' desire to perform well, and a high percentage of socioeconomic backgrounds. In addition, Mullis and Martin (2013) stated that success in mathematics and science teaching and learning depends on good conditions in economic resources, the structure of the education system, intended curriculum, monitoring of curriculum, classroom assessment, and engagement. PISA study (OECD, 2010) affirmed several conditions for a high-quality education to all students. Among them include schools that provide similar learning opportunities to all students despite their socioeconomic milieu. Schools emphasize good positive behavior among teachers and better teacher-student relations.

This study upholds the factors formulated because they also intended to improve the learner centred teaching practices. The education systems promote well these factors and are expected to lead to better student learning and performance. However, the researcher in this study argues that the application of these factors may not be successful in an environment that does not favor them. The education system has to make sure factors are well coordinated and integrated to support classroom practices. Some of the factors need good socioeconomic conditions in the country. Others need suitable cultural contexts and stakeholders' commitment to supporting their functions. Hudson et al. (1999) found that it is not sufficient to focus only on classroom practices, but it is also crucial for teachers to take care of students' needs and national/international demands for economic growth. Motschnig-Pitrik and Derntl (2002) wanted teachers to allow students to be free to suggest topics, aspects, processes in the curriculum, and participate in the evaluation of learning. Alexander (2000) said that even effective practices do not happen only

on organizational and technical structures. However, it needs attention from psychological, epistemological, cultural, and situational factors.

Many countries have been failing to implement the foregoing factors accordingly. There might be several challenges causing this failure. These are the reasons responsible for weakening educational reforms towards learner centred teaching practices in several national and cultural contexts. Therefore, evaluation in schools is essential to examine whether the reforms and curriculum implementation are working effectively. It is because assessment process helps to evaluate how the education system works. The process can evaluate teaching, learning, and students' performance.

- **Teachers' knowledge and skills as linked to the learner centred teaching practices**

Teachers' knowledge and skills are crucial attributes for the implementation of the learner centred teaching practices. This view is supported because teachers act as the primary implementers of the curriculum. It is in line to Hudson and Meyer (2011) who asserted that teachers are implementing the curriculum according to their knowledge and skills. Therefore, if they possess appropriate knowledge and skills, teachers can implement the curriculum successfully. However, if they lack these aspects, teachers can act as barriers to the suggested reforms (Hudson & Meyer, 2011). The preceding ideas confirm how and to what extent the knowledge and skills of teachers are fundamental in the entire provision of quality education.

The knowledge and skills of teachers depend largely on how they receive the best formal training and ongoing professional support programs. Studies indicate excellent characteristics that a teacher can gain from teacher training and in-service programs. These were found to contribute positively to the learner centred teaching and learning practices. According to Wenglinsky (2001), good training exposes the teachers to the subjects they are going to teach. Vieluf et al. (2012) add that teachers who engage in professional development programs receive more feedback and improve their teaching practices. By the same token, UNESCO (2000) opines that good quality education needs well-trained and committed teachers who are employing active learning techniques, enough materials, relevant curriculum, accurate assessment, and motivate students. Teacher training programs are considered because they are essential for the proper implementation of the learner centred teaching. They orient teachers to ongoing reforms advocating for student learning. In line with this goal, the study by OECD (2009) described teacher training objectives that enhance educational practices. They include updating teachers' knowledge based on the recent advances, to update teachers' skills, attitudes and approaches

based on the development of new teaching techniques, objectives, circumstances, and educational research. Others are to enable teachers to apply changes made to curricula and teaching practices, and to allow schools to develop and use new strategies concerning the curriculum and teaching practice.

Furthermore, the present study supports the scholars above based on the fact that, teaching is a practice that is not simple. Vieluf et al. (2012) confirmed this and said, “instructional quality is complex” (p.26). Teachers in the classroom environment are dealing with human beings who have different behaviors, understanding, needs, and interests. To conduct the learner centred teaching practices successfully in such situation requires sufficient qualifications and experiences. Likewise, due to reform of the education system, teachers’ role is broadening and in many contexts, teachers are expected to perform new tasks. Wenglinsky (2001) found the professional development practices as essential for strongly influencing teachers’ classroom practices. It is evident that teachers require proper knowledge and skills to cope with the educational reform and function effectively in the context of learner centred teaching practices. They need to positively orient towards new teaching methods suitable for the learner centred teaching. Orchard (2007) added that the learner centred professional development practices increase students achievement. This is to confirm that students’ achievement is directly impacted by the quality of teaching in the classrooms. This point is supported by Marzano (2007) and Mykra (2015) who stated that the more teachers gain pedagogical competence the greater the students' achievement.

To prove that teachers are crucial in the whole process of change towards the learner centred teaching practices, Maloy and LaRoche (2010) challenged educators that no teaching principle is automatically student centred. Teachers use their knowledge and skills to create this setting. To support teachers, Flores (2005) wanted teacher education to undergo evaluation in light of the new changes in teaching and learning practices and new ways of looking at the teaching profession. This study finds the idea of reviewing teacher education as vital. Educators need to examine how they update teachers’ knowledge and skills to perform duties skillfully and smoothly.

Unfortunately, the professional development programs for updating teachers’ competences have not been implemented well due to various challenges. The ongoing reports showed that teachers are not receiving proper training due to many circumstances. They found that teachers lacked real growth in the profession due to a lack of chances to attend in-service and school based training (Hardman et al., 2009; Hargreaves & Fullan, 1992; Hightower et al., 2011; Schweisfurth,

2013). On the same token, Bhalalusesa, Westbrook, and Lussier (2011) and UNESCO (2006) observed that teachers have not adequately prepared, equipped, and committed to facilitating learning practices effectively. Scholars in Orchard (2007) stated the barrier to effective professional development was teachers' reluctance toward new classroom practices. It was a natural part of the change process and thus should be expected, planned for, and utilized. This might occur when teachers' habits, beliefs, values were challenged. Reluctance affected teachers' willingness to adopt new classroom practices. It is the reason for teachers in the current period to disregard the use of learner centred teaching practices. Thus, the question is how reluctant teachers can be empowered by professional development to implement new strategies successfully.

In Tanzania, the teacher education has also proven to be the source for teachers' best learner centred teaching practices. Bhalalusesa et al. (2011) opined that the programs of teachers are expected to equip them with pedagogical knowledge and skills, which in turn, influence students learning outcomes. For teachers to remain up to date and continue functioning well, they are supposed to be offered chances to attend educational programs. This requirement has also been stipulated in the Education and Training Policy (URT, 1995) which stated, "the in-service training and re-training shall be compulsory in order to ensure teacher quality and professionalism" (p.50). Educators in Orchard (2007) considered learner centred professional development as the key for educational reform that intended to increase students' performance. This initiative might benefit several countries that aim to improve performance. Chedié et al. (2000) stated teachers are obliged to attend these programs to update and improve knowledge and skills and be able to fulfill their duties and achieve the educational objectives.

The results of the review of teacher education in Tanzania (Hardman, 2009) found that the teacher training colleges are the only source of advice and support to practicing teachers. Therefore, it was suggested that the training modules should emphasize making teaching more interactive, problem solving, and reflective. In addition, teachers needed guidance in how to apply different approaches to address students needs (Orchard, 2007). Furthermore, pre-service programs should be developed to support student teachers' personal growth, social confidence, leadership skills, and prepare them for teaching responsibilities. The practice of instruction for student teachers needs to be well-organized, constructive, supportive, and enlightening experience (Hardman, 2009).

It is important to remember that during the application of the teacher centred practices, any teacher was able to teach. They just act as the source of knowledge and transmit information to

students. Under the learner centred paradigm, the teaching is complex and thus requires considerable teacher training. It needs teachers with appropriate knowledge and skills. Those who create an active learning environment that are suitable in this current period. Thus, the training stated above is supported because it helps to enable teachers to implement the curriculum successfully. Those who create an active learning environment that are suitable in this current period. Thus, the training stated above is supported because it helps to enable teachers to implement the curriculum successfully. This process is expected to improve teaching, learning and students performance in the examinations.

3.7 Teacher centred practices

This study explores learner centred teaching practices. However, the observation made in the previous empirical research shows that teachers are still employing teacher centred practices in the classrooms. Studies in various national and cultural contexts provided findings that indicate the domination of the teacher centred practices instead of the adoption of learner centred teaching practices prescribed in the curriculum. Based on that observation, this study gives some descriptions of the teacher centred practices so as to provide the understanding and how teachers employed it in the classrooms. The reports show to what extent the reform from teacher to learner centred has been facing challenges.

Usually, teachers have been considering how to employ teaching practices that are beneficial to students. They want students be quiet, ordered, controlled, and enjoy the learning process. According to Mascolo (2009), the teacher centred practice defines as a style in which the teacher assumes primary responsibility for the communication of knowledge to students (p.4). Also, Biggs and Tang (2011) asserted that the teacher centred practice regards teachers as the center of attention in the classrooms. Students put all of their focus on the teachers. Teachers control greater expertise about the subject matter. In fact, they are in the best position to decide the content and structure of the classroom practices (Mascolo, 2009). According to Metto and Makewa (2014), this style of teaching focuses on what the teachers are doing in the classrooms. Teachers are regarded as experts who talk and transmit knowledge while the students remain as passive learners who wait for the teachers to feed them with knowledge/information (Mansour, 2013; Mascolo, 2003; Msonde, 2011).

This study argues that teacher centred practices are good for maintaining the teachers' authority and for transmitting substantial content from the teacher to students. However, it is not useful for students' active learning and understanding of concepts. This study agrees that teachers be given

the mandate of planning, executing, assessing the lessons, however, when it comes to the classroom interactions between teachers, students, content, and materials then there must be a balance of power to allow students to perform practices freely and successfully.

The literature provided characteristics that support the teacher centred practices. These features are of interest to this study as they will be used to compare with those of constructivist or learner centred teaching to see how secondary school teachers in the visited secondary schools facilitate learning practices. In this case, Entwistle and Tomlison (2007) and Schweisfurth (2013) opined that the teachers determine and control the subject matter, pace entirely and they use practices like chalk and talk, whole class, and drilling. Schuh (2004) added that the classroom appears to be more of the teacher talk and questions than the student talk and questions, more of whole class instruction reliance on textbooks. Further to that, Mascolo (2009) asserted that teachers conduct teaching by asking direct, close, and recall questions, and responding to students through direct, correct or incorrect feedback. Sifuna and Sawamura (2010) added that the extensive amount of learning time has been spent with students silently working on teacher-assigned tasks.

Previous research showed how teachers are applying the teacher centred practices. For example, to improve methods of science teaching, there were considerations for many countries in Central and Eastern Europe (Kapanadze & Eilks, 2012) to reform from the old communist model of education towards modern educational practices. However, it was found later that despite those efforts, practices in the classrooms were still dominated by traditional practices and transmission methods of teaching and learning. Rakhkochkine (2012) summarized descriptions and evaluations of three comparative studies. The scholar gave an answer to the research question that teacher centred practices found to dominate the Russian classrooms.

Several educators also shared this perspective when identifying similar practices that confirm the domination of the teacher centred practices in many countries all over the world (Kapanadze, Janashia, & Eilks, 2010). Others reported practices that rely on traditional teaching practices are lecture, rote learning, memorization of the materials, and repetition (Ahmed, 2013; Mendizabal, 2014; UNESCO, 2014; Yilmaz, 2009). Likewise, Adams and Sargent (2012) found that teachers during teaching are standing in front of the class lecturing, reading loudly, and asking questions while students are listening, copying notes, and accepting information from the teachers. This observation is interpreted that teachers are perceived as experts who know everything and students are empty vessels who cannot contribute anything.

This study joins with scholars to describe the situation where many teachers in different countries encountered the teacher centred practices. In this case, teachers showed to believe in their old teaching methods that were used to implement the lesson. They believed in the behaviorist approach and use transmission methods of teaching. They disseminate information to students. In this case, teachers lecturing use most of the class time, and students are watching, listening, and receiving. The students are rarely expected to ask questions or to challenge the information from the teacher. These practices are not suitable under the current learner centred approach. This is facilitated by the fact that students of today and tomorrow should change their mode of learning. They are supposed to be mostly doers and not listeners.

Moreover, scholars recorded results that seem to be against the execution of the learner centred education. In this case, Zhao et al. (2014) found the learner centred teaching practices were not effective but the teacher centred practices contributed to the students' good performance. This result might be the one, which caused opposition to the use of learner centred practices. Teachers see that teacher centred education is working in terms of students' performance. Therefore, for students to perform well in teacher centred practices there might be other factors that supported the classroom practices. However, in actual fact, learner centred practices are effective compared to teacher centred practices. Many scholars have been confirming this fact.

In Tanzania, some studies showed teachers who were directed to employ learner centred teaching but continued with the traditional style. In this regard, Wangeleja (2003) argued that, although teachers have been trained to conduct teaching and learning practices by the use of learner centred teaching, they still used traditional teacher centred practices in their classrooms (HakiElimu, 2005, Kafyulilo et al., 2012, Msonde, 2011). Paulo (2014) reported pre-service teachers who failed to implement the learner centred practices. Instead, they continued with teacher centred practices and paper and pencil assessments regardless of the demand for changes. Likewise, World Bank (2008) and Kimaryo (2011) stated that the practices taking place in the classrooms are not very much different from the content based (old curriculum).

The descriptions provided above continue to confirm ways and conditions that hindered teachers' effective use of learner centred teaching. It implies that implementation of the reforms is still encountering challenges in many countries including Tanzania. Worse still in several countries, teachers have been trained to change, but they continued with the traditional methods. Also, in other nations, teachers were using teacher centred practices, and students were performing well in their examinations. It shows that more explorations are needed to address this phenomenon. It

is because teacher and learner centred practices in some places produced similar as well as different results and this made the situation complicated.

In that environment, it is important to know the disadvantages caused by teachers when they continue applying the teacher centred approach in the classrooms. One of the normal problems is for the students learning passively. This habit does not guarantee that effective learning is taking place and that good performance is expected. Rawat et al. (2012) found that students who qualified from the schools that use teacher centred practices exhibited some weaknesses. They lacked abstract thinking, good reasoning, creativity, and cannot express ideas and solve the problem by themselves. Also, students work alone and they don't learn to collaborate with other students. Prosser and Trigwell (1999) reported about the students who learn by reading summaries and memorizing formulas. They did past papers and had plenty of problems with the expectation of recalling them during the examination. In general, teacher centred practices have not provided suitable knowledge and skills to the students. In that situation, educators have been emphasizing the application of the learner centred practices. This study focuses on its implementation in different stages of lesson development.

3.8 Different stages of the lesson development as applied in teaching and learning practices

This study holds that the lesson is presented well if it is planned and executed by considering stages. To accomplish the view teachers have been instructed to prepare and apply stages when facilitating the learner centred teaching practices in the classrooms. By following stages, teachers put themselves in a proper position to conduct teaching smoothly from the beginning to the end. In fact, stages direct teachers on precise practices to plan and facilitate the achievement of lesson objectives. Likewise, stages help researchers/educational stakeholders to observe and record systematically how the lesson is conducted.

Planning for the lesson is one of the most significant tasks that teachers need to perform to know what will learn, when it will be learned, and how learning will take place. By covering these areas, teachers are benefited because planning simplifies the teaching and learning practices and helps them carry out the lesson without leaving or forgetting any classroom task. According to the World Bank (2008), teachers can use a lesson plan to indicate the aims and objectives and how to accomplish them during the lesson. They should give full descriptions of what activities students should perform, how best to perform, learn, and teach. Likewise, Baker and Westrup (2000) added that teachers use lesson plans as a permanent written record of what they have already taught in class including class size and resources used.

Under learner centred teaching, teachers think and plan by focusing on statements describing what students should be able to do by the end of the lesson. This view is important because it helps teachers to assess if their plans and execution of the lesson in the classrooms were well done according to the stated objectives. In the process of guiding teachers to do proper planning as well as teaching, Doyle (2011) formulated some questions that help teachers to plan and execute the lesson successfully. The questions cover the main aspects teachers encounter or perform in the classrooms. Teachers should ask themselves and see how they carry out efficiently during the lesson. The questions are: *How will the lesson be developed in different stages? What will students do in the classroom? Who will perform the learning activities? When will the learning be completed? What resources and materials will teacher and students need? How will the teacher assess learning?* This study refers to these questions because they should guide the process of exploring and capturing the learner centred practices. They help to specify teaching and learning aspects that have to be focused on.

The paragraph above considers and shows the importance of lesson planning. It gives teachers a general picture of what will happen during teaching and learning and how it should be controlled beforehand. It is in line with Rakhkochkine (2011) who opined that most of the research put an emphasis on the relevance of lesson planning as an essential element of teaching. It became an issue in educational empirical research. It is closely connected to the matters related to curricula, the choice of instructional strategies, and institutional regulations on documenting lesson plans and it originated mainly in teacher education. To show an emphasis on this matter (Arnold, 2009 as cited in Rakhkochkine, 2011) demonstrated that lesson planning is a vital topic in the research on teaching and learning and in teacher education in most countries in Europe and North America (p.96).

There are guidelines presented to help teachers plan and execute teaching. In this regard, German philosopher and psychologist Johann Herbart laid the foundations for the scientific study of education. The scholar made a major contribution to the reform of education and teaching practice and revolutionized pedagogical thinking. He has suitably been described as the founder of scientific pedagogy in educational theory. His philosophy was not only an appropriate pedagogical theory but it was a practical tool for state education policy drafting its structure, contents, didactic, and methods. The idea of educational teaching is central to Herbart's theory of education that is founded on experience and on psychological and philosophical reflections. Proper application of pedagogical ideas in educational practices should bring a guaranteed

outcome. Appropriate teaching is the only sure means of promoting education (Hilgenheger, 2000).

Therefore, the ideas of Herbart are imperative even at present. With his followers, the scholar formulated Herbartian didactics focused on lesson planning and the order of subject matter underlying teaching (Hopmann, 2006). In this case, Herbart described the logic of learning that follows stages of teaching. This process led to the systematic organization of the lessons by curricular content (Hopmann, 2015). According to Herbart's method, it is the function of the teacher to impart knowledge by utilizing students' previous knowledge and experiences (Tanner & Tanner as cited in Kelly, 1997). Thus, Herbart ideas confirmed the connection to the constructivist approach that considers students' previous knowledge as vital for learning. According to Koohang et al. (2009), this approach focuses on the active construction of new knowledge based on students' prior experience. Herbart predicts learning to follow sequences of ideas. Based on the Herbartian model, his followers identified the teaching process to proceed in five stages as follows (Herbart, 1776-1841; Kelly, 1997; Sharpes, 2012):

(a) Preparation/Introduction: This step involves the task of preparing students to be ready to learn new knowledge. The teacher should be sure of what the students already know. He should ask questions to examine student's previous knowledge. The aim is to relate new knowledge to the relevant previous ideas. Therefore, testing previous knowledge, stimulating interest in the minds of students, and maintaining the curiosity of the students can be achieved in this step.

(b) Presentation: This is the main step in which the actual process of teaching is going to take place. The aims of the lesson should be stated clearly. The teacher makes the concepts understandable to students. Simple language is used and appropriate or specific examples or illustrations of the concepts will make the understanding better. The interest of the students should be maintained by asking questions from time to time. The teacher makes proper use of questions, charts, graphs, pictures, models and other illustrative for demonstration and explanation. The learning environment should be organized for teacher and students to participate in the process of teaching and learning.

(c) Comparison/Association: Compare the facts observed by the students with another concept by giving examples. Comparison of a new idea with former ideas helps to find similarities and differences. The students are encouraged to give new suitable examples of the concept instead of using examples already in the book. This process makes them think in an innovative manner.

(d) Generalization: To arrive at some general ideas or draw out the necessary conclusions by students based on different comparisons, contrasts, and associates observed in the learning material presented by the teacher. The teacher can use examples to illustrate the lesson main points. As far as possible, the formulation should remain to students. A teacher should try to remain in the background for providing only necessary guidance and correction.

(e) Application: It involves the teacher to help students to use understood knowledge in a new situation. Using the new knowledge so that it becomes an integral part of students' life. This is possible if the student applies the new knowledge, by making it his/her own.

(f) Recapitulation: In this stage, the teacher should know whether students have grasped and understood the concepts taught or not. It can be achieved by reviewing a lesson or by giving assignments to students. The teacher can use this step to close the teaching process.

Together with Herbart's constructive contribution in the educational theory, teaching practice and his pedagogies, it is good to show some emerged criticisms. They involved issues related to his scientific educational theory. In this case, Herbart has not succeeded to gain broad public recognition and understanding of the educational theory of teaching. He failed to show a determining influence on the reform of education system. They accompanied by the criticisms on Herbart's scientific and pedagogic work. Miroslav and Lenka (2014, p.415) list them as follows:

- i. Herbart's pedagogy is based on the objectives of education.
- ii. In contrast, most new current aims at the opposite: to stem from the interests of the child.
- iii. Herbart's pedagogy entitles the teacher with the main role.
- iv. Most new trends relegate the teacher to the background, leaving the principles place to the pupil.
- v. Herbart sees as crucial the role of school as preparation for life.
- vi. Representatives of the new trends argue that childhood is part of life and make far-reaching conclusion based on this area.

The followers criticized and abandoned Herbart's educational theory/philosophy. In Europe, Herbart's educational practice was considered obsolete and unusable for modern pedagogy. His followers tried to find the appropriate methods for guiding the educational provision. In fact,

they attempted to transform the educational theory (Hilgenheger, 2000; Miroslav & Lenka, 2014). In this case, the Herbartian model is found to be flexible in such a way that it can orient with any state curriculum or practices. This study sees flexibility as an essential characteristic linking to learner centred teaching practices. It aligns with the notion that classrooms are unpredictable settings. There are different cultural characteristics occurring in classrooms in various countries. Therefore, for the learner centred teaching practices to be applied well, it has to be flexible. Flexibility makes the organization of teaching by the Herbartian model to be successful in many countries (Hopmann, 2015).

This study supports the ideas made by Herbart and his followers because they show how learner centred teaching practices need to be facilitated following stages. In reality, stages help to point out actual learner centred teaching practices in every stage of the lesson development. They provide teachers methods used on the learner centred teaching in different stages of the lesson development. They help teachers to understand genuine practices applied in the classrooms. Likewise, stages help teachers to remain on track without deviating from the plan and this enables them to achieve lesson objectives. Based on the advantages of stages, this study challenges the habit of conducting research in the classrooms without taking into consideration the stages of the lesson. Without stages then the data collected will be insufficient. It is supported by the fact that some of the practices might be missed, neglected, or not observed.

The Herbartian model of the educational system, theory, and practice has been stated to suit educational intentions because it was formulated based on the objectives of education. It also, presented educational ideas that reflect the social and economic conditions of the time (Somr & Hrušková, 2014). This model is useful, and thus educators have been continuing to develop various models of lesson development. They relied on the models that are guiding effective teaching and learning in the classrooms. Scholars developed these structures and focused on the stages that support teaching and help students learning effectively. In line with the preceding idea, Moore (2000) instructed teachers to organize students learning in stages because it is the right way of doing things. Similarly, Walters et al. (2014) insisted on systematic stages as they stimulated students' interests in the classroom. Likewise, Temu (1995) considered stages as a means of making students to build a good understanding of the subject matter.

Scholars have been developing lesson plans to guide classroom practices. In this regard, Alexander (2000) conducted a study in five cultures and found that teachers were usually teaching in an orderly manner consisting of three or four main stages and the most fundamental plans were the one consisting of stages like introduction and development. The scholar described

the stages used in Bristol city in Britain. In this case, the teachers who participated were found to follow eight stages to develop the lesson. They included *an introduction, a practice of principles, collective correction of practice tasks, writing of rules and point of reference, learning the lesson, testing of what has been learned, collective corrections of work tested, and recording and reporting of results* (Alexander, 2000).

Similarly, the observation made in Grigoriev in Russia showed that mathematics teachers were facilitating the lesson by following eleven stages. They are stated as follows: *introductory words, communicating the lessons aims and themes, mental exercises one, mental exercises two, checking individual work, multiplication tables, problem solving new learning, one minute of physical exercises, independent work from textbooks, summing up what have been learned, self-assessment* (Alexander, 2000).

Ellis (2002) presented another structure of the lesson development. The structure consisted of three stages that are introduction, development, and conclusion. In the introduction, the teacher made a good beginning by summarizing prior knowledge and introducing important ideas in different ways. The teacher made a smooth transition from introduction to new knowledge. During development, the teacher guided students to understand the content, which they are required to learn. The teacher used methods, practices, materials, and resources to facilitate learning. In conclusion, the teacher summarized key ideas and identified what students need to have remembered for the next lesson, and finally gave homework (Ellis, 2002).

In discussing the future of general didactics, it was observed the group of educators integrated the characteristic model of general didactics cooperatively with the elements of instructional design. This group produced instructional model follows four stages of the lesson development that are planning, implementation, analysis, and evaluation. It was perceived that the evaluation influenced other stages. Formative evaluation managed planning and implementation while summative evaluation managed analysis (Zierer & Seel, 2012).

Furthermore, the review of the literature showed some constructivist teaching stages which have been suggested by different theorists as strategies to address students' knowledge and understanding. The adoption of stages in this study is a good strategy that improves students' learning and performance. It provides evidence that successful teaching and learning always follows systematic stages in the course of achieving the lesson objectives. It is in line with Widodo (2004) who wanted the improvement in the series of constructivist lessons. This study

used ideas by several educators to explore all stages and collect detailed information addressing the research questions.

Teachers in Tanzania develop the lesson by following five stages called *introduction, new knowledge, reinforcement, reflection, and consolidation*. The stages are summarized as follows:

Introduction: The teacher introduces the lesson using various methods and finds out what students previously know about the new knowledge. **New knowledge:** This is the main part of the lesson that gives teachers opportunities to impart new knowledge to achieve the intended outcomes. **Reinforcement:** This is an opportunity for students to perform some practices and demonstrate an understanding of the new knowledge. **Reflection:** The teacher and students need to reflect on the understanding of the knowledge and how teaching was conducted. **Consolidation:** Revising and summarizing key points of a lesson and assessing what has been learned.

The assessment practices are anticipated to take place at every stage of the lesson development. Teachers are supposed to conduct an assessment during the teaching and learning process. They are not expected to wait until the end of the lesson to assess students. This principle accompanies the ongoing assessment that supports learner centred teaching. It is important to note that, the researcher explored classroom practices based on these stages. The investigator analyzed these practices and came out with various themes that reflect stages linked directly to the learner centred characteristics.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

This chapter discusses the methodology adopted to guide the entire research process. It started to build the foundation by describing the background of the study and research questions and methodology. The chapter presents the research design and approach chosen to provide a logical plan of the research activities in the selected secondary schools. In this case, a qualitative design was selected as suitable for exploring the learner centred teaching practices in the visited classrooms. The design employed the ethnographic approach to investigate everyday teachers' and students learner centred teaching practices. The researcher applies purposive sampling to select schools and teachers. Besides, the chapter explains the pilot study conducted before the actual research. It discusses the data collection methods and how each method was applied in this study. It further describes the data analysis process and the formulation of themes that are responding to research questions. Finally, the chapter presents the ethical and consent process and the quality criteria applied to ensure the credibility of the current study.

4.2 Overview of the background of study and the research questions and methodology

The background of this study was formulated based on the performance of many secondary schools in Tanzania. The national form four examination results released by the National Examinations Council of Tanzania (NECTA) showed that performance has been deteriorating. The trend revealed that the number of students who scored division zero (failure) is on the increase. The preceding problem of poor performance in secondary schools indicates that the quality of education has been dropping for several years. This phenomenon tends to suggest that secondary education provision and curriculum implementation are in a poor state. This indicates that something is going wrong in the education system. Therefore, it is crucial to conduct research to establish its root causes and find out how to improve.

The initial stage was to review the existing literature and get a better understanding of the problem. It was observed that previous studies of the learner centred teaching practices reported findings from different national and cultural contexts. First, some studies generated new knowledge in various aspects of the provision of education. Secondly, other studies discovered the challenges that might hinder the effective implementation of the learner centred teaching practices and achievement of the educational objectives. Thirdly, the review provided instructions on how to address the problem of poor performance. In particular, the study cited teaching and learning practices facilitated by teachers in the classrooms as an appropriate way

to deal with the problem of poor performance. Specifically, the present study explored learner centred teaching practices that have been implemented according to the instruction guided by the competence based curriculum.

After undergoing the literature review, the researcher has identified the research problem and questions as well as the appropriate research methodology. Various researchers have used a full range of methods in answering the research questions. Alexander (2000) provided a comprehensive comparison of educational traditions and classroom practices in five cultures. The scholar provided vital insights to education stakeholders and other people dedicated to the improvement of education. The foregoing study applied the qualitative design that uses classroom observations, interviews with teachers, headmasters, and students, videography, photography, and research diary. Stigler et al. (1999) conducted TIMSS video exploratory studies to investigate science and mathematics teaching in different participating countries. The studies employed video surveys that allowed the researcher to integrate qualitative and quantitative aspects of teaching practices across countries. These studies have been structured to capture culturally specific qualitative data and video observations and used to expose the relationship between culture, perceptions, and teaching practices (Stigler et al., 2000).

In another perspective, Schweisfurth (2011) showed how the learner centred teaching had been conceived, researched, and reported in various national and cultural contexts. The study indicated that most of the reviewed research was on a small scale and qualitative in nature. They were based on interviews, classroom observations, and rarely questionnaires. They sometimes adopted an ethnographic strategy. The current study benefited from Ellis's (2005) study that showed how the Australian researchers used an ethnographic strategy to explore teaching and learning practices. Likewise, Phillips and Schweisfurth (2008) said the research in comparative education provides new methods of perfecting the science education. To achieve that aim the research methodology might be using techniques such as hermeneutics, content analysis, and ethnography (Thomas, 1990). Furthermore, Manzon (2011) reported using semi-structured interviews and participant observation in data collection. The scholar applied a comparative approach to investigate similar and different phenomena. These research methods and techniques support the study of educational practices. Scholars stated ethnography, semi-structured interviews, and participant observation as the proper methods applied in research.

The researcher was aware of the advice from various authors on the limitations that might occur when scientists use methods that are not appropriate for the study concerned. Several studies of this nature encountered challenges in achieving the envisaged objectives. Stigler et al. (1999)

who used questionnaires to explore classroom practices and faced limitations gave a vivid example. Various reasons might cause this phenomenon. First, the classroom is a complex environment where many practices are taking place at any given time and thus it is impossible to document everything. Secondly, teachers may be accurate reporters of what they planned for the lesson, but inaccurate in reporting classroom practices occurred. Likewise, in questionnaires, teachers can only answer the questions asked by researchers, but observation goes further and sees other practices in the classroom. It suggests that direct observation to some extent overcome the limitations of questionnaires. Interestingly, the use of videos helps to overcome the limitations of questionnaires and observations (Stigler et al., 1999).

The selection criteria of research design, approach, sample, data collection methods, and analysis had primarily been informed by the previous studies in connection with the purpose and research questions. In this study, the researcher decided to start with the research design that provides the plan for all activities in the visited schools. To this end, Saunders, Lewis, and Thornhill (2009) seem to offer important meaning regarding research design as they write “your research design will be the general plan of how you will go about answering your research questions; your research questions will subsequently inform your choice of research strategy, your choices of collection techniques and analysis procedures” (p.136). In the following sections, essential components of the research methodology have been discussed.

4.3 Research design

Kothari (2004) defines research design as “the decisions regarding what, where, when, how much, by what means concerning an inquiry or a research study” (p.31). The author clarifies the research design as being the conceptual structure that shows how research is carried out and constitutes the plan for data collection, measurement, and analysis. Johnson and Christensen (2008) viewed research design as an outline, plan or approach that researchers use to seek answers to research questions. By considering the meaning of research design according to the foregoing scholars, this study employs those ideas and describes how the current study should be effectively planned, carried out in the selected secondary schools in Tanzania, analyzed the information, and produced findings responding to research questions.

Based on the review presented in the previous section as well as the purpose of this study, it is important to note that researching in a complex context like classrooms presents methodological challenges. The complexities might be caused by various factors that have been interacting, impacting, and influencing each other. Aspects connected to the school, curriculum, the

classroom environment, appropriateness of the learning activities and interactions, knowledge, and skills of teachers/students, and culture influence the learner centred teaching practices in the classrooms. Sometimes the nature of the research and the knowledge and skills of the researcher influence these practices. Anderson and Burns (1989) described the complexity that occurs in the classroom because of different characters portrayed by students and teachers when they interact during the teaching and learning practices. In addition, Ritchie, Lewis, Nicholls, and Ormston (2013) explained the complexity that occurs because of different perceptions and understandings made about classroom practices. Similarly, Tytler, Hubber, and Chittleborough (2010) depicted that the complexity arises because of many practices happening at a time and many interpretations made in teaching and learning practices.

The researcher of this study was aware of the complexities that usually happen in classrooms. Teachers are normally having the lesson objectives and plan to achieve them in the classroom. They execute the teaching and learning practices and make sure students gain knowledge and skills. Therefore, conducting research in such an environment calls for an appropriate design that ensures the learner centred teaching practices are explored successfully. For this reason, a qualitative design was selected as suitable for generating information and understanding in complex situations. The researcher was in agreement with scholars such as Prill-Brett (2005), Mason (2006), and Flick (2009) who were of the view that qualitative design enabled investigating sophisticated practices in complex contexts. The qualitative design is effective in collecting and interpreting culturally specific information about the values, opinions, behaviors, and learner centred teaching practices.

The real execution of the learner centred teaching practices in the classrooms is not predictable. This view provides a picture that anything or challenge, as well as emerging issues and problems, can happen during the teaching and learning process. In this situation, one may enter the classroom with a set of predetermined characteristics, but they might not work or responded as expected. In this situation, a qualitative research design is flexible and adaptable to respond to the preceding classroom challenges. It can provide detailed descriptions of practices. Therefore, studies that are conducted in the classroom environment can best be performed by employing qualitative design. This fact gets support from Prosser and Trigwell (1999) observation on the principles of qualitative design that directed researchers to focus on giving full descriptions of teachers' and students' practices in the classrooms rather than relying on a causal relationship.

Alexander (2000) supported the use of qualitative design for exploring pedagogical practices because it complies with the principles of an art and not of the experimental science. A similar

view was shared by Brown (2002) who advocated that qualitative design appropriately studies teaching practices in the classrooms instead of representing them by numbers that resulted from quantitative design. Likewise, Wenglinsky (2001) found a qualitative design to be suitable for studying actual classroom practices. This study agrees and adopts the views presented by preceding scholars mainly because the learner centred teaching practices are conducted by following theories, principles, skills of teaching and stages. These practices do not rely on certain routine or experimental procedures that can be predicted, seen, and captured easily. But, teachers use artistic skills to make students learn something. Thus to capture such practices needs qualitative design.

The arguments presented above continue to confirm the suitability of the qualitative design for guiding this study. It made the researcher of the present study positively concur and follow Merriam (2002) who suggested that “if you want to understand a phenomenon, uncover the meaning a situation has for those involved, or delineate process (how things happen), then a qualitative design is most appropriate” (p.11). It provides in-depth descriptions of the real contexts and focuses on naturally occurring and ordinary events in natural settings. It enables to explore learner centred teaching practices and gain the required understanding. In addition to the same perspective, Creswell (2009) exemplified that in the whole process of qualitative research, the researcher focused on learning the meaning presented by participants concerning the problem and not the meaning researchers or literature bring to the ongoing study. The foregoing fact, guided the researcher to explore the learner centred teaching practices and acquire the meaning provided by teachers in the visited schools regarding how they are implementing and the challenges they are facing.

For qualitative research to produce reliable data that reflects the actual context, researchers should consider the kind of culture found in the learner centred environment. Culture is known as the basic frame to understand and explain the research activities in the classroom contexts. Therefore, no decision, action, a policy can be accurately understood except by considering the inherited ideas, values, habits, and customs (Alexander, 2000). The foregoing points make the concept of culture to be paramount. By referring to the context in which this study was conducted, it is more appropriate to focus on the classroom culture. This is because the study will cover various attributes that guide everyday learner centred teaching practices. To act in accordance with this situation, this study adopted the ethnography research approach.

4.4 Research approach

This study used an ethnographic approach that was designed by social anthropologists to study culture in social science. Creswell (2009) defines ethnography as “a strategy of inquiry in which the researcher studies an intact cultural group in a natural setting over a prolonged period of time by collecting primarily observational and interview data (p.13)”. It is an effective approach that occurs in a natural setting and for this case classroom and enables the researcher to develop a level of detail from high involvement that is extended in the actual practices. Also, Merriam (2002) asserts that ethnography is a field of study developed by anthropologists to study human society and culture. Merriam (2002) and Ritchie et al. (2013) assert that an ethnographic approach encompasses the study of understanding the culture regarding shared knowledge, beliefs, ideas, practices, behaviors, and values of a particular group of people. The scholars indicate various aspects that are expressed by the culture and should be considered when conducting research. More specifically the present study should focus on learner centred teaching practices.

It is believed that classroom culture influences learner centred teaching practices. Thus, the preceding descriptions substantiate the adoption of the ethnographic approach. In fact, it is known as an effective research approach in understanding classroom culture. This approach is suitable for this study because it facilitated the researcher to explore the learner centred teaching practices taking place in the classroom. Under the ethnographic approach, the classroom is viewed as a cultural context. The learner centred teaching practices are guided by the cultural traditions, principles, and characteristics of the teachers, students, and the education system. This view suggests that students, teachers, materials, the learning environment, and the surrounding society are all cultural aspects that influence classroom practices. In connection to this study, the ethnographic approach helped to acquire a better or a deep understanding of the implementation of the learner centred teaching practices. Scholars considered this approach as data collection method that generate ways of understanding the observable fact and promoting good descriptions and interpretations (Mason, 2006; Saunders, Lewis & Thornhill, 2009).

To collect detailed information about the learner centred teaching practices, it is imperative to explore these practices in all stages of the lesson development. Teachers and students in the visited classrooms comply with the instructions of following all stages. This idea gets support from Wilson (1997) and della-Porta and Keating (2008) who focused on ethnographic strategy for capturing detailed information about teachers’ practices in the classroom. Likewise, Hammersley (1990) and Hiebert and Stigler (2004) observed that the ethnographic approach

facilitates the process of learning people's practices and their learning environment daily. To accomplish this, the researcher watched what teachers do, talked with teachers, listened to what they said, and asked questions in their learning site daily to gain a deeper understanding of the learner centred practices. In general, the researcher engaged in observations and interviews of teachers in the selected secondary schools to explore the learner centred teaching practices in various stages of the lesson development. The researcher employed participant observations and semi structured interviews to scrutinize how teachers interact with students in the classroom concerning their everyday learner centred teaching practices. The preceding processes helped to generate detailed and comprehensive field notes of everyday classroom interactions. The information was analyzed and organized well and produced various themes responding to this study. Scholars supported the fact that the foregoing activities made the researcher construct ideas and meanings as they occur in the field (LeCompte & Schensul, 2010; Miles & Huberman, 1994).

Moreover, this study adopted the idea raised by Wilson and Chaddha (2010) that "good ethnography is theory driven" (p.549). For the same reason, Hammersley (1990) opined that good ethnographic research is accompanied by the primary question, thesis statement, and theory. The theoretical understanding helps to facilitate the interpretation of the data obtained from the context in which it occurs. It contributes to integrating empirical findings with theoretical principles (Wilson & Chaddha, 2010). The preceding principles seem to be relevant to the nature and context of the current study. In this case, the research is guided by research questions and the theory. It adopted the constructivist theory to guide the exploration of learner centred teaching practices. The theory provided information on how it works to facilitate these practices. It presented characteristics for teachers to use and create learner centred classrooms. In short, the constructivist theory indicated real learner centred teaching practices in different stages of the lesson development. This view facilitated the ethnographic approach to collect detailed information that addresses the objectives and research questions.

4.5 Sampling methods

Scholars described sampling in various ways. According to Kothari (2004), sampling refers to "the technique or procedure the researcher adopts to select items for the sample (p.55)". Similarly, Mertens (2010) adds that sampling refers to the method used to select a given number of people (or things) from a population (p.309). The sampling process is considered in this study as a crucial aspect. This is because the objectives and questions that guide the research study depend much on the sample. Therefore, to respond to the research questions in the present study

the researcher selected the sample. This process facilitated getting representative teachers to participate successfully in teaching and research activities.

According to Cohen et al. (2007), there are two primary methods of sampling designs. These are probability sampling and non-probability sampling. This study adopted non-probability sampling to select a sample that met the criteria for inclusion. The study applied purposive sampling to select key informative participants from the visited schools. These were teachers with a good understanding of the learner centred teaching practices implemented in the classrooms. In the first place, schools were selected based on the performance in the results of the national examinations displayed for some years. Therefore, four schools A, B, C, D represent schools that performed well, poor, very poor, and worst. The selection showed to rely more on the poor performing schools because this study intends to address the problem of poor performance.

The researcher selected these schools to investigate extensively and build an understanding of the curriculum implementation, educational reforms, and see how teachers carry out learner centred teaching practices. The foregoing schools were selected to explore the similarities or differences regarding their learner centred teaching practices. The findings from these schools were discussed by comparing them with the educational research carried out in various national and cultural contexts. This process provides a chance of exposing and sharing educational practices with different education systems. Educators use this chance of learning from each other. It gets support from Cowen and Kazamias (2009) who proposed for single country studies as the most frequently used type of research methodology in comparative education.

Regarding teachers, the study purposively selected four teachers from four schools A, B, C, D to participate in the data collection process. The teachers were selected based on the initial conversation with the researcher to demonstrate that they have attended learner centred educational programs. Expect that they practice in their day-to-day classroom practices, considering the requirement of the current secondary school curriculum and syllabus. Another criterion was that the selected teachers were teaching a chemistry subject, which is an area of interest to the researcher. Therefore, through their participation in the learner centred programs and continuing to employ learner centred teaching in the classrooms, teachers confirmed to have broad knowledge, skills, and understanding needed to fulfill the purpose of this research. The researcher was of the view that to conduct research properly and produce trustworthy and credible results it needed an appropriate sample. Few teachers with prerequisite information were chosen. The researcher intended to work intimately with few teachers and acquire deep

information about the learner centred teaching practices. They were considered as the main source of information because they plan, prepare, execute the lesson, organize the learning environment, and facilitate students to acquire knowledge and skills prescribed in the curriculum. In addition, teachers know the challenges and obstacles that hinder the effective implementation of these practices according to the nature of our classrooms.

Scholars confirmed the importance of selecting teachers for the studies addressing the implementation of the curriculum in classrooms. Stringer et al. (1997) reported that the problems of teaching and learning might have been revealed more effectively by carefully examining the real-life experience of teachers in educational contexts as well as focusing on the quality of teaching practices in the classrooms. Also, Stigler et al. (1999) provided suggestions regarding the rise and drop of students' performance. As a solution, they suggested improving performance by overseeing the implementation of the curriculum in classrooms. The preceding discussion gives teachers a premier chance to participate in the current study.

4.6 Pilot study

It is imperative to note that ahead of the actual fieldwork, the researcher conducted a pilot study. It has been argued that conducting the pilot study before the real research is an essential process. The pilot study intended to enable the researcher getting a real picture of what would happen during the actual fieldwork. By definition, a pilot study is the pre-testing or trying out of a particular research instrument (Baker 1994 as cited in Van Teijlingen & Hundley, 2001, p.1). The researcher used information from the pilot study to adjust instruments as a strategy to minimize expected distractions. The pilot study might give a warning about where the main research project could fail, where research protocols may not have been followed or whether proposed methods are unsuitable or too complicated. It might reveal local politics or problems that affect the research process (Van Teijlingen & Hundley, 2001).

Pilot studies enable researchers to improve and sharpen the data collection methods to avoid problems in the course of research (Cohen et al., 2007). The researcher needs to conduct several pilot studies to develop good data collection methods (Mertens, 2010). This study applied the ideas of preceding scholars because the researcher intended to accomplish the stated purpose. It needed to collect what it was supposed to be collected and provided an understanding of the learner centred teaching practices. In the process, the investigator selected two secondary schools and then sought permission from the educational authorities. Indeed, the permission was granted. The researcher tested the data collection methods (semi-structured interview and participant

observation) by testing, applying, and practicing the data collection activities as a means to check their applicability. Afterward, the researcher reviewed and used the reactions obtained from the pilot study to improve the semi-structured interview and participant observation as well as their administration. The investigator used this opportunity to adjust the data collection methods.

In this case, the researcher added the following questions. One question was *what do you understand by the term learner centred teaching?* The investigator discovered during the pilot study that it is important to know the teachers' general understanding of the learner centred approach first before going deep into the practices taking place in the classrooms. This question alerted the researcher to start very early to build a relationship with the main participants by checking their knowledge connected to the learner centred teaching. Another question was *how do you manage, control, and organize students in the classrooms?* The investigator discovered that the classrooms in the pilot schools were overcrowded. This situation motivated him to search for information related to classroom management. It was facilitated by the fact that classroom context is complex, so it was important to know how teachers manage many students under learner centred teaching practices. Also, how teachers engaged many students in such a classroom environment.

The pilot study enabled the researcher to organize the research activities and thus collect information in an effective way. The researcher used the experiences from the pilot study to arrange successfully how to conduct multiple observations and interviews in the visited secondary schools. The researcher planned to conduct the foregoing research activities in various ways and arrangements. The intention was to ensure the researcher is collecting deep and authentic information as much as possible. This study followed the advice of Roberts-Holmes (2005) who provided the directives of using a pilot study for refining and adjusting research and being sure about whether or not the methods are doable in the actual research environment. Van Teijlingen and Hundley (2001) asserted that well designed and well conducted pilot studies informed researchers about the best research process and the likely outcomes. This study benefited from the foregoing authors because the exercise helped to minimize challenges or barriers that would happen if the pilot study was not done. Besides, it is important to remember that the classroom environment is generally complex so to conduct research successfully then a pilot study must be done. It should assist researchers to carry out research activities in the classrooms as smoothly as possible.

4.7 Data collection methods

To answer the research questions, the researcher planned and collected data from the selected secondary schools. This task was carried out in different periods of the research. In fact, the data collection and analysis were made on an ongoing basis according to the qualitative research. The researcher began data collection activities by requesting permission from the regional education officer as well as from the heads of selected schools. Permission to conduct research was granted. Before beginning the actual data collection processes, the researcher made communication with chemistry teachers in advance and then visited them in their schools. In the first meeting, the investigator wanted to know the teacher's understanding regarding learner centred teaching. The teachers showed to agree that they have knowledge and skills acquired from the teacher education programs.

The researcher explained thoroughly the purpose of the study and the methods that could be used during the data collection. He made clarifications of how the data would be captured and how teachers and students would be involved and to what extent. The investigator used this chance to build a good relationship with the teachers being the main participants and gain some information related to the status of the implementation of learner centred teaching practices. Likewise, the researcher asked teachers to provide information concerning the general school environment such as teachers, students, practices, classes, timetables, conditions, materials, infrastructures, and the general school organization. The intention was to know to what extent the school setting supported/motivated or hindered/discouraged teachers from implementing curriculum reforms and the learner centred teaching practices in particular.

Searching for information on these attributes helped the researcher to provide descriptions showing how school environments are similar or different and how they influence the learner centred teaching practices as well as students' performance in examinations. This idea is in line with the factors explained by educators (Mullis et al., 2012; Mullis & Martin, 2013; Hattie, 2009; Scheerens, 2013) on how school effectiveness improves students' achievement. Some conditions should be considered for the school, teacher, and students to perform their duties successfully. It aligns with the purpose of this study of exploring learner centred teaching practices as a strategy of investigating and finding ways of improving the poor performance of students in the national examinations.

To build a favorable environment for data collection, the researcher adopted essential components that facilitate research activities in the field and specifically in the classroom

contexts. To accomplish data collection from the field, the researcher emphasized and incorporated the open questions, explored various attributes, and stayed fully in the school environment and classrooms. The preceding processes facilitated the gaining of information that provides a detailed understanding of the actual learner centred teaching practices employed in different stages of the lesson development.

Furthermore, the researcher followed the advice provided by other researchers on how to build sound relationships with the participants to ease the whole process of data collection and obtain authentic information. The researcher used his long experience of teaching in secondary schools to develop a positive relationship with teachers and communicate with them using their language, and it helped to acquire information efficiently. Teachers in the visited secondary schools were free and open to the researcher because he used to be a fellow teacher who worked, faced, and encountered similar educational environments. In fact, teachers were not afraid to talk to the researcher. This study adopted the strategy of building an empathetic stance to enhance the relationship to facilitate data collection (Saunders et al., 2009). Furthermore, O'Reilly (2009) explained how to access data from the research site. The scholar advised the researcher and participants to make conversations so that they know each other. The teacher will know exactly what is needed by the researcher to accomplish the research study. This understanding builds closeness that helps to acquire in-depth information concerning the teachers' perceptions and practices of the learner centred in the classrooms.

After becoming satisfied with how the research would be conducted vis-a-vis some information regarding ethical issues such as a guarantee of confidentiality, voluntary participation, informed consent, and protection from any harm, teachers agreed to participate and co-work with the researcher. Teachers signed a consent letter to confirm their official participation. The researcher was acquainted with the main school timetable. It shows all the educational activities for the whole day. Teachers also submitted teaching timetables showing their schedules for classroom activities. The periods started normally at 8.00 am and ended at 3.00 pm. After the researcher, got oriented to the school/classroom schedules, later the research activities started by following the arrangements made between the researcher and teachers. This activity was done to ensure that the exercise was carried out ethically without disturbing other teachers and students or interfering with other school activities.

In the process, the researcher carried out semi-structured interviews, participant observations, and at the same time collected teaching documents. The teachers selected to participate in this study responded to research questions in various ways. They were observed to capture their

learner centred teaching practices in the classrooms. They provided their perceptions regarding these practices during the interview sessions. To maximize the process of gaining meaning the researcher listened and looked at the teachers. The arrangement confirms that teachers were involved in three main routes that are participant observations, semi-structured interviews, and educational documents.

- **Participant observation**

Observation is the process of watching the behavioral patterns of people in a given situation to obtain information about the phenomenon of interest (Johnson & Christensen, 2008). This method is a powerful tool for acquiring insight into situations (Cohen et al., 2007). According to these scholars, the distinctive feature of observation as a research process is that it offers an investigator the opportunity to gather “live” data from naturally occurring social situations (p.396). The information is collected by making a direct observation without asking questions to respondents (Kothari, 2004). This study considered participant observation as the primary method for data collection. In this case, the learner centred teaching practices were captured in their original manner (live) as they occur in the classrooms. The actions, activities, and engagements were recorded entirely in the classrooms. It helps to gather accurate information obtained from natural settings. These data are crucial for crosschecking classroom practices and comparing them with what teachers responded in the interview sessions and what was written in the teaching documents.

According to Ahola and Lucas (1981), the phrase participant observation denotes participation on one side and observation on the other. There are useful descriptions of the three possible roles of participant observation. (a) The participant as an observer (the observer is a natural member of the group studied). (b) The observer as a limited participant (the observer is not a natural member of the group but interacts with a member of the group for the stated purpose of the study). (c) The observer as a non-participant (the observer can remain detached from the group under study) (Ahola & Lucas, 1981). The researcher expressly played the role of an observer with limited participation. In this case, the researcher was not involved in facilitating teaching or acting like a normal member of the teaching staff. However, the participants took the form of interacting with teachers and students to accomplish the purpose of the study and collecting data as it should be. Limited participation helps the researcher to focus more on observing and gaining learner centred teaching practices in the classroom comprehensively. It is suitable for exposing the true practices of teachers and students in the classrooms.

To capture classroom practices, the researcher observed a single period (40 min) or double periods (80 min) from the beginning until the end. The investigator sat at the back and sometimes moved to various places in the classroom depending on the nature of learning activities. The researcher watched and collected teachers' and students' practices by writing notes, taking pictures and recording by video. In all teaching and learning sessions, the investigator followed the order in which practices occurred according to different stages of the lesson development. The teachers were allowed to teach according to their plans and methods without the researcher interfering in any way. The aim was to ensure that the entire learner centred and other teaching practices taking place in the classrooms were observed and captured as they occurred. The researcher worked in that manner to make sure that the data collection is carried out and facilitated an extensive exploration of the learner centred teaching practices. This method helped to produce comprehensive descriptions of the information collected from the fieldwork (Turner & Meyer, 2000).

In the course of data collection, multiple observations of the same teacher, students, and classrooms were made (it was done more than three times). The purpose was to explore the learner centred teaching practices for the same participants and environment extensively. This study considers multiple observations as good practices to use for classroom based research because making observations frequently helped to reveal changes and differences that occur in the way teachers conducted these practices. It is the regular practice for teachers as they gain new knowledge and skills they use in the classrooms. So, collecting data in this way helped the researcher to capture and present modified learner centred teaching practices as happened in the classrooms. Thus, the researcher of this study agrees with other researchers like (Kaya, 2014; Zohrabi, 2013) who suggest repeated observations as the expedient method that helps to reach valid conclusions and enhances research credibility.

Importantly, the repeated observations were intended to control reactivity effects that occur among teachers and students when their lessons or classroom practices are observed. It is normal for teachers and students to react when they see a guest in the classroom. This may be considered as the culture for teachers and students in the visited schools to react in that way. To avoid it, the researcher conducted several observations. Indeed, repeated observations are a useful method for reducing tension and the reactivity of teachers and students (Ahola & Lucas, 1981; Kawulich, 2005). Furthermore, this process manages the way the researcher collects practices taking place in the classroom and thus avoid any interference that is likely to be caused by the researcher's knowledge and experiences. This idea is in line with Temu (1995) who considered many

observations as good practices because they minimized the researcher's influence and assisted in collecting factual data.

Furthermore, the study adopted and complied with flexibility in observing the learner centred teaching practices. The stages teachers used to develop their lessons did not restrict writing and recording other practices that occurred in the classrooms. The researcher applied the strategy provided by other scholars to ensure the collection of all practices as they happened (Brown, 2002; Mickan & Motteram, 2008). This idea facilitated information to be acquired in its actual form in the classrooms. The researcher allowed classroom situations to "speak for themselves" (Cohen et al., 2007, p.398) without manipulating the practices done by the teachers and students. This study adopted this method as one of the good ways of collecting data as described by scholars. In addition, it helps to observe classroom practices authentically which adds significantly to the richness of the data (Cohen et al., 2007; Saunders et al., 2009).

Apart from the method mentioned above, the researcher recorded learner centred teaching practices taking place in the classrooms by using a video gadget. The video recording device was not used as the main method of observation but as an extra tool for capturing teachers' and students' practices as they come about in the classrooms. It is considered as an appropriate device to do observation comprehensively and collect information that accounts for the learner centred teaching practices. It has some advantages stated by scholars as follows: First, it enables a detailed examination of the complex activities from a different point of view. Secondly, it allows coding from multiple perspectives. Thirdly, it stores data in a form that allows new analyses later. Fourthly, it provides access at any time, and fifthly, it facilitates communication of the findings (Prill-Brett, 2005; Savola, 2008).

Moreover, this study agreed with video as it helped to avoid misunderstanding and misinterpretation of the learner centred practices. It is considered as a better way to understand what takes place inside the classrooms (Stigler et al., 2000). Furthermore, video helps to collect data on the situation where some practices move rapidly without the researcher's notice (Anderson-Levitt, 2006) and other practices that are hard to record (Seidel et al., 2011). The video method benefited this study because the researcher used it as an additional method and permanent resource that viewed and reviewed many times and finally acquire relevant information. It also allowed for the preservation of data from disappearing, and this helped to make data available at any time. In the process, the researcher used the video gadget to record learner centred teaching practices for some lessons. He ensured the video device was simple and common so that it does not distract students from learning. The one that could not interfere with

the teaching and learning processes. He used a video device to capture practices from the beginning to the end of the lesson. The gadget recorded verbal and non-verbal interactions in the classroom. The researcher stood at the appropriate position/angle that allowed the recording of all practices. For classrooms in Tanzania, the traditional arrangement allows the researcher to stand at the back and capture ongoing practices simply. In some instances, the researcher moved in all places of the classroom to record practices closely.

Researcher presents pictures for some of the classroom practices in the selected secondary schools. These pictures show how teachers facilitate learner centred teaching practices. They attempted to demonstrate what really took place in the classrooms. The presentation by pictures helps educators, teachers, administrators, and other stakeholders to confirm the ongoing learner centred teaching practices. Moreover, the researcher collected some documents that provide information on how these practices are implemented in the classrooms. They facilitate understanding of the classroom practices in the visited schools. Flick (2009) opined that documents are very instructive in addition to interviews or observations. The study act in accordance with a qualitative design that allows the use of documents facilitating the presentation of content that improves understanding of learner centred teaching practices.

- **Semi structured interview**

The interview is an interchange of views between two or more people on a topic of common interest (Kvale, 1996 as cited in Cohen et al., 2007, p.349). Also, Kothari (2004) defines an interview as involving the presentation of oral verbal stimuli and reply regarding oral verbal responses. This method enables participants to discuss their interpretations of the world and expresses how they regard situations from their opinions (Cohen et al., 2007). It applies to this study because the interview gives a chance for teachers to provide their perspectives freely about learner centred teaching practices. The interview helps to understand the impressions or experiences of the teachers as regards these practices. To accomplish that the interview in the present study was formulated to be consistent with the purpose and objectives of the research, the research questions, and the research approach employed (Saunders et al., 2009).

According to Mertens (2010), interviews in qualitative research are guided by unstructured or minimally structured format. To conform to that idea, this study primarily adopted semi structured interviews. This method is appropriate for addressing the research questions guiding the present study. It allows teachers the freedom to express their perceptions and information freely on their own terms. The current study employs semi structured interviews because of

various reasons and qualities explained by scholars. According to Merriam (2002), the semi structured interview contains a mix of more or less structured questions. The questions are flexible and allow the interviewee to provide more information. It gives a chance to present research findings in detail. This type of interview was guided by a list of questions that were presented to the teachers in the visited schools. According to Creswell (2009), semi structured interview involves open-ended questions used to elicit views and opinions from the members.

This study administered interviews at various times. The interview was done during the data collection process, then six months after the data collection process, and during the members checking with the key research participants in the visited secondary schools (ie when the teachers verified the research findings). Multiple interviews were necessary to cross-check the teachers' perceptions and to find out whether there were changes or new knowledge, skills, and understanding teachers gained concerning the learner centred teaching practices. Concisely, interviews were administered in many manners to make sure that accurate and productive information was collected. The researcher attempted to crosscheck the teachers' responses to capture and record authentic data as a strategy to ensure the credibility of the research findings. During the interview sessions, which normally took 40 to 60 minutes, the researcher was guided by the kinds of questions that allowed teachers to provide answers openly and according to their understanding. The researcher applied open-ended questions because they helped to build an open situation that allows for greater flexibility and freedom (Cohen et al., 2007).

To facilitate the interview process, teachers were allowed to say anything they knew that relates to the perceptions and practices of the learner centred teaching. The researcher did not interfere to force them to speak the ideas he wants. The investigator remained as objective as possible. The researcher attempted to adopt some guidelines for interviewing as presented by Patton (1987). In particular, the researcher applied the techniques for guiding effective interviewing. The researcher remained focused on the purpose of the current study. He always built good communication and friendship with teachers and motivated them to participate in the interview in a free and secure manner. He asked questions clearly and one after another. The preceding techniques facilitated the collection of authentic information that reflected the teachers' knowledge and understanding of the learner centred teaching practices in the learning environment.

The researcher of this study used some techniques emphasized by different researchers (Cohen et al., 2007; Creswell, 2009; LeCompte & Schensul, 2010; Saunders et al., 2009). The techniques include probing, rephrasing, and asking to follow up questions. These techniques are considered

good because they motivated teachers to account for the lesson. They helped the researcher to acquire a rich and detailed set of data that address the research questions. They revealed wider aspects of teacher thinking and understanding of the learner centred teaching practices. Moreover, the researcher wrote notes and captured the major points. The investigator also recorded information in the form of voices that are useful for keeping the actual quotes from the teachers. The study considered recording the audio records as an important technique because taking notes by using the hand only is usually not enough. A researcher might miss some information presented by teachers. To control this deficiency the audio gadget was used to record everything and it provided complete information needed for analysis. This device preserved the information, and it helped the researcher to crosscheck and frequently repeat to check the accuracy of the field notes. This process improved the collection of findings that confirm the credibility of the research results.

4.8 Data analysis

According to Cohen et al. (2007), qualitative data analysis involves organizing, accounting for, and explaining the data. In short, it makes sense of data in terms of the participants' definitions of the situation, noting patterns or themes, and regularities (p.461). The researcher of this study analyzed information from the field and predominantly identified the themes that demonstrate the main issues obtained from the visited secondary schools. Creswell (2009) explained further that qualitative data analysis is carried out together with the processes of collecting data, making interpretations, and writing reports. It is important to know that in qualitative research a significant amount of work is performed during the data collection, analysis, and interpretation processes. This study has successfully followed that principle, and accomplished the research objectives and responded to the research questions. The analysis process is a progressive refinement of data and codes in various stages (Saldaña, 2009). The purpose was to make sure that at every stage the data from schools A, B, C, D are improved accordingly. The process produced information that is authentic, detailed and gave a real picture of the learner centred teaching practices.

Saunders et al. (2009) opined that qualitative information is found in many forms. This fact has also manifested in this study as data were in the form of transcripts, texts, pictures, documents, audio, and video recordings. It made the process of analyzing and presenting data to depend on the researchers' outlook of what suits the purpose of the qualitative study. Cohen et al. (2007) supported this view and stated that there is no single or correct method to analyze and present qualitative data, how one does, should abide by the issue of fitness for purpose. In short, the

purpose of the study determines the kind of analysis performed on the information and the way it was written up.

Researchers who conduct qualitative studies, often struggle to pick the best method to analyze their data. In this study, the researcher analyzed the data by applying the most common method of analyzing qualitative data called thematic analysis. It focuses on examining themes within the data. A theme is a broad or short construct that describes a particular observable fact (Ryan & Bernard, 2003). It is a phrase or sentence that identifies what a unit of data is about and what it means (Saldaña, 2009). The theme captures something significant or has an important effect regarding the data in relation to the research objectives and questions. It has been suggested that thematic analysis is a flexible and useful research tool. It provides a rich and purely qualitative and detailed, yet complex account of the data (Braun & Clarke, 2006). Therefore, qualitative researchers and this study should become more familiar with thematic analysis as an independent and reliable qualitative approach to data analysis. Is “a method for identifying, analyzing, and reporting patterns (themes) within data” (p.79). It further interprets various aspects of the research topic. Interpretation helps to provide the meaning of the data.

Thematic analysis is regarded as the form of theme recognition from the data. It includes careful, focused reading and re-reading of data as well as coding and theme construction. The emerging codes and themes may serve to integrate data gathered by different methods (Bowen, 2009). This study considered and employed the foregoing procedures as an essential undertaking in qualitative data analysis. In fact, it facilitated the researcher to identify appropriate themes reflecting the learner centred teaching practices. The investigator discovered themes in different stages of carrying out this research. It includes before, during, and after the data collection and analysis. In addition, the researcher produced and described the themes addressing the learner centred teaching practices by considering learner centred characteristics. Scholars explained to them that researchers wanted to use thematic analysis because it favors the data collected from complex context such as a classroom. In elaborating more on how thematic analysis supports the identification of themes, scholars asserted that thematic analysis emphasizes flexibility in different aspects, it is easy to carry out, it summarizes key features, highlights similarities, differences, trends, and allows proper interpretation of the data (Braun & Clarke, 2006). It is valuable to note that the analysis in this study was done continuously and at different stages and times as the research goes on. This process was carried out in an ongoing way, and new themes were regularly discovered and added to the research findings.

The following descriptions present a summary of the main stages the researcher followed to analyze data from the fieldwork (visited schools). They were compiled by considering the stages described by the following scholars (Braun & Clarke, 2006; Cohen et al., 2007; Creswell, 2009).

- **Preparing and organizing raw data to familiarize with them**

To accomplish this stage, the raw data obtained from the visited schools was prepared and organized in a manner that they could be read to examine what was therein and how they relate or reflect the learner centred teaching practices in various stages of the lesson development. This process helped the researcher to become familiar with and understand the information already collected. It gave a picture of the information to show whether they reflect on what was needed by the current research. This stage involves the organization of data to produce different types of information depending on the sources from which they occurred and captured from the visited schools (Creswell, 2009).

- **Reading thoroughly the data from the fieldwork and formulating transcripts/texts**

After becoming familiar with what was already collected, the researcher reread the entire field notes thoroughly. This activity is accompanied by repeatedly listening to the audiotapes and watching the videotapes to get a full understanding of the information on the subject of the learner centred teaching practices collected from all sources. Information from the written notes, documents, audiotapes, and videotapes were transcribed to form transcripts/texts. These research contents were applied to enrich the presentation of the research findings and report. The researcher followed the instructions given by Roberts-Holmes (2005) that the process of reading and listening to the tape, video, and transcribing word by word helps to provide a good understanding and analysis of the field notes concerning the learner centred teaching practices. Flick (2009) called this an active process of producing the authenticity of the research findings.

- **Coding the transcripts/texts and formulating the themes**

Transcripts/texts were coded to filter crucial information, concepts, and ideas appearing in the database and respond to the purpose and research questions guiding this study. Codes are essential elements of the research description. They act as words used to represent facts linked to the learner centred teaching practices in various stages of the lesson development. The process of coding is not accurate science, but it is mainly an interpretive action. Therefore, it needs a researcher to possess broad and appropriate knowledge and attributes to carry out coding and produce accurate themes for the qualitative study. To achieve this task, the researcher ensured to

develop the following traits that facilitated data analysis. They included an investigator to be organized, flexible, creative, ethical, persevere; deal with ambiguity and to have an extensive vocabulary (Saldaña, 2009).

The coding process in this study adopted two cycles presented by Saldaña (2009). The first cycle is Descriptive coding which is used to summarize the primary topic as appearing in the extracts. It provided an organizational understanding of the current study. The researcher assigned words or short statements on the transcripts/texts to produce topics/concepts relevant to the learner centred teaching practices. Descriptive coding has been applied for a variety of data including the interview transcripts, documents, pictures, audiotapes, videotapes, and field notes. Another type of coding is In Vivo coding. The researcher applied the direct language or voice of teachers to formulate codes. It helped the investigator to adjust teachers' words and phrases. It was used only for interview transcripts. The second cycle involved Pattern coding that was applied to organize and analyze data coded in the first cycle. The researcher organized together data into a more meaningful unit of analysis. The investigator gathered codes according to similarity and regularity and facilitated the development of themes. In general, the words and short statements have been sorted and organized to produce themes.

This study provides a few examples of the coding process in the data analysis (Table 3). It shows the transformation from the transcripts/texts to the themes responding to the research questions related to the learner centred teaching practices in various stages of the lesson development. This study worked according to Saldaña (2009) who advocates that coding is primarily a hermeneutic or interpretive act that represents the transitional process between data collection and more extensive data analysis. In general, the activities of coding the information from the visited schools simplified the data analysis process. It helped to make the information in this study to be more meaningful. Straus (1987) as cited in Saldana (2009) advocated that to become proficient in doing qualitative analysis needs effective execution of coding. The quality of qualitative research depends on the quality of coding.

It is important to note that, the implementation of the secondary school curriculum in Tanzania has been emphasizing teachers to employ learner centred practices in the classrooms. These practices have been guided by the constructivist theory. They are advocating being more effective compared to teacher centred practices. Therefore, the transcripts/texts from the fieldwork show classroom practices that have been captured according to the stages of the lesson development. The analysis of the actual practices in the classrooms indicates that the

transcripts/texts represent the extent teachers employed learner centred teaching practices. The preceding practices have been reflected on the themes identified in this study.

Table 3: Some examples of the transcripts/texts, codes, and themes

| Transcripts/Texts from the raw data | Code | Theme |
|---|---|----------------------|
| If I continue with the same topic, I start the lesson by reminding students about the concepts we discussed together in the classroom. Then I ask questions to scrutinize whether there is a link between the previous knowledge and the new knowledge | Start lesson Ask questions | Introduction |
| The teacher started by supplying questions to students and then asking them to discuss in their groups and summarize important points. Later on, one student from each group was invited to present answers in front of the classroom | Discuss in groups Summarize points Present answers | New knowledge |
| In this school, class teachers have set the seating arrangement to comply with the real situation in the classrooms. Therefore, it is very difficult for the subject teacher like me to try adjusting this arrangement. What I do in order to interact with all students I create an environment enabling me passing to reach all students. | Seating arrangement Interact with students Reach all students | Classroom management |
| Reflection is like a mirror to the teacher because it gives an accurate picture of how the teacher facilitates the teaching and learning practices in the classroom. I usually use quiz or oral questions to examine students learning and understanding | Facilitate teaching Quiz/Oral questions Examine students | Reflection |
| I assess students in a continuous manner by asking students oral or written questions. This process helps me to identify students who are facing learning problems. It alerts me to find the ways of helping these students | Assess students Ask questions Identify problems | Assessment |

Source: Fieldwork

- **Interpreting the meaning given by the themes**

This study followed the philosophical foundation of interpretivism in guiding the exploration of teachers' perceptions and practices of learner centred teaching at different stages of lesson development. Interpretivism fits into the qualitative design, and it is viewed as a set of interpretive practices that help to make the world more visible (della-Porta & Keating, 2008).

This study used the foregoing idea and collected information then interpreted the teachers' perceptions and practices as experienced by teachers. The researcher focused mainly on the meaning of the learner centred teaching practices as provided by teachers in the visited schools. The researcher's opinions get support from several scholars such as Anderson-Levitt (2000), della-Porta and Keating (2008), Prill-Brett (2005), and Ritchie et al. (2013). All opined that the adoption of interpretivism under qualitative design takes subjective meaning or the meaning from inside the participants' lived experiences as the center in generating new knowledge. In this case, it emphasizes the understanding based on the experiences that have been collected from the teachers. The present study adhered to the foregoing philosophical perspective and applied it to data collection, analysis, and interpretation. It explored how teachers in the visited schools perceived and practiced the learner centred practices.

Teachers were used as the key informers of what is going on in the classrooms. It was supported by Flores (2005) who opined that central to success in education is understanding what teachers do, how they think about teaching practices and themselves, how they act in classroom contexts, and how they develop changes. When there is success in an educational program, the connection should be established. The connection between thinking and acting is a process of trial and error. If there is an error, the thinking has to go on. The constructed representation has to be developed. In that, way errors will lead to better thinking (Day, Pope, Denicolo, 2013). In everyday practices thinking and acting are not separated, they depend on each other and thus work together. Consequently, right thinking is the key to right acting. Therefore, teachers need to improve their thinking towards learner centred practices and this will lead them to act effectively during the teaching and learning process.

Thinking and acting strategically involves being able to plan learner centred practices that lead to positive results. The stakeholder should ensure these practices are implemented in the right way (ways of doing things perfectly) and at the right time to achieve desired objectives. When we are promoting someone for teaching, we look to the one possessing the ability to think and act deliberately. The ability to think and act will elevate teachers on top of the planned objectives. If you want to act strategically, you need to think. Thinking and acting strategically is seeing the patterns, themes, trends, and connections between ideas, plans, and practices. This is the only road that leads to a positive ending. Thinking and acting are powerful ways to make changes and foster change makers. Teachers need to think and act appropriately to ensure learner centred teaching practices are executed successfully.

The interpretation of the themes in this study involved the process of formulating meaning by comparing the findings presented by teachers with the literature review, empirical studies, educational reforms, theories, policies, and learner centred practices. Through interpretation, the researcher explains what has been observed and can be understood by educational stakeholders. The researcher interpreted the themes by focusing on various aspects of the constructivist principles and the learner centred teaching practices carried out in different stages of the lesson development. The investigator was guided by the purpose and research questions to interpret the meaning based on teachers' perspectives. The preceding information confirmed that the researcher's interpretation still exists and is essential for qualitative research. Teachers as implementers of the learner centred teaching practices should possess vital and accurate information from the fieldwork. This idea is in line with Stringer et al. (1997) who advocated teaching to be not limited but is enriched by understanding that describes the way it is from the perspective of the teachers in educational contexts.

In addition, the present study followed the advice given by researchers (Braun & Clarke, 2006; Creswell, 2009) that viewed data analysis as a repetitive movement between the raw data, texts, codes, themes, and finally produced credible findings that support the study. This idea is facilitated by the fact that teachers learn new ideas continuously. In fact, teaching is a dynamic activity. Therefore, the repetition makes the themes and descriptions produced to be more up-to-date and accurate in representing the real situation. Researchers attempted “working back and forth between the themes and the database” (Creswell, 2009, p.175) or repeatedly moving between data collection, reading, analyzing, interpreting, and writing to gain good credibility (O’Reilly, 2009) and good conclusion of the findings (Flick, 2009).

Stages of the data analysis process are summarized in the following Figure 4. They show what was done in the entire process of analyzing data.

| |
|---|
| Raw data captured by various methods and gadgets in the fieldwork |
| Preparing and organizing raw data so as to familiarize with them |
| Reading the data from the fieldwork thoroughly, transcribe (notes, documents, pictures, audio and video tapes) and preparing transcripts/texts |
| Coding the transcripts/texts by identifying words or short statements. It focuses on the commonalities or relationships (descriptive, in vivo, pattern) |
| Formulating the themes |
| Interpreting the meaning given by the themes |

Making a repetition movement between the raw data, texts, codes, themes to refine the themes and research report

Figure 4: The summary of the stages of data analysis process

4.9 Ethical and consent treatments

Ethics refers to the aptness of one's behavior about the rights of those who become the subject of one's work or are affected by it (Saunders et al., 2009). Ethics relates to questions about how the researcher carried out the study following the research ethics. It involves abiding to the proper moral behaviors in the formulation and clarification of the research topic, research design, and issues of gaining access, data collection, data analysis, and report writing (Saunders et al., 2009). This study supported and followed the ethical standards that guide the research work. It is because the study dealt with an essential topic that focused on how to improve teaching, learning, performance, knowledge, and skills. Therefore, the researcher ensured and conducted the study with all the effectiveness and thus fulfilled its purpose.

This study followed ethical procedures to conduct the research accurately and thus make its findings and report trustworthy. To facilitate the preceding, Yogesh (2006) said that any researcher using the human sample in facilitating the research has certain responsibilities towards the human as well as ensuring the integrity of the study (Swann & Pratt, 2003). Some of the ethical responsibilities adhered to in this study included the privacy of participants, their voluntary participation, participants' consent, the right to withdraw from the process, and issues of confidentiality of data. Others are anonymity of participants as well as avoiding any form of embarrassment, stress, pain, and harm towards the participants (Saunders et al., 2009). In connection with the foregoing responsibilities, the researcher treated teachers, students, and research activities with care. He avoided all relationships and practices that jeopardize and leave burdens to teachers, students as well as the school. He carried out the research activities smoothly and left the participants in good rapport. This action eased the process of the researcher to communicate with teachers and visit the school regularly. It enhanced the ongoing data collection and analysis in qualitative research.

In addition, the researcher honored the research sites and ensured to follow school rules, regulations, and teachers' instructions without interrupting the school structures including the organization and classroom situation. Teachers advised the investigator to use simple gadgets that are common for recording activities in the classroom contexts without disturbing students

learning. Also, they requested the researcher to abide by the normal school timetable. The researcher did not expose the information gathered from teachers and students in such a way that could be identified by others. Investigator ensured not to violate or invade the teachers' and students' privacy and avoided harm by respecting and taking into account participants' behaviors, needs, and interests. This study adhered to all the instructions which required data collected to be relevant to the research problem, be collected through formal or standardized tools, data should have minimum measurement error, be accurate and precise (Yogesh, 2006).

4.10 Quality criteria considered in this study

This study considered various conditions that ensure the research is conducted perfectly and presents findings as accurately as possible. To ensure credibility, the researcher adopted and applied some strategies stated by Golafshani (2003) and Mertens (2010) to increase the quality of the research and eliminate possible errors. This point is crucial because, in qualitative ethnographic studies, the researcher is the main instrument used to collect, analyze and report the data by focusing on the everyday experiences of the teachers and students in the visited classrooms. Therefore, to make the present study more credible/truthful all the mistakes caused by the researcher were minimized as possible. This was accomplished by researching according to the principles, directives, and information stated by research scholars.

To achieve the quality needed in this study, the researcher used most of the time to attend the lessons in the visited classrooms and worked closely with teachers and students. The investigator was to a small extent involved in the classroom activities, but he remained focused mainly on collecting the information related to the learner centred teaching practices as conducted by teachers at different stages of the lesson development. The researcher made a persistent engagement to ensure gaining profound insights from the visited classrooms and interpreted the learner centred teaching practices accordingly. This was in line with the authors cited in Mertens (2010) who proposed criteria for achieving quality in qualitative research that include deep and close involvement in the study site to record classroom practices accurately.

Together with the above criteria, it is important to know the various criteria adopted in this study to ensure trustworthiness. One such criterion that was done is the triangulation. Cohen et al. (2007) and Roberts-Holmes (2005) stated triangulation as the process of combining different sources of collecting information to reach a better and deep understanding of learner centred teaching practices. According to Creswell (2009), this process is considered to add to the validity of the study. In this case, the researcher used a semi-structured interview, participant observation,

and document to collect data from the visited classrooms. These methods facilitated to acquire a comprehensive picture of learner centred teaching practices. They increased credibility and confidence in the study findings. Schuh (2004) considered triangulation as necessary for a research study involving complex environments such as classrooms. Researchers need to make use of several methods for acquiring data providing significant findings. Multiple methods in a single study allow information to be triangulated and this presents rigor. In the same light, Zohrabi (2013) supported triangulation as it helped to verify findings from different sources. It improved the credibility of the findings.

To ensure consistency of evidence, the researcher conducted multiple observations using the same methods for data collection. The researcher administered the activities in the same classroom contexts and worked with the same teachers and students. The investigator followed all the procedures throughout without making any adjustments in such a way that they remained stable to fulfill the purpose. In addition, the researcher as a participant in qualitative research collected and analyzed data continuously in a repetitive manner and ensures that all the learner centred teaching practices have been reflected. After presenting the preliminary findings investigator reviewed instruments of data collection and adjust them accordingly. This process helped to get accurate information that improved the credibility of the findings.

Furthermore, the present study used member checking as the method for reviewing the findings after analysis and interpretation. The researcher used this criterion to check the accuracy of the findings from participants as directed by Cohen et al. (2007). According to Mertens (2010), researchers should establish criteria for member checking and engage in discussion with peers on research findings. In particular, the researcher engaged in peer review by making a presentation to the members of the Department of International and Intercultural Comparative Education, Faculty of Education, University of Leipzig. Colleagues reviewed and offered their constructive comments that helped to enrich the research findings. Also, they advised the researcher to go back to Tanzania and discuss with secondary school teachers to verify the constructions that arose from the preliminary findings. To accomplish the recommendation, the researcher used the period during the research to visit the teachers. He discussed the findings and make adjustments, corrections, and additions accordingly. It is in line with Creswell (2009) who advised researchers to take findings back to participants to correct them accordingly. This point is an example of the external check of the study that increases the honesty and accurateness of the findings (Zohrabi, 2013).

Moreover, the clarification over researcher biases to the study had also been made to comply with the principles guiding the acquisition of factual findings. It involved the reflection showing researcher bias that may interfere with the study findings (Creswell, 2009). Mertens (2010) proposed that researchers should monitor their constructions throughout the study. In this study, the researcher has experience of many years of teaching in secondary schools and thus he is familiar with learner centred teaching practices. Indeed, the researcher was advised from the onset to avoid all processes that are likely to cause bias. Informed by this understanding, the researcher agreed with Savola (2008) and recorded practices by taking pictures, audiotapes, and videotapes that were reviewed and verified by participants during member checking as a way of improving objectivity.

To make sure teachers were not influenced to color their views, the researcher used various strategies suggested by different scholars (see Flick, 2009; Hammersley, 1990; Zohrabi, 2013). To be specific, Mertens (2010) mentioned them to include, among others, transferability, dependability, and confirmability (pp.259-260). This research considered and applied them. Transferability enabled making judgments on the applicability of research findings to other contexts. The researcher provided detailed descriptions of the context of the fieldwork so that readers can decide whether the research will apply to their situation. Regarding dependability, the researcher ensured that the study is consistent and could be repeated. It improved the quality and appropriateness of the research. On confirmability, the researcher tried to remain objective. The investigator minimized the influence in making judgments and use the meaning provided by teachers in the original sources. The influence of the researcher's judgment is minimized accordingly.

¹The Department of International and Intercultural Comparative Education, Faculty of Education, University of Leipzig, organized the presentation. It was conducted in the department colloquium on 25th November 2015. The supervisor and other members participated in the presentation. They asked questions and provided constructive comments.

CHAPTER FIVE: FINDINGS OF THE STUDY

5.1 Introduction

This chapter presents findings responding to the research questions guiding this study. It explains various themes that emerged after the data collection, analysis, and interpretation. These themes provide an understanding of the learner centred teaching practices observed in the visited secondary school classrooms. The chapter starts by describing the perceptions of individual teachers concerning the stages during the teaching and learning process. The purpose of this theme is to explore whether teachers agree, abide, and follow stages of the lesson development. Also, the descriptions concerning the presentation of findings that follow the stated cases were provided. This view of cases abides by the qualitative ethnographic research that insists on describing one case (school) as an independent context and relating it to other contexts. In this regard, the findings of the four teachers abbreviated with letters A, B, C, D are presented under the following themes: descriptions of the teacher, school, and classroom context and perceptions regarding the learner centred teaching. Other themes are the learner centred teaching practices employed by teachers in various stages of the lesson development. In addition, the chapter explains the learner centred teaching practices regarding the reflection stage, how students are involved in the learner centred teaching practices, and the support needed by teachers to improve the learner centred teaching practices.

5.2 Perceptions regarding the stages during the teaching and learning process

This theme focuses on the teachers' opinions concerning the stages they utilize to develop the lesson. It is because the teaching and learning process in the classrooms normally follow stages. This study intends to get teachers' views concerning the stages of lesson development. The aim is to know whether teachers follow stages as prescribed in the formal curriculum or not. Teaching by following stages is important because it helps teachers to organize lessons effectively and thus be in a good position to achieve the lesson objectives. The previous studies advocated that stages are useful for teaching practices and the practices follow patterns of activities. Stages facilitate the teacher to guide students through essential educational activities that improve teaching, learning, and students' performance. The review of related literature motivated the researcher to investigate the implementation of learner centred teaching practices in all stages as stated in the competence based curriculum.

Teachers A and B reported, “the stages of the lesson development as good because they help teachers to conduct teaching systematically”. (A.3, B.94) In elaborating this fact, teacher A said, “the stages of the lesson development provide a good roadmap of the lesson, and this helps the teacher to facilitate learning in a systematic manner”. (A.4-5) Teacher B added that the stages guide the teaching and learning process and simplify the teacher's work in the classrooms. Stages help teachers to incorporate practices that contribute to facilitating students' understanding of the subject matter. They help students to comprehend better the lesson they are taught. Teacher C said, “good organization of the lesson by following stages enhances teachers’ practices of presenting the lesson which follows a good logical flow”. (B.169) Based on the preceding facts, all teachers reported employing stages and build useful knowledge and skills that systematically contributed to organizing the subject matter into the suitable sections.

Teacher B had the following to say:

Stages assist the teacher to simplify the teaching and learning practices and thus help to make students learn more effectively. Stages provide an appropriate structure that guides and helps the teacher to accomplish the lesson objectives. (B.95-97)

Similarly, teacher C added:

Stages assist the teacher to move smoothly from one point to another. It can be from simple knowledge to the complex knowledge in order to achieve the lesson objectives successfully. (C.170-172)

Teacher D had this to say:

Stages are interconnected, and each stage depends on how the teacher presents the preceding one. Each stage is known to have a specific function of guiding students to learn the subject content and finally be able to accomplish the lesson objectives. (D.229-231)

In addition, teacher D supported the idea of following stages in teaching and said that such organizations assist the teacher to appraise the students’ progress as the lesson continues. The teacher perceives the stages of the lesson development as useful for helping to identify students who have already understood the subject matter and those who still have misconceptions. This view is to perceive that by following stages, teachers get the opportunity to assess students learning and providing assistance at the right time (ie before it becomes too late). It is expected that all students could be properly appraised according to their learning needs and interests.

It is important to note that for effective application of lesson stages, teachers need to have appropriate knowledge and skills of integrating theory and practices in the classrooms. To accomplish that, teachers are required to build a good understanding of the characteristics of constructivist theory and the learner centred practices and how they should be incorporated into the appropriate stages of the lesson development. The present study discovered that teachers agreed with the stages of lesson development. They supported the fact that stages are fitting and pertinent for the effective implementation of the learner centred teaching practices.

5.3 Presentation of findings that follow the stated cases

To organize the presentation of the research findings, the researcher treats the secondary schools that participated in this study as cases. This idea implies that the findings obtained from each school have been considered and presented as an independent case. More specifically, the teacher who participated in this study represents each school. Therefore, for the four schools, there are four teachers. In each case, the researcher presents findings focusing on the identified themes. Scholars support the presentation of the findings in the form of cases. Alexander (2000) suggested and advised researchers to produce findings from the ethnographic study by considering cases appearing in the study. In the same perspective, Thomas (1990) added that comparative research that is rich in detail is usually focused on individual cases.

It is evident that teachers in this study implemented the learner centred teaching practices by following similar stages of lesson development. However, how teachers employed these practices in the classrooms might differ. Cases help to reveal real practices executed by an individual teacher in his/her context. Alexander (2000) found the phenomenon when he showed unique characteristics demonstrated by every teacher in the classroom. It might be caused by the surrounding culture that manifests various characteristics as compared to another culture. Teachers are advised always to create a classroom environment that is comfortable, safe, and responsive to the needs of students. To accomplish that and make learning more effective to students, teachers should consider cultural aspects in the classroom that create relevant teaching. Students must relate learning to their cultural experiences, aspirations, and environments. Teachers should use culturally appropriate materials to engage students effectively in the teaching and learning process.

Li and Oliveira (2015) confirmed that teaching and learning practices involve multiple agents and their interactions within the classroom as a system. The educational practices should be manifested in various formats and structures and its effectiveness can be influenced by numerous

factors both internal and external to the classroom. The educational practices come across several factors that affect its implementation in the classroom. These practices may happen to be similar and different among teachers within a school, society, or country. This study presents an example that occurs when students from the same or different school/classroom are producing similar or different meanings regarding a stated concept. Students taught by teachers who followed the same curriculum/syllabus and using the same textbooks might conceptualize concepts similarly or differently. Therefore, teachers who studied educational programs that follow the same curriculum might provide an understanding of the implementation of learner centred teaching practices in similar and different ways. The preceding phenomena are likely to be caused by several factors. Also, the aspects/behaviors that are considered appropriate or interesting in one classroom/culture could be regarded as inappropriate or not interesting in another classroom/culture (Schweisfurth, 2013).

The situation above indicates various attributes that could be manifested in the teaching and learning context. To capture a real and definite picture of the learner centred teaching practices in different contexts they should properly be presented in terms of cases. The researcher presents the findings of the four schools by following the order of four teachers abbreviated as A, B, C, D. Similar trend was followed to present each case according to the themes identified after the data collection, analysis, and interpretation. This pattern helps to refer to findings for all teachers. Therefore, the presentation of the findings follows the previously mentioned state of affairs. Further to that, it is important to note that the presentation of learner centred teaching practices in different stages of the lesson development for every teacher will go together with their perceptions. This is to say that, teachers were observed in the classrooms and also make conversation with the researcher concerning various issues related to learner centred teaching practices. In the process, the researcher analyzed the actual teachers' classroom practices and perceptions. It helps to demonstrate whether teachers facilitate lessons according to what they have been saying in the interviews or not. It is established that teachers' classroom practices and their perceptions are crucial for improving education provision.

In summarizing the practices and perceptions of teachers in the visited secondary schools, the analysis indicates different perspectives in various stages of lesson development. Specifically, the findings indicate teachers to practice and perceive the learner centred, teacher centred and other practices created by teachers according to the situation in the classroom. In this case, teachers were found to demonstrate practices and perceptions in similar and different ways. In the development of the lesson, teachers were found to practice and perceive similar or different

practices in similar or different stages. *This is to proclaim that, the findings (practices and perceptions) of teachers in the visited secondary schools in Tanzania regarding the learner centred teaching practices appear to be in a mixed manner.* The similarities and differences have been happening because teachers have attended the same teacher education programs as well as different teacher education programs. In addition, teachers have attended the preceding programs in either the same or different colleges or universities. Moreover, teachers might have learned/studied/read/discussed information from similar or different scholars, educators, lecturers, textbooks and papers. Teachers' knowledge, skills, competences, attitudes, interests, and other aspects such as the education system and schools have caused the foregoing perspectives, similarities, and differences.

TEACHER A

Descriptions of the teacher, school, and classroom context

Teacher A is a male holding a degree of Bachelor of Science with Education from a recognized university in Tanzania. In his teacher training program, he studied under the curriculum which emphasizes the application of the learner centred teaching. He has three years of teaching experience. At the time of research, teacher A was teaching chemistry and biology subjects in form three classes. The highest number of students' in teacher A's class was 60. This figure exceeds the maximum number of students recommended to teach in one class, which is 40 (ratio of 1:40). Likewise, teacher A had 24 periods per week. It is the normal teaching load because the maximum allocation is 30 periods per week. This phenomenon is common for private secondary schools because most of the time these schools do not experience the problem of shortage of teachers as compared to public secondary schools.

On the subject of professional development programs, teacher A complained that he had never attended any training program and even the school has failed to organize school based training for teachers to share their experiences. The researcher perceives that teachers lacked important opportunities for updating and upgrading their knowledge and skills in facilitating learner centred teaching practices in classrooms. Teaching is changing depending on the new demands in various sectors, so teachers should exchange experiences in schools. In addition, personal observation and informal conversation with teacher A revealed by saying that, "I am satisfied to some extent with the working conditions in this school". (A.7) Such understanding is obvious for many private schools as they always aim to create and provide a favorable and supportive

environment for students as well as teachers. They try to create good conditions to retain teachers and motivate them to perform duties effectively.

In carrying out this study, the researcher selected school A (privately owned secondary school). School A has located in an exquisite environment for teaching and learning. The area is calm, and the school has enough space. Also, it is not far from the essential services needed by students and teachers. All students in this school are living in school dormitories. The provision of accommodation gives students ample time for studying even after school hours. Students get better opportunities to cooperate and work together within the school environment. They can also organize extra teaching sessions in the evening. They have a better learning chance for both academic and social behaviors and other educational experiences.

The school has an educational motto that: *It is committed to achieving excellence by ensuring a continuous improvement of programs, services, and processes* (school website, 2015). It has been implementing the competence based curriculum that emphasizes the application of the learner centred teaching practices in the classrooms. However, teacher A complained about the confusion teachers face in understanding what is required by the competence based curriculum and particularly the learner centred approach. This might cause challenges to teachers' classroom practices. Concerning the *language of instruction*, the official language at the secondary education level is English and students are required to demonstrate skills in the practical use of communication during the learning process. The observation from the classrooms showed that students in school A have a good mastery of the English language. They get an excellent opportunity to learn successfully. It is because language helps students to think, communicate and understand the materials in the subject matter.

Regarding the issue of the *laboratory*, only school A was found to have this building. It gave a chance for students to perform practical for science subjects. The laboratory is considered essential for the meaningful learning of science subjects. It provides an opportunity for students to learn well the subject matter by experimenting and demonstrating various scientific concepts. It supports the learner centred approach and makes students learn actively. Moreover, the *classroom context* of secondary school A was found to have standard classes with regular sizes including the door on the one side and the windows on both sides. The rooms are well ventilated and in good condition. The classes are supplied with basic items such as desks, chairs, teacher tables, chalkboards, and all students are seating on chairs with desks. The *chalkboard and textbooks* are found to be the primary materials applied for carrying out the learner centred teaching practices in the classrooms.

In general, the present study unfolds that private schools such as school A have a conducive teaching and learning environment that contains essential requirements promoting educational provision. For example, this school has a laboratory building, dormitories, good conditions for students and teachers as well as maximum use of the English language. Therefore, school A has a supportive environment that enhances the learner centred teaching and learning practices as well as good performance in examinations. The teaching and learning environment in school A might be linked to the national examination results for secondary schools at the regional level (see Table 4). This school is performing well compared to other visited schools. This is to say that a good learning environment tends to motivate teachers and students to put more effort into teaching and learning. This enables them teaching and learning more effectively.

Table 4: The National Examination performance ranking for secondary school A, 2012-2014

| Secondary school | Ranking level | Position 2012 | Position 2013 | Position 2014 |
|------------------|---------------|---------------|---------------|---------------|
| A | Regional | 17 (226) | 9 (238) | 19 (191) |

Source: National Examination Results for Ordinary Level, 2012-2014.

Perceptions regarding the learner centred teaching

Teacher A reported that “the learner centred teaching is the method that orients students participating fully during the teaching and learning processes”. (A.9-10) The students in this approach are considered as the main participants in the learning process, and the teacher is a facilitator who has the role of guiding students through a series of learning practices. In particular, this teaching style offered students a chance to discuss and put forward different issues/ideas, and the teacher clarifies misconceptions and other aspects that are not clear to students. The students are more involved in this style of teaching. In elaborating more on the students’ participation in the learner centred teaching, teacher A provided information that demonstrated a series of the teaching and learning practices that usually occurred as explained in the following excerpt:

I guide the lesson by providing some parts of the topic for students to discuss in groups. After the discussion, I ask each group to present ideas in front of the class. I encourage everyone to participate by asking questions and then discussing together. Also, I note down the ideas which need more clarification, and finally, I summarize all issues raised during the discussion. (A.11-13)

On the issue of how learner centred teaching relates to the concept 'tabula rasa', teacher A explained it and agreed that students normally possess ideas. He recommended for all teachers to value and respect students' opinions expressed during the learner centred classes because those ideas facilitate students learning. Teacher A reported further that "under the learner centred teaching, students are considered to have ideas which can be contributed to the lesson". (A.15-17) Students should be regarded as individuals who possess knowledge and skills that can be utilized to improve learning. On that basis, teacher A demonstrates to respect and support students according to Swahili saying that "mwanafunzi sio debe tupu" which literally means, "A student should not be regarded as an empty vessel" or rather "the student is not a tabula rasa". (A.17-18)

Teacher A continued to advocate the view that students should be allowed to bring into the classrooms prior ideas and other background experiences. They should provide ideas and build the proper meaning. The teacher stressed that facilitators should avoid considering students as tabula rasa because it is contrary to the learner centred teaching. He had the following to say in our discussion:

Every student in the classroom knows something related to what he/she learns. These students and especially those studying in English medium schools possess many ideas gained from different educational sources. It is important to understand that, good proficiency in the English language enables students to access and learn various educational documents. (A.19-22)

Furthermore, teacher A provided his thoughts on the issues related to the teaching responsibilities. He agreed to focus on guiding students to interact with materials and understand the subject matter. His responsibility in learner centred teaching is to facilitate learning, but not to act as the primary source of all information or as a person who knows everything in the classroom. The teacher said that he considered himself as someone who facilitates the students' learning practices to help them understand the subject matter. He sometimes allows students to share and exchange ideas for the concepts they already know. In this way, teacher A indicates to share power with students who, in this case, consider having some autonomy to control and contribute to their learning.

Likewise, teacher A concurred with what was suggested by teacher C concerning the challenges teachers encounter in implementing the learner centred teaching. Both agreed that there are several challenges, and one of them is that many schools demanded teachers to cover the topics

listed in the syllabus on time. When teachers cover the content guided in the syllabus, then schools are satisfied that students are in a good position to attempt the final examinations. Nevertheless, learner centred teaching is challenged because it takes more time in facilitating learning. This is to perceive that educational administrators do not consider some obstacles arising in the learning environment. This could involve other factors that affect the implementation of learner centred teaching practices.

The learner centred teaching practices employed in different stages of the lesson development

- **Introduction**

Teacher A was observed to introduce the lesson by describing the previous sub topics that had already been taught and the new ones proposed to be covered. Teacher A tried to link what students already know to the new knowledge he is planning to teach. In accomplishing this task, the teacher mentioned sections of the subject matter that include sub topics such as *valence, chemical formula, double decomposition reaction, redox reaction, and ionic equation*. In addition, the teacher was observed introducing the lesson by making jokes with students as well as asking real questions. Teacher A asked questions such as: *What is the chemical formula for a banana? What is the chemical formula for a coffee? What is hydrogen peroxide?* The analysis of this matter indicates that this teacher tried to use jokes and real questions to make students think and become inquisitive in the classroom. The questions relate to the subject matter and help to stimulate students to talk more concerning previous experiences.

After describing the learner centred teaching practices in the introduction stage, the current study is presenting the teacher's perceptions. In this case, teacher A said that he introduces the lesson by using common practices employed by many teachers in the classrooms. The teacher admitted that he is usually asking questions to examine students' previous knowledge and understanding of the subject matter. From the students' responses, the teacher found out if students have adequate knowledge and understanding of the subject matter under discussion. In the case of introducing a new topic, teacher A had the perception that he attempts to find information or issues that would attract, build interest and attention of the students concerning the new topic. Teacher A explains how the new topic relates to students' everyday life and why it is important for students to learn it. The teacher elaborates on the concepts already discussed by using examples, questions, and describes the new topic in various ways. He portrayed that:

If I continue with the same topic, I test students' prior knowledge and find out if it could be related to the topic that follows. In accomplishing this, I usually brainstorm with students by focusing on the relationship that exists between the prior knowledge and the new knowledge. (A.34-35) If the topic is new, I always find something that is interesting and helps to catch the attention of the students. For example, for some topics in chemistry, I provide chemicals that relate to students' everyday life. In biology, I use different strategies like drawing pictures and naming living organisms to stimulate the interest of the students towards the new topic. (A.36-39)

- **New knowledge**

New knowledge is considered as the main stage that teachers use to facilitate students learning the subject matter. Teacher A used most of the time at this stage because it is where students are expected to acquire new knowledge using a variety of teaching and learning practices. Therefore, teacher A was observed to employ a number of practices to make sure students learn successfully and achieve the lesson objectives. To begin with, teacher A engaged students by giving descriptions connected to concepts such as *redox reaction*, *ionic equation*, and *precipitation reaction*. He provided information to clarify these concepts and attempted to show some examples to make the presentation more comprehensible.

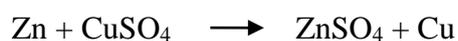
In facilitating learning, teacher A applied the chalk and talk lecture method. He presented the subject matter, illustrated, and wrote on the chalkboard while students were listening and copying teachers' notes. The teacher was observed to dominate the teaching and learning practices. He was considered as the main source of all information needed for teaching and learning. The classroom interaction between teacher and students was found to be minimal. Figure 5 shows an example of how teacher A is conducting a chalk and talk lecture in the classroom. These practices compelled the teacher to use most of the time standing in front of the classroom while looking, talking, and writing on the chalkboard. The teacher was observed transmitting the subject matter to the students who remained silent. Students do not ask questions or contributing to existing ideas. They just listen and receive information from the teacher who is considered as an expert. In general, students believe that the subject matter the teacher presents is accurate and therefore there was no question or discussion. Students were observed to be not active; they just receive information from the teacher. The preceding practices were against the learner centred teaching practices.



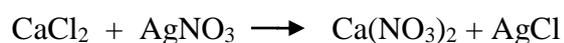
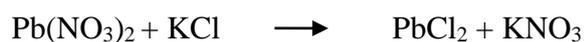
Figure 5: Teacher A is facilitating the lesson by chalk talk lecture

In another session teacher, A used a group discussion method. He asked students to form groups and guide them to discuss the *balancing of the ionic equation*. Then the teacher started to examine students' knowledge and understanding of the subject matter by asking questions such as: *What is an oxidation? What is a reduction? What is an ion?* These concepts were important because they represent essential ideas that students needed to know beforehand to balance successfully the ionic equation. Afterward, teacher A guided students to write and balance the ionic equation. He wrote the following questions on the chalkboard.

Write total ionic and net ionic equation for each of the following reactions:



Likewise, teacher A guided students to balance the precipitation reactions and started by asking the following question: *Who can tell us the meaning of precipitation reaction? Who can balance the precipitation reaction?* Afterward, the teacher showed students on the chalkboard examples of the precipitation reactions and how the elements are exchanged in different positions. Then teacher A allowed students to continue discussing together and balancing the following precipitation reactions in their similar groups. The teacher wanted students to use the following reaction as a guide: $\text{AB} + \text{CD} \longrightarrow \text{AD} + \text{CB}$



During the discussion, students in the school A classroom were observed interacting and exchanging ideas in their groups with lots of noise that could be heard by the observer. Teacher A passed around different groups observing the way students were doing. The discussion practices conducted in this class were good in such a way that students exchanged information actively (this is in line with the learner centred teaching practices). The classroom interactions were stimulating. This was because students in school A were more proficient in the language of instruction (English) compared to students in the other participating schools. Students in this school were motivated to use English in all communication within the school compound. This initiative indicated that the school environment favored the use of English language and in general improving communication during the teaching and learning process.

Moreover, the formulation of questions by teacher A in most of the practices were lower-order thinking questions. He used this type of question to assess students' knowledge and understanding of the subject matter. In this case, students can just memorize some information and procedures and answer the questions. They simply respond by remembering answers. These types of questions have not occasionally been suggested under learner centred teaching practices because they do not inspire students' thinking and understanding. This study suggests it is good for teacher A and others to put more emphasis on asking higher-order questions. These questions motivate students to think critically, and this is what is emphasized in the learner centred environment.

After describing the learner centred teaching practices in the new knowledge stage, this study is presenting the teachers perceptions. The conversation with teacher A emphasized that he is exposing students to new knowledge by employing various teaching and learning practices. These practices ensure the teacher applies appropriate strategies to accomplish the lesson objectives. To select good practices, teachers need to consider factors that influence teaching and learning practices in the classrooms. He distinguished himself from other teachers by describing factors that need to be considered in guiding students properly to new knowledge. "These factors include the nature of the topic under discussion as for whether it is simple or complicated, time allocated to cover the topics prescribed in the syllabus, the number of students present in the classrooms, and the understanding capacities of the students". (A.43-44) The researcher agrees

that it is a good idea for the teacher to be familiar with the preceding factors. This is because teaching is not a simple process, particularly for classrooms that face a number of challenges such as the overcrowding of students and poor organization of students. The teacher needs to know in advance how to deal with the above factors/obstacles and to find appropriate strategies that help him conduct teaching and learning practices smoothly. The teacher should develop and utilize good organizational skills that help to accomplish the lesson objectives.

In making the selection of the teaching practices, teacher A responded, “group discussion is among the practice that is frequently used in the classrooms”. (A.46) In facilitating discussion, teacher A encourages students to exchange and contribute ideas concerning the subject matter. Afterward, the teacher goes around the groups and assesses progress made during the discussions and learning in general. Teacher A focuses on students' understanding of the subject matter. When students fail to understand, he organizes special sessions for making corrections or even to repeat the whole lesson. This situation is apparent because in the classroom there are students with varying learning abilities who learn and understand concepts at different levels. Teachers admitted that remedial teaching is instrumental in helping students with learning problems. Teacher A explains the importance of remedial teaching:

If I discover that a particular concept is not clear to many students, I normally arrange a remedial session to help them to clear their misunderstanding of the subject matter. This activity is very important because learning follows a logical flow. If you neglect one subject matter, then it will continue to cause a gap in the students learning of the next topic. (A.50-53)

Furthermore, teacher A reported in the interview that he uses the chalk and talk lecture methods to teach some parts of the topic. In this case, he prepares and makes a presentation of the content in front of the class while students listen and copy. Teacher A preferred the lecture method because it saves time, and it is easy to employ. Teachers can present a lot of content and cover the topics that have been stipulated in the syllabus. The lecture is unavoidable; teachers cannot keep away from it. It is used to present the information that builds the foundation of the intended topic or subject matter. It should be noted that the chalk and talk lecture method is not recommended to employ under the learner centred environment. This teaching method does not help students learn actively and successfully in the classrooms.

- **Assessment**

In assessing students, teacher A was observed to use methods that help to acquire feedback in relation to the students' understanding of the subject matter and the attainment of the lesson objectives. In the actual classroom activities, teacher A assessed students mainly by asking questions, giving assignments, and examining the students' answers. For example, during group discussion, he supplied questions, guided students to discuss and exchange ideas together, and then wrote their responses that were assessed by the teacher later. Under the learner centred teaching practices, teachers are expected to perform a continuous assessment to examine students learning progress. To ensure this comes about, teacher A was required to be organized and follow the guided assessment questions. Based on this principle, it was observed that the assessment practices conducted by teacher A were not systematic in following the assessment questions. This is a weakness because these questions are purposely written to guide the teacher in preparing the learning practices to assess the learning progress of the students at every stage of the lesson development. The observation showed that teacher A did not conduct the assessment continuously. This is against the characteristics of learner centred teaching.

After describing the learner centred teaching practices in the assessment stage, this study is presenting the teachers perceptions regarding this stage. In an interview, teacher A suggested teachers use different practices to assess students' understanding of the subject matter and the achievement of the lesson objectives. He said, "I use practices such as asking questions, giving quizzes and tests. I prefer more the application of homework". (A.63) Teacher A supported to use it to assess students' understanding of the subject matter presented in the classroom. His intention in homework is to give more opportunities for students to continue learning even in the environment outside the school. According to him, homework provides a chance for students to practice what they have learned in the classrooms. It motivates students in revising and completing classroom assignments.

Additionally, teacher A reported conducting assessments regularly at the end of the period. He said openly and with confidence, "I carry out an assessment at the end of the lesson to check students' understanding". (A.64) When the researcher probed further on the same aspect, the teacher continued to insist on assessing students when the lesson is about to finish. This is to perceive that, there was no ongoing assessment in this case. Teacher A showed to differ from other participating teachers because he did not show any interest in the ongoing assessment conducted at different stages of the lesson. This view is contrary to the formative assessment recommended accompanying the learner centred teaching practices.

- **Classroom management**

In the aspect of classroom management, it was observed that teacher A attempted to organize students in various ways. To facilitate that he instructed students to perform practices such as group discussion, questioning, moving around to assess practices in the groups, and calling a few students to do questions on the chalkboard. It is important to note that, organizing students help teachers to interact successfully during the teaching and learning processes. In the aspect of materials and resources, teacher A was observed to conduct teaching without using these substances. Nevertheless, in one of the sessions, he used the teaching aid that makes teaching and learning effective. It was useful for enhancing the teaching process. In reality, it helped students understand the subject matter easily. He displayed the manila sheet (see Figure 6) showing the rules for writing and balancing chemical equations and the steps in writing the ionic equations. The researcher observation revealed that the quality of teaching aid was poor and it did not create interest or motivate students. In fact, it lacks good qualities that are stated to support teaching. It was too small to be seen by the students, thus failing to achieve the required purpose. The preceding shortcomings affected learning in the learner centred classroom.



Figure 6: The manila sheet attached on the chalkboard

Concerning the seating arrangement in the classrooms, it was observed that the classroom in secondary school A is following the structure of students seating in rows facing the chalkboard and the teacher (see Figure 7). It was revealed that several students were sitting in places that did

not allow free interactions with other students and even the teacher. The overcrowding of students in the classroom causes a lack of movement. Poor organization of the school and the lack of knowledge and skills of teachers caused this. The situation was also forced by the higher authority, which demands schools to receive many students without prior preparation. Overcrowding of students affected the teaching and learning process. The teacher may fail to facilitate the class becoming interactive. The teaching materials will not be sufficient for all students. In fact, the classroom organization and management, teaching and learning might be affected. That is why teachers have been deciding to adopt teacher centred methods. They said that learner centred teaching practices stated in the curriculum are difficult in such an environment.



Figure 7: The seating arrangement in school A

After describing the learner centred teaching practices on the aspect of classroom management, the current study is presenting teachers' perceptions on this aspect. In the conversation on the aspect of classroom management, teacher A perceived similar practices mentioned by teacher B. He insisted on sound management by encouraging students to abide by the school rules and behave in an appropriate manner continuously. He believed that students who follow rules might

generate a good opportunity to succeed in his/her studies. Teacher A provided the following statement to express how he manages students by applying school rules:

I alert students regarding the rules and good behavior expected in the classroom. I require students to respond and behave appropriately without stubbornness. This instruction to students helps to support teaching and learning practices and ensure it progresses smoothly and with the required effectiveness. (A.67-69)

In addition, teacher A agreed to use different methods compared to other teachers. He applied punishment to control a few stubborn students. He clarified more in relation to the punishment and had this to speak in our dialogue, “sometimes, depending on the nature of the problem, I can order the stubborn student to kneel down or get beaten by a stick”. (A.70) In punishing students, the teacher intends to make them refrain from bad behavior and thus create a healthy environment for students learning. On the other side, teacher A urged other teachers also to behave in good manners to build a good relationship and respect towards students. When students respect the teacher, they will automatically behave well in the classroom. This action softens classroom management because students will be controlling themselves.

Pertaining to the seating arrangement, teacher A agreed with the learner centred classroom of organizing students in an interactive manner. “I show my preference for an interactive seating arrangement and said that is allowed in the school because it improves the student learning”. (A.71-73) He showed his preference for preceding arrangements, nevertheless, he described a lack of appropriate environment as a constraint of proper organization of students. Overcrowding in classrooms and other obstacles causes difficulties in organizing successfully the seating arrangement. Teacher A explained in the interview session that:

In this school, class teachers have set the seating arrangement to comply with the real situation in the classrooms. Therefore, it is very difficult for a subject teacher like me to try adjusting this arrangement. What I do in order to interact with all students I create an environment enabling me passing to reach all students. (A.74-76)

TEACHER B

Descriptions of the teacher, school, and classroom context

Teacher B is a female holding a degree of Bachelor of Science with Education from a known university in Tanzania. In her teacher training college, she attended several courses addressing matters pertaining to the learner centred teaching. When the teacher joined with the public secondary school, she implemented classroom practices guided by this approach. During the fieldwork, she was teaching chemistry subject to form two and three classes. This teacher had six years of experience in teaching. The highest number of students' in teacher B's class was 50 for both classes. The number of students surpasses the normal maximum number of students approved in one class, which is 40 (ratio of 1:40). Relating to the number of periods, teacher B had 28 periods per week. The maximum allocation is 30 periods per week. This means that she works under the normal teaching load according to the curriculum.

Concerning the professional development programs, teacher B reported that she had attended professional development programs once since she started teaching. Likewise, in her school, teachers are occasionally meeting for school based training. These meetings are called when one of the members of the teaching staff returns from a seminar/workshop, and he/she uses that chance to share what he/she has learned from the seminar/workshop. Also, if a teacher has an educational issue and wants to discuss it with colleagues. Teachers are trying to use these seldom opportunities to exchange information and update knowledge and skills of teaching under the learner centred teaching. Furthermore, the researcher's personal observation and dialogue with teacher B revealed that she is not happy with the working conditions. "I am not satisfied with the working conditions. It lowers the motivation towards the teaching job". (B.99) This problem is normal with many of the teachers especially in public secondary schools because they lack incentives and other benefits. She complained about poor working conditions, lack of enough teachers, and a lack of clear understanding of the competence based curriculum. These challenges lower motivation towards the teaching job.

During the fieldwork, the researcher visited school B (community secondary school). All students are day students. The school is located in an area that is surrounded by various human activities, and the area is busy most of the school time. It is close to one of the main roads in the city and other public offices. The adverse conditions noticed to face this school included incidents occurring near the school and thus interfere with students learning when they are in the

classrooms. Regarding basic services, they are not far from this school. Nevertheless, students commonly meet with the problem of transport to and from the school.

This school was found to have an educational motto that it is *striving for excellence* (school poster). Like other participating schools, it also implements the competence based curriculum which instructs teachers to apply learner centred teaching practices in the classrooms. In terms of language, the school insists that students, when they are in the school compound, should make all communications in the English language. The researcher observed several advertisements on walls that instructed students to speak English for any communication they want to make with teachers. However, the problem in school B is that both teachers and students were found to lack seriousness in this matter. The researcher observed this weakness during the teaching and learning process. Students speak the Swahili language during the lesson. This situation made them lack good development in the mastery of English as compared to teachers/students in school A.

On the issue of a *laboratory*, the situation was not good for school B and other community schools. This is because it lacks a laboratory. Therefore, the learning practices of performing practical experiments were a challenge in this school. When the researcher asked the teacher about this matter, she responded that the school was in the process of building a laboratory. It was a project conducted in various secondary schools to improve the teaching and learning process. The researcher saw the construction was ongoing during the fieldwork. The situation regarding *classroom context, chalkboard, and textbooks* are similar to the one explained in school A. In addition, the researcher discovered that no paintings, students' work, posters, and pictures were found to cover the walls of the classrooms. This state of affairs was observed in all visited schools.

Based on the realities described in this section, the present study discovered several impediments surrounding this school like other visited ones. Therefore, by referring to the challenges in the school environment plus the students' low learning abilities, this study is likely connecting to the performance of this secondary school at the regional level. That is to say, there are various obstacles affecting the performance of students. It might include issues related to teachers' knowledge/skills/attitudes, students' readiness, materials and resources, curriculum, and other factors. In fact, the trend indicates that school B did not perform well compared to school A (see Table 5).

Table 5: The National Examination performance ranking for secondary school B, 2012-2014

| Secondary school | Ranking level | Position 2012 | Position 2013 | Position 2014 |
|------------------|---------------|---------------|---------------|---------------|
| B | Regional | 135 (226) | 106 (238) | 77 (191) |

Source: National Examination Results for Ordinary Level, 2012-2014.

Perceptions regarding the learner centred teaching

Teacher B showed different perceptions that accompany the learner centred teaching. She reported the approach as one that helps students to become active during the lesson. To facilitate activeness, the teacher described guiding and providing chances to students to practice what they have learned in the classroom. Students have to act according to the instructions provided by the teacher. Teacher B believed that practices motivate students to become active and interested in the learning process. This view helps students gain knowledge and skills on the various matters presented in the classrooms. She had the following to speak in the dialogue:

I guide students to perform the learning practices that make them active throughout the lesson. I facilitate this by providing chances for students to practice what they have learned. Not only that, but I believe that by regularly repeating the practices, it helps them understand the concepts as they should be. *(B.106-107)*

In addition, teacher B continued to define learner centred teaching as the method that motivates students to learn more deeply through the process of searching for information individually. She was of the view that this approach encourages students to be responsible, put more effort, and search for answers to questions provided by the teacher. In order to acquire knowledge and skills effectively, the teacher suggested that students be facilitated in accessing information from various sources. The statement below illustrates teacher B observable fact:

I always encourage students to put more effort and find answers to the questions I provided to them. To simplify this task, I instruct them to search for information from various sources such as books, the library, the internet, and other means of communication. *(B.109-110)*

Moreover, teacher B showed a different idea regarding the concept of learner centred teaching. She elaborated that many teachers have been connecting this approach to participatory teaching. This is to say that during teaching, students should be given a chance to participate entirely. To accomplish participation, the teacher has to attempt to involve students in a sequence of teaching

and learning practices. She explained to start with questioning and then organize group discussion. During the discussion, she motivates all students to participate and contribute as many ideas as possible. After finishing the discussion, she guides students to make a presentation of the answers summarized from the groups. This practice gives a chance for the teacher and students to assess and ensure the responses are accurate as possible.

When teacher B was asked to provide her understanding of the concept *tabula rasa*, she perceived this concept and agreed like teacher A that students possess some thoughts. Therefore, she urged teachers to build an understanding that students possess prior ideas when they enter the classroom. The teachers' obligation in such a situation is to facilitate and encourage students to share and contribute knowledge during the teaching and learning process. Teacher B had this to articulate on whether students are *tabula rasa* or not and how they apply in the learner centred teaching:

Students are not *tabula rasa* they must possess some ideas. Proof of this is occurring in cases where you find a teacher learning information from students. You know these days, there are many sources that students can access and acquire information. I suggest teachers and parents build the habit of motivating students to search for information. (B.115-117)

In another perspective, teacher B reported one technique used in the learner centred teaching of focusing on a small portion of the entire topic. In this case, the teacher said she is teaching profoundly and make sure students get an accurate insight into the small portion that was taught. This idea is likely to work better because there is a high possibility for a small portion of the topic to be understood in-depth as opposed to the whole topic. Students can understand various standpoints that are describing the same portion. Likewise, the small portion is more focused, more specific than the large one. Teacher B had the following descriptions to offer in our exchange of ideas:

I believe students will master the concepts and understand easily if I present a small portion of the subject matter rather than teaching an enormous amount of materials that are difficult for students to understand. (B.112-113)

Teacher B reported further that learner centred teaching enhances students' interest in the classroom. Students learn by making use of what they know from the experiences of their everyday life and interactions. It is, therefore, a useful method for helping students learn the subject matter successfully. However, this method faces challenges and one of them is resistance

from students. This view is caused by the fact that students do not cooperate in performing the learner centred practices. They do not prefer to learn independently and build a correct understanding. They always demand to be spoon-fed and receive ideas from the teacher. In general, students have an understanding that the teacher knows everything, so he/she should present information to students. The teacher is considered as the source of information. This learning experience is not encouraged under the learner centred environment.

The learner centred teaching practices employed in different stages of the lesson development

- **Introduction**

Teacher B introduced the lesson by following the same procedure used by many teachers. She started by reminding students about the previous topics already studied in the classroom and those topics that remained to be learned. In this regard, she mentioned some topics such as *chemical equation, molecular formula, empirical formula, preparation, and uses of oxygen*. In order to examine students' previous knowledge, she asked several questions. Among them, were included questions such as, *Anyone who can tell me the meaning of molecular formula? Anyone who can mention the common methods of preparing oxygen gas? Anyone who can tell me the formula of hydrogen peroxide and potassium chlorate?* She asked those questions to prepare a relevant environment that should assist students in learning and understanding the new knowledge anticipated for that lesson.

After describing the learner centred teaching practices in the introduction stage, the current study is presenting teachers perceptions. The perception of teacher B on how to introduce the lesson resembles what was expressed by teacher A (see page 9). Moreover, this teacher examined students to see whether they have an accurate understanding that is linked to the subject matter under discussion. More specifically, she exemplified that "If I continue with the same topic, I start the lesson by reminding students about the concepts we discussed together in the classroom. Then I ask questions to scrutinize whether there is a link between the previous knowledge and the new knowledge. (B.122-124) In the situation of introducing a new topic, teacher B had the perception of describing concepts related to a new topic. She is incorporating several examples and stories mostly, from students' surroundings so as to be easy for them to understand. Teacher B had the following to emphasize in the conversation, "I introduce the new topic by using many examples and try to present the subject matter using various styles until it becomes clear to students". (B.125)

Further to that, teacher B agreed with the fact that if she finds the students' knowledge of the subject matter is clear, she continues with the next stage. Nevertheless, if she discovers that something has not been correctly understood, the teacher finds ways to clear students' previous misconceptions. The intention of the teacher is to help students to have a correct understanding of the concepts and ideas. Continuing with the new subject matter would only depend on students' previous understanding of the topic. So the previous students' knowledge is used to determine or forecast the understanding of the next topic. Normally, learning follows an organized flow of ideas. Meaningful learning is a cumulative process that connects previous knowledge with new knowledge. Prior knowledge normally assists students in learning the new material. The foregoing ideas are in line with the principles of learner centred teaching practices. The perception of teacher B on how to introduce the lesson resembles what was expressed by teacher A (see page 9).

Moreover, this teacher examined students to see whether they have an accurate understanding that is connected to the subject matter under discussion. More specifically, she exemplified that "If I continue with the same topic, I start the lesson by reminding students about the concepts we discussed together in the classroom. Then I ask questions to scrutinize whether there is a link between the previous knowledge and the new knowledge. (B.122-123) In the situation of introducing a new topic, teacher B had the perception of describing concepts related to a new topic. She is incorporating several examples and stories, mostly from students' surroundings to be easy for them to understand. Teacher B had the following to emphasize in the conversation, "I introduce the new topic by using many examples and try to present the subject matter using various styles until it becomes clear to students". (B.125)

In addition, teacher B agreed with the fact that if she finds the students' knowledge of the subject matter is clear, she continues with the next stage. Nevertheless, if she discovers that something has not been correctly understood, the teacher finds ways to clear students' previous misconceptions. The intention of the teacher is to help students to have a correct understanding of the concepts and ideas. Continuing with the new subject matter would only depend on students' previous understanding of the topic. So the previous students' knowledge is used to determine or forecast the understanding of the next topic. Normally, learning follows an organized flow of ideas. Meaningful learning is a cumulative process that connects previous knowledge with new knowledge. Prior knowledge normally assists students in learning the new material. The foregoing ideas are in line with the principles of learner centred teaching practices.

- **New knowledge**

During the new knowledge stage, teacher B facilitated students learning the new topic. She was observed to employ several practices to make sure students learn successfully and thus achieve the lesson objectives. In the actual teaching practices, teacher B facilitated the lesson by explaining the terms chemical formula and molecular formula. She presented information based on the chemical reaction represented by the formula $A + B \rightarrow AB$, where the left-hand side represents the reactants and the right-hand side the products. Also, she engaged students mainly by using questions and answers and group discussion methods. The teacher always insisted and adopted a series of teaching practices. She started by providing explanations regarding chemical formula and molecular formula and then supply questions to students and asked them to discuss in their groups. She passed to students groups and observed, discussed, summarized and clarified important points (see Figure 8). This activity is supported in the learner centred environment.



Figure 8: The teacher is passing to students groups

Later on, one student from each group was invited to present in front of the classroom the answers/ideas that arose or suggested from the group. During this activity, it was observed that few students (one from each group) dominated all the learning activities. They were just reading answers from a sheet of paper, and no group was questioned or criticized. Also, students from different groups made no contributions regarding the answers/ideas presented. Even teacher B was failed to encourage students to ask questions or share ideas. After all presentations, the teacher just summarized the discussion and students' responses and provided some comments and more clarifications. Some of the aforementioned actions are against learner centred teaching.

Figure 9 shows one of the presenters is reading the answers from the sheet of paper. This style of learning is not effective because it makes the discussion and presentation to be less interactive. Students failed to learn actively. They have not engaged effectively in the learning process according to the learner centred teaching approach. In order to learn successfully, students need to ask questions and challenge each other regarding the answers presented by different groups. They need to use this chance to speak amongst themselves and reach an agreement regarding the answers presented. It is important to remember that students learn effectively by speaking or sharing what they understand concerning the subject matter presented. Learner centred teaching insists students discuss and exchange ideas during the lesson. Students should participate effectively. Thus, it is the responsibility of the teacher to organize and guide classroom practices as successfully as possible.



Figure 9: Student in school B read answers/ideas in front of the class

Teacher B asked students in their groups to discuss the following questions as it was written on the chalkboard (see Figure 10).

Discuss the rules of predicting reaction product

Discuss the types of chemical reactions and in each type give one example

Discuss all the necessary steps needed in writing a formula equation

Discuss all the necessary steps needed in balancing a chemical equation and identify symbols in the equation

The analysis indicates that the foregoing questions are more of the higher-order type, they needed students to use knowledge, thinking, and reasoning to provide correct answers. In their groups, students attempted to interact to make sure they respond to the questions correctly. The analysis showed that these questions if facilitated well could help students develop higher-order thinking skills. They are appropriate for secondary school students. In fact, they are supported by the principles guiding the learner centred teaching practices. The responsibility of the teacher is to guide students to discuss actively.

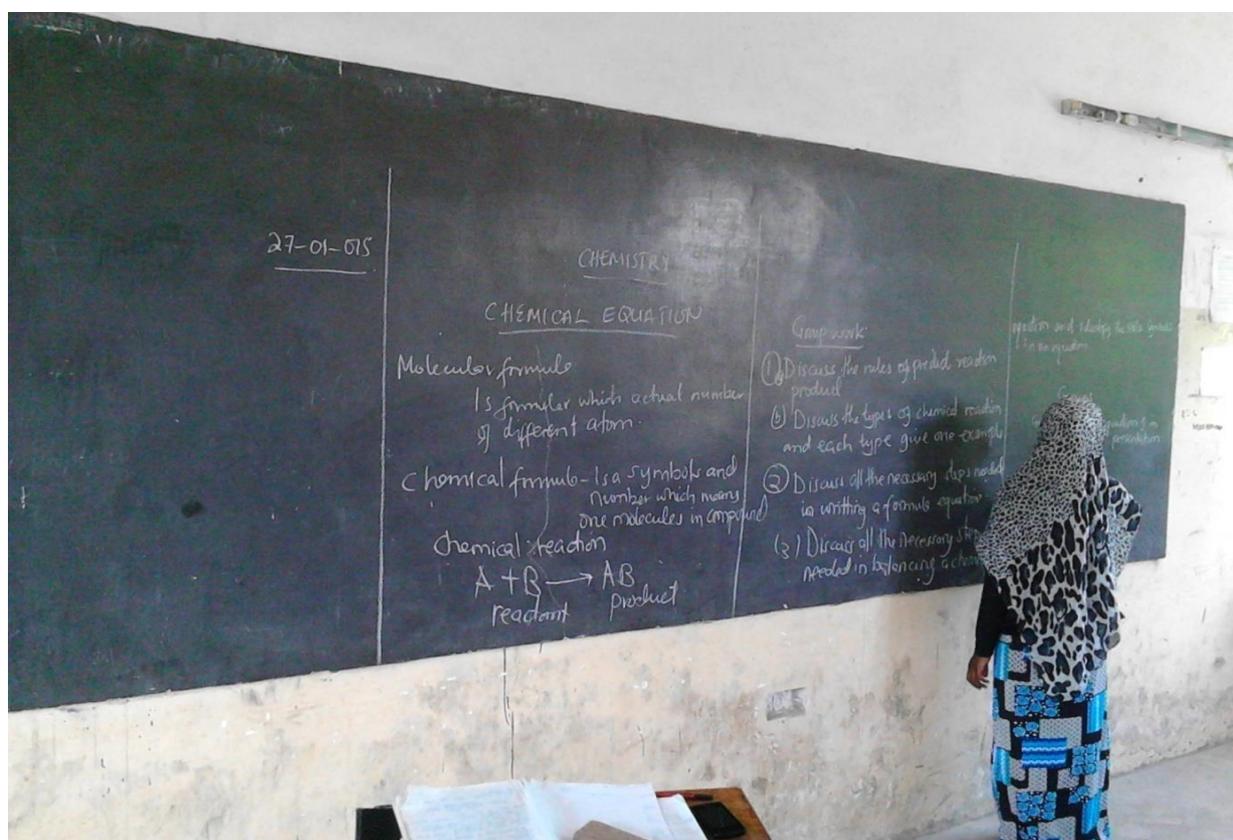


Figure 10: Teacher B is writing questions on the chalkboard

Teacher B guided the students to conduct a discussion of the written questions. Observation showed that the practices of group discussion conducted in this class of school B were discovered to be different compared to those observed in school A. It was because students in this class were discussing questions silently and inactively. Actually, students were less interactive. Sometimes teachers prepare questions accurately but fall short of facilitating students sharing and exchanging ideas as it should be. This was what happened in this class as students interacted ineffectively and actually, this learning practice did not assist students learning successfully. The

foregoing occurrence is not expected to happen in the learner centred classroom. Theorists expect students to be noisy during discussions. Teacher B attempted to make groups active by mixing students of various intellectual abilities. She asked all students to participate, and she passed to see what is going on in their groups. However, the observation showed that the teacher B initiative did not improve the situation and worse still, she did not take further action to motivate. This made the class to have groups discussing with no active sharing of ideas. It was as if nothing was going on in the groups.

When the researcher asked why the students were silent, teacher B said that the students' poor English language proficiency is likely limiting interactive discussions. Students were comfortable discussing questions in the Swahili language (mother tongue) rather than in English. In addition to that, students indicated lacking a good understanding of the concept under discussion. If students lack enough knowledge and understanding of what they were asked to discuss, it will be difficult for them to contribute ideas and this resulted in silencing. It might be the reason causing students' failure to participate well. To improve students' interactions, teachers need to help students build knowledge and skills by providing them in advance with the topic for discussion. Students should get the time of reading and prepare ideas ready for discussion.

In another session, teacher B presented information that described the preparation of oxygen gas in the laboratory and its uses. To make it practical, she arranged students into groups and then engaged them to read from the textbooks about the preparation of oxygen gas from potassium chlorate. The teacher showed on the chalkboard the reaction used in this activity as:



After reading activities, she wrote questions on the chalkboard to examine students understanding of the subject matter. The students were observed answering these questions by just reading the information they copied from the textbooks. This method was considered poor because it did not create the situation for students to think and search for answers for themselves without depending or relying much on textbooks. The method did not motivate students learning. These questions were written as follows:

Mention common methods of preparing oxygen

Write the formula of hydrogen peroxide and potassium chlorate

Mention all apparatus needed when preparing oxygen in the laboratory

Mention any catalyst used when preparing oxygen gas in the laboratory

State the chemical test of oxygen

Analysis of the above-stated questions indicated that students answered by providing short answers. They just memorized information or procedures to respond correctly to such questions. Those questions do not help students think and learn the subject matter as it should be. In this case, students present answers that do not go beyond simple information. In fact, they do not think very much to search for answers. Practices of this nature are not encouraged in the learner centred environment. One thing noted in terms of the questions is that teacher B, in general, was applying both types of questions (lower/higher order) in the classroom. Her questions did not rely on one side like the other participants. Such questions should provide a chance for students to demonstrate understanding appropriately.

After describing the learner centred teaching practices on the new knowledge stage, this study is presenting teachers perceptions. In the dialogue, teacher B said exposing students to new knowledge by employing several teaching and learning practices. She selects and uses the appropriate strategies that help to accomplish the lesson objectives. The teacher cited to adopt a succession of practices that seems to be appropriate when teachers employ the learner centred teaching practices in the classrooms. Teacher B provided some information regarding those practices, which when analyzed showed to focus on the common learner centred teaching practices. She presented a certain order of practices as disclosed in the following statement:

I start teaching by arranging students into groups, and then I supply questions for discussion. Afterward, I motivate students to participate and exchange ideas to answer the questions. After finishing the discussion, each group presents the answers in front of the class and then receives comments from the teacher. (B.126-128)

Moreover, teacher B suggested for teachers provide an environment that permits them to employ teaching methods preferred by students. This is to say that if students have high regard for a certain teaching method, then they should react positively. Students will build interest and be ready to put effort, learn and understand the subject matter. The teacher defended this point and specified “students learn well when you use practices which are preferred by them”. (B.129-130) Therefore, teachers need to be sensitized to apply learner centred teaching. They should be encouraged to employ an effective approach in the classrooms. Teacher B provided an option when students fail to understand the subject matter. She agrees with other participating teachers to organize remedial teaching for making corrections or to repeat the whole lesson. This teacher

differentiated herself from the other participants by providing an extra strategy to deal with students who failed to understand the subject matter. She attempts to share the learning problems with fellow teachers and together scrutinize how to create what is called a team teaching. Therefore, it is good to work together and achieve the learning objectives. The following descriptions were captured from teacher B:

If the topic is not understood, I repeat it by using appropriate teaching methods. If it fails to work, I sometimes invite my colleagues who are teaching the same subject to come to my class and teach the same topic again. (B.132-133)

- **Assessment**

Teacher B assessed students mainly by asking questions and giving assignments. In the classroom, she supplied questions and asked students to discuss and exchange ideas together. After recording the students' responses, the teacher asked them to present and provide a chance for the whole class to participate in a discussion. Finally, she summarized the lesson, assessed the students' responses, and provided comments. The teacher's comments helped to improve students understanding of what they were discussing in groups. In a similar manner to that of teacher A, close observation of teacher B indicated that she did not perform practices according to the assessment questions used to check the students learning progress as it was presented by the teacher's activities. This phenomenon is suggesting that continuous assessment was not well conducted in this classroom.

After describing the learner centred teaching practices on the assessment stage, this study is presenting teachers perceptions. The perceptions of teacher B regarding the assessment indicated some practices that are applied to examine students' understanding of the subject matter. Teacher B used similar methods like the one used by teacher A. She supported questioning as a suitable method. Particularly, she insisted on the types of questions and had this to express in our dialogue, "In assessment, I do not use simple questions which can be answered by Yes or No". (B.139) Such questions are not good because they do not show whether students have understood the concepts or not. She is advising teachers to stop asking simple questions. They should ask questions that encouraging and motivating the student to think more deeply. In addition, teacher B exemplified conducting assessments throughout the period. She distinguished herself from the perception of teacher A. The teacher used this strategy to collect information that helps to identify students' progress in the learning process. The perception of this teacher concurs with the principle of learner centred teaching practices. It insists teachers to

continuously test out how students learn the subject matter. Teacher B stated the perception in the following statement:

I conduct students' assessments when the teaching continues. This process helps me to discover learning problems as they arise. What I do is that, after finishing teaching a small portion of the subject matter, I provide some questions to examine students understanding of that portion. *(B.141-142)*

The perception of teacher B on the issue of assessing large classes, she criticized strongly the process of teachers assessing students by providing questions and then displaying answers on the notice board for students to mark for themselves. She asserted that students are not responsible for this task; in fact, they are not accurate, committed, and faithful. They may perform cheating in marking by favoring themselves without following what the teacher instructed. To control students cheating teacher B suggested teachers not compromise with their classroom practices. Teachers should ensure that they mark students' work and provide accurate feedback to students. She remarked and provided the following descriptions:

What I know is that assessing and marking are the duties of the teacher. So let us emphasize and practice our profession without compromising because of several challenges. To accomplish assessment as it should be we, as teachers need to involve ourselves in this practice without leaving it to students. *(B.144-145)*

- **Classroom management**

Teacher B attempted to organize the students to participate and perform classroom practices successfully. She guided and performed several practices such as questioning, reading textbooks, group discussions, and presentations of answers in front of the class. On the matters related to the seating arrangement, the observation from teacher B classroom was similar compared to the other visited schools. In general, the classroom followed the traditional structure adopted by many schools in Tanzania. This structure hinders free interactions, group discussions, and collaboration between students and students or with the teacher. During the discussion, the researcher observed students caused noise when they try to push desks and chairs to arrange themselves in the groups. It took time for them to form groups and settle ready for the discussion activities. This phenomenon was common to all visited classrooms.

Furthermore, teacher B was observed using textbooks as the main materials for supporting students learning in the classroom. She was observed to depend much on textbooks, in such a

way that she referred students to the textbooks for every classroom assignment. The observation made on the lesson plan of teacher B indicated that she planned to use wall charts showing the rules of predicting chemical reaction products. However, in the actual classroom practices, she did not use the materials prepared in advance. This was considered a mistake because it was expected that the materials written in the lesson plan would be really used during the period. It is a problem facing teachers as they fail to use the materials prepared well in advance.

After describing the learner centred teaching practices on the aspect of classroom management, the current study is presenting teachers perceptions. Therefore, teacher B expressed perceptions of practices used to manage/control students to help them learn successfully in the learner centred environment. She stated rules and procedures for guiding students in the classroom. These aspects help to organize and accomplish successfully the classroom practices. Teacher B insisted on good classroom management that encourages students always to behave in good manners. To facilitate management practices in the classrooms, she warns students to stop misbehaving. She expressed her point of view that:

You know it is my duty to caution students that the classroom is a place that requires discipline. This environment helps to make all the practices to being carried out successfully and thus benefit all students. It is important to note that students who always misbehave cannot succeed in their school life. (B.148-149)

Teacher B showed to differ from the other participants regarding the organization of practices in the classroom. She reported organizing and facilitating practices for students learning. Particularly for the learner centred environment, she mentioned a group discussion method. The teacher explained managing what is taking place in the groups by passing and assessing whether all students are doing the practices instructed by her. Concerning stubborn students, teacher B indicated using the technique that was not used by the other participants. She mixed students of different behaviors in one group. To mix stubborn students with a kind, bright and serious students in one group. The reason behind this technique is to provide a chance for stubborn students to imitate and learn good behaviors from their colleagues and thus change and improve learning. Teacher B proclaimed on managing students' in the classroom:

To manage students, I visit each group, asking questions and motivating all students to participate fully in learning. Sometimes I employ a technique of exchanging a few students from one group to go to another group where I think they can learn good behaviors that promote learning and understanding. (B.151-152)

In terms of the seating arrangement, teacher B maintained the idea of trying to arrange students in an interactive manner. This kind of arrangement helps students to move freely in the classroom. Students can easily talk or exchange ideas with one another and even with the teacher. She showed her preference for the interactive seating arrangement and explained that, “I prefer the U-type, round or interactive method of seating arrangement because it supports the learner centred practices”. (B.154) In a similar view, teacher B complained like the other participants about this aspect. She indicated a lack of a suitable environment as a constraint for the perfect arrangement of students. Sometimes due to overcrowding in the classrooms, teachers find it difficult to organize proper seating arrangements. The awareness of both students and teachers is constructed from the traditional arrangement. She explained in the following excerpt:

You know I support the interactive seating arrangement. It is preferred because this format enhances the teaching and learning process. However, the problem is that students and teachers have been experiencing traditional arrangements for a long time, thus it might be difficult to change. (B.155-157)

TEACHER C

Descriptions of the teacher, school, and classroom context

Teacher C like other participants has a degree of Bachelor of Science with Education. He studied the degree program from a known public university. The teacher has eight years of experience in teaching various secondary schools, including public and private ones. One of the private schools he used to teach (Feza) is among the best secondary schools in Tanzania. The teacher agreed to have good experience in connection with the learner centred teaching. He gained a lot of instructional experiences when he was teaching in a private school. He preferred the private school because students were active, committed and interesting during the teaching and learning process. The teacher C during the fieldwork was teaching chemistry subject for form one in a community school. Students were behaving differently compared to those in a private school. A number of periods per week for him were normal. He had 24 periods and the highest number of students’ in the class was 25.

The researcher noticed the number of students in this class is small compared to other classes in secondary schools A, B, D. The investigator wanted to know the reasons why this is so. Teacher responded that the poor learning environment of school C causes it. Both teachers and students

experience several difficulties that affect every day academic activities. Therefore, many students, after reporting to this school, process transfers to go to other schools, finding a favorable learning environment. One of the main problems facing school C is that it is located in a remote area. It is very far from fundamental services. The area is tranquil, with no human or disturbing activities. All students in this school are day students. Thus, they face difficulties mainly caused by long-distance and poor transport services. This circumstance forces students to walk or travel a long distance every day to get to school, and in most cases, they arrive at school late and tired. Correspondingly, when they return home, they arrive at very late hours in the night. This state of affairs in one way or another affected student learning and performance in this school.

Likewise, teachers face the same problem of transport in such a way that they always seek for transfer to go to other schools. The transfer of teachers tends to create the problem of shortage of teachers. In addition, this problem makes teachers manipulate the teaching timetable to compromise the situation. In this case, teachers have squeezed their periods to a few days per week. They come to school to teach in two or three days in a week and remain at home for the rest of the days to avoid high transport costs. This strategy affects school timetable, teaching, students learning as well as the performance. Teacher C elucidated that, “both teachers and students experience several difficulties that impact everyday academic activities. One is the long-distance and lack of good transport to reach the school. Many students after reporting to this school shift to other schools due to this problem”. (C.174-175)

The state of affairs regarding the professional development programs indicated that teacher C comes across challenges like other research participants. The teacher complained that he had never attended such training programs when he was in a private and even now in a public school. Further to that, teachers in school C did not organize school based training for them to share knowledge and experiences in teaching and educational matters. Lack of further training opportunities is an indication that teachers miss a good chance of improving and updating knowledge and skills in implementing learner centred teaching. On another side, the absence of this training discourages teachers and this is not good for the teaching profession.

School C has a motto *education for liberation* (school poster). It implements the teaching and learning processes following the same instructions as it is provided for all schools in Tanzania. Like in other visited schools, the official language is English. The observation from the classrooms showed students encounter challenges concerning the mastery of this language. It made the students frequently stop a teacher to interpret a few English words into the Swahili

language to enable them to understand the subject matter. Students become uncomfortable when they find a teacher is using English only throughout the period. This observable fact interferes with the teaching, learning as well as organization of the lesson. In actual fact, the English language is an issue in this school.

Teacher C reacted differently on the issue of lack of a laboratory. He was innovative in such a way that he created a room and used it to perform demonstrations for essential experiments. The school and teacher C efforts are appreciated. However, the room is a normal classroom where students used to sit as if they are waiting for the teacher to teach a subject matter and not built for the actual practical experiment purposes. It limits all students to do some science practical experiments by themselves. It lacks spaces for putting equipments, chemicals, and apparatus. The classroom is not appropriate for practical. Thus, it is evident that the school needs a real science laboratory to enhance the implementation of learner centred teaching practices. Not only that, but chemistry is an experimentally oriented subject, so it should be accompanied by the use of a laboratory. This is to say that a normal classroom will be used for teaching and learning while a laboratory will be used for conducting practical experiments. On the issue of *the classroom context, chalkboard, and textbooks*, the results follow similar trends as the ones observed in schools A and B.

This study is not satisfied with the situation in school C because of the number of challenges that affect the provision of education. They might be related to teachers, students, school and classroom context, and teaching and learning materials. In addition, the teacher complained that the school normally receives students with low pass marks from primary schools. These students were observed to have poor learning capability. They do not put big efforts to improve their knowledge and understanding. According to teacher C, this might be one of the reasons for this school poor performance. Actually, the performance was worst compared to the other visited schools (see Table 6).

Table 6: The National Examination performance ranking for secondary school C, 2012-2014

| Secondary school | Ranking level | Position 2012 | Position 2013 | Position 2014 |
|------------------|---------------|---------------|---------------|---------------|
| C | Regional | 225 (226) | 234 (238) | 85 (101) |

Source: National Examination Results for Ordinary Level, 2012-2014.

Perceptions regarding the learner centred teaching

Teacher C reported the learner centred teaching to mean the process of guiding students doing many practices in the classrooms. He expected students to perform a series of learning practices and as a result, gain activeness. This activity helps them build a good understanding of the subject matter. In addition, the students in this paradigm are facilitated learning by allowing them to be free to discuss the subject matter by themselves. Teacher C perceived the learner centred teaching and said that, “the learner centred teaching motivates students to learn almost independently without depending much on receiving information, ideas and knowledge from the teacher”. (C.178-179) The teachers’ role is to make a clarification and attempt to correct the students’ mistakes and misconceptions and finally put the concepts and ideas in an accurate manner according to the curriculum.

In addition, teacher C reported respecting and supporting students' ideas during the teaching and learning processes. He advocated that teachers should believe students to possess good ideas relating to what they are learning. They learn several matters in their everyday life so should not be considered as tabula rasa. Teacher C had the following to say defending his opinion on the concept tabula rasa:

Students are not tabula rasa; they possess some ideas gained from their background experiences. Therefore, a teacher must build an understanding that students know or remember something from what they have learned in the lower classes. (C.183-185)

Regarding the responsibility of the teacher in learner centred teaching, teacher C considered the role of the teacher as mainly that of guiding, monitoring, instructing and facilitating students’ practices. The students normally do all learning practices and the teacher acts more as the facilitator of the students learning. In performing their responsibilities, teachers in the visited schools encounter challenges connected to how they facilitate learner centred teaching and at the same time cover topics prescribed in the syllabus. This phenomenon makes teachers compromise with the situation and employ teaching methods like a lecture just to cover a significant portion of the topics and conform to the school calendar. Likewise, the lack of enough knowledge and skills on learner centred teaching necessitated teachers to choose the lecture method. Teachers can employ this method without making sufficient preparation. They just prepare notes and transmit to students in the classroom.

In general, teacher C agreed with the advantages of learner centred teaching in the classrooms. However, he remarked, “this teaching style is surrounded by several challenges hindering its

effective implementation". (C.180-181). According to him, the challenges include the heavy teaching load, which includes a large amount of content that is required to be covered according to the subject syllabus and the scheme of work and school calendar. These practices are known to be time consuming. In addition, teachers are somewhat not satisfied with this approach. It is because this approach is to some extent new and thus it needs sufficient knowledge and skills to employ it successfully. Teachers need to know how they can make use of this approach taking into account the existing environment in secondary schools.

The learner centred teaching practices employed in different stages of the lesson development

- **Introduction**

Teacher C was observed to introduce the lesson differently compared to other participating teachers. This teacher employed the demonstration method. He made a simple demonstration on the topic of hydrogen gas. In the process, the teacher distributed chemicals and asked students in pairs to mix and observe the reaction. The students performed well the practice, and they responded to the teacher regarding what they have been observing. By performing the demonstration, students got a chance of building their interest in what they were learning. Students were convinced to participate actively in the whole lesson. Like the other participants, teacher C also asked the following questions to assess students' previous understanding: *Have you heard about hydrogen gas? Do you know anything about hydrogen gas? Is hydrogen gas found in air or not? Write the chemical formula of any compound you know.* The teachers knew previous knowledge is the foundation for learning new knowledge. However, one thing observed in class C was that the teacher asked questions as a formality. He did not scrutinize to check whether students responded correctly or not. He did not put an effort to make sure he links students understanding to the subsequent new knowledge. These behaviors were discouraging. This habit is contrary to effective learner centred practices. It was expected that the teacher could have used the demonstration to show the significance and usefulness of the topic and motivate students learning. This learning practice was anticipated to inspire students learning the subject matter successfully in the next stage.

After describing the learner centred teaching practices in the introduction stage, this study is presenting teachers perceptions. In this case, teacher C used mainly questioning methods to recognize what students already know regarding the topic that is expected to be taught. In introducing the new topic, the teacher attempts to relate the new topic to the students' everyday

life experiences. It should include experiences such as what students come across, see, hear, interpret, learn, etc. It is important to know that the materials students tend to learn depend much on the background knowledge students have. The main aim is to link new topics with students' information and ideas thus making the teaching and learning process meaningful. The perceptions are in line with the learner centred teaching practices. The extract below provided the understanding of teacher C about principles applied in the lesson introduction when considering both situations (ie when the topic is continuing or if topic is new):

If I continue with the same topic, I start the lesson by describing the concepts that already taught and examined whether there is a connection between the previous knowledge and new knowledge. If I teach a new topic, I start slowly to describe to students why that topic is important or whether it has any relationship with what they see and hear in their everyday life. It helps to remind students and start searching for information connected to the new topic. (C.193-196)

- **New knowledge**

During the new knowledge, teacher C used most of the time to impart to students' knowledge of the subject matter using a variety of teaching and learning practices. He carried out chalk talk lectures, questioning, and demonstration methods. The teacher continued with the demonstration and explained the stages of how hydrogen gas is prepared in the laboratory. He prepared the materials and called students to come in front of the class. They observed together how hydrogen gas is produced from that reaction. Afterward, the teacher presented the subject matter to students, who used most of the time to listen and copy notes written on the chalkboard. The teacher or students asked no questions. In fact, the classroom practices were not interactive and students did not participate effectively.

In another session, teacher C was teaching about a chemical equation. He presented information covering the concept of a chemical equation. The teacher showed how the reaction is taking place. The heat to be given out accompanies this process and the new compound is produced. To demonstrate this experience, the teacher attached the students with the bottle to prove the heat change during the reaction (see Figure 11). This process made the students aware of the changes. They notice and experience changes. Touching is a good way of learning because it stimulates and sends information to students. It helped students to understand what is taking place during the reaction. It improves students learning in a learner centred environment.



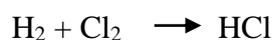
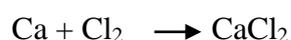
Figure 11: The teacher demonstrates the reaction to students

In another period, teacher B taught subject matter that explains the process of *writing the electronic configuration of the first 20 elements, writing the chemical formula of compounds and balancing of the equation*. The teacher gave students some procedures to follow to arrive at the correct configuration and formula, as well as how to balance the equation. Finally, the teacher gave the following exercise to students as an individual assignment. He wanted to assess the students learning and understanding of the subject matter above.

Write the chemical formula of the following: magnesium chloride, aluminum chloride, calcium chloride, calcium chlorate, potassium oxide, magnesium nitrate, sodium fluoride, and magnesium sulfate.

Write the electronic configuration of magnesium, aluminum, calcium.

Balance the following equations:



The observation showed that almost all the questions were asked in a way that directs students to lower order thinking. This is to perceive that they can be answered by just filling one word or short statement. In fact, the questions can be replied simply. Nevertheless, it is important to understand that the same questions can be modified/improved to address higher order thinking. This type of question requires students to think first, organize, and follow procedures to write the configuration, formula, and balance the equation. So it is the responsibility of the teacher to bring about higher order questions.

One aspect noted in teacher C class was that he dominated the classroom practices and he did not give a chance for students to exchange information. Students in this class were receiving information from the teacher who was talking and writing on the chalkboard. Students thought this teaching method was appropriate for classrooms. The teacher did not engage students well in the classroom as expected. He did not employ methods used to apply when he was teaching private school. In another case, it was observed that teacher C in all the teaching sessions, did not employ group discussion practices. This trend is not normal because many teachers in the visited schools and Tanzania in general, most of the time comprehend learner centred teaching practices by applying the discussion method. The understanding of these teachers is limited because various classroom practices are representing the learner centred paradigm. The teacher admitted using this paradigm when he was in a private school because students were more active, committed, and cooperative. However, students in class C were inactive, and this acted as an obstacle for the learner centred teaching practices.

After describing the learner centred teaching practices on the new knowledge stage, this study is presenting teachers perceptions. In the conversation on how to guide students in the new knowledge stage, teacher C perception was discovered to support teaching differently compared to the other participants. The teacher was found to favor the chalk talk lecture method in teaching a new topic. The teacher preferred the lecture method because it is simple to use in teaching the subject matter and the teacher could apply it without making deep preparation. The teacher continued to elucidate on the chalk talk method and said that, “to me, the lecture is good for coverage of a large amount of materials prescribed in the syllabus” while “learner centred teaching is good for making students active, learning effectively, and understanding the subject matter”. (C.197-198)

Teacher C responded in the dialogue regarding the situation when new knowledge becomes unclear to students. He employed different methods compared to teachers (A and B) who suggested remedial sessions. This teacher starts making clarifications of the concepts already

taught. In addition to that, he stated to employ the reading technique. The teacher guides students to read the section of the subject matter directly from the textbooks. Teacher C believed that reading might help students' build a good understanding and thereby learn the topic successfully. However, teachers need to be careful with reading activity because it needs to be well organized to create effective student learning. Otherwise, reading activity most of the time has led students to passive learning, something that does not help.

- **Assessment**

Teacher C assessed students' understanding of the subject matter and attainment of the lesson objectives. He was observed providing assignments usually at the end of the lesson. Afterward, he marked the students' works and gave feedback. This teacher employed homework frequently compared to the other participants. He believes students learn independently when he/she working with the homework. In addition, the teacher did not carry out the ongoing assessment to scrutinize students' learning progress in the classroom. The observation indicated further that the assessment questions were not followed appropriately. They were not applied practically to guide teaching and learning. This indicates that there was no connection between the planned teaching activities and practices taking place in the classroom. This phenomenon is not good for the teacher as well as students because it violates characteristics of the learner centred teaching practices. According to the curriculum instructions, it is expected for a responsible teacher to plan the lesson comprehensively before actual classroom practices. Teachers wrote in advance the learner centered teaching practices expected to use in the classrooms to engage students in learning.

After describing the learner centred teaching practices on the assessment stage, the current study is presenting teachers perceptions. In an interview, teacher C emphasized assessing students frequently by using the question and answer method, giving exercises, and homework. This teacher differs to some extent from teacher B. He asserted that both types of questions (lower order and higher order) are important for classroom assessment. According to him, using these types of questions depends on the aim and focus of the assessment. Teacher C explained to use these questions to monitor students' learning progress and examine their understanding of the subject matter. In supporting his perception, teacher C demonstrated when responded in the following statement:

I assess students in a continuous manner by asking students oral or written questions. This process helps me to identify students who are facing learning problems. It alerts me to find ways of helping these students. (C.203-204)

Concerning large classes, teacher C joined with teacher B rejecting the strategy of allowing students to mark for themselves. Instead, he highlighted another technique of examining slow students. The teacher focuses largely on assessing to what extent the slow students in the classroom have understood the subject matter under discussion. So slow students were considered as indicators of learning. They reveal whether learning has taken place or not. This is to say that, if slow students show or manage to understand the subject matter, then, the teacher assumes the same understanding happening to the whole class. Teacher C clarified on this technique that:

To assess large classes, I use the technique of assessing slow students and see how they respond to the questions. If I find they provide correct answers, it gives me an indication that the entire class has already developed a good understanding of the subject matter. (C.205-207)

In giving an account regarding marking, teacher C considered this task as an essential part of a teachers' professional work. Therefore, to do it effectively, he advised teachers to mark students' work regularly. The technique will assist teachers to be acquainted with students learning progress. It gives teachers feedback about how and to what extent students have learned and understood the subject matter. It helps teachers to identify areas causing problems to students learning and thus find a proper solution at the most opportune time. In general, this process motivates students and improves their learning.

Furthermore, teacher C showed to differ with the other research participants by explaining a method that is not normal for assessing students. He focused on reviewing the students' notes as an essential practice for assessing students. The teacher proclaimed on this matter, "I examine students' notes to check whether they have been writing correctly or not. Students' notes are the fundamental learning resources". (C.208-209) Therefore, notes need to be written in an approved manner to avoid mistakes that could mislead students when reading. To facilitate this process, teachers are required to make a follow up of students' notes. It is because students would use notes for making revisions and reference to what they have already learned. For students to make a good preparation for tests or examinations, they need notes that have written accurately. Notes

that have written correctly lead students to a proper understanding and as a result perform examination successfully.

- **Classroom management**

Teacher C used textbooks as the main material for supporting students learning in the classrooms (see Figure 12, 13). He customarily began the lesson by presenting the subject matter and providing textbooks to students, and then guiding them to read the prescribed content. All the time, the teacher wanted students to find answers or solutions from the textbooks. This method is not favoring learner centred practices, as the students get information directly from the textbooks. Students do not put any effort to find answers. They learn passively. Students are not given a chance to investigate, think, and find answers from their previous knowledge, understanding, experiences, and other sources. No chance was given for students to exchange or share ideas/information. Teacher C did not encourage and motivate students to find answers for themselves. He did not facilitate successful learner centred teaching practices.



Figure 12: The teacher is distributing textbooks to students

In addition, the teacher used materials as stated in the lesson plan. He respected and followed the classroom instructions. Teacher C was differentiated from the other participating teachers because he planned and used various educational materials during the actual classroom interactions. It includes local materials, laboratory equipment, chemicals. Figure 13 shows the

teacher is providing solutions to students and observing the chemical reaction. He wanted students to learn in an authentic manner and build a good understanding. In fact, teacher C attempted to incorporate teaching aids to assist students in learning. He tried to manifest improvisation skills and prepare the appropriate teaching and learning materials in the classrooms. This practice is recommended in a learner centred environment. Other participating teachers were generally not following what they had written in the lesson plan.



Figure 13: The teacher is providing solution to students

Moreover, teacher C failed to arrange students according to the interactive seating arrangement. His class was not overcrowded, and it had enough space that allows a chance for an interactive seating arrangement (see figure 14). Students might be arranged in such a way that could allow movements and interactions during the teaching and learning process. They can be arranged in a certain style of seating arrangement (for example, U style). But amazingly, the teacher did not arrange students in an interactive style as he agreed in the interview. He just left students to sit in a traditional way. Again, the researcher asked the teacher about the possibility of changing the seating structure; he responded that he is free to choose any structure. However, he decided to follow a similar format used by all teachers in the school to avoid confusion that may happen to students and teachers when they find a different style of the seating arrangement in his classroom. The teacher described that although learner centred supports interactive seating arrangement, but its implementation in the actual classroom environment is challenging. There are several challenges to accomplish the preceding arrangement in the learner centred environment.



Figure 14: The seating arrangement in school C

In addition, the researcher observed the instances where all the students arranged on one side of the classroom, but another side remained with the desks alone. This proved that there are still spaces for arranging students and interact effectively. Therefore, the classroom seating arrangement in this class was not perfect. According to the size of the class and the number of students, the teacher could make appropriate arrangement that promotes students movement and interactions. It is in this environment that students could learn successfully in an active and involving way. The foregoing organization is recommended in the learner centred teaching and learning environment.

After describing the learner centred teaching practices on the aspect of classroom management, the current study is presenting teachers perceptions. In this case, teacher C described several practices used to manage and control students during the teaching and learning processes. He warned students to stop performing bad behavior such as joking or laughing in the classroom. The teacher agreed to apply psychological principles to advise students to behave properly when they are in the classrooms. He used these principles to establish good friendship and relationship with students. Good advice helps to motivate them putting more effort and improve learning. Further to that, he joined with other teachers to urge students to follow the school and classroom rules. This aspect helps to maintain order and create a productive environment for learning. Teacher C stated as regards of how he manages students in the classroom:

I frequently remind students that they need to discipline themselves when they are in the classrooms. I tell them that good behavior is critical for students. It will enable them to learn effectively, pass examinations, and succeed in their life. (C.211-212)

Furthermore, teacher C reported managing students using a unique technique compared to the others. He particularly watches the entire class during the teaching and learning process. This activity influences managing students' behavior in the classroom. It helps the teacher to watch students' behavior closely and thus notice what students are doing. It contributes to discovering inattention or any behavior that might be disruptive to students learning. Teacher C had this to pronounce:

I try as much as possible to be attentive and watch the entire class to observe all the activities students are performing. Doing this practice helps me to discover any activity interfering with students' learning in the classroom. (C.213-214)

TEACHER D

Descriptions of the teacher, school, and classroom context

Teacher D was noticed to have different qualifications compared to the other participants. He is holding a Diploma in Education and a Bachelor of Science in Procurement. His diploma in education made him permissible to teach at the ordinary level of secondary school. In the diploma training program, he attended courses instructing about the learner centred teaching. He had been teaching in different schools for twelve years. This is to say that he has a long time in teaching compared to the other research participants. Due to the long experience, this teacher learned effective teaching methods that should be applied in the classroom. So the expectation for this teacher was to execute teaching successfully and as a result, raise students' achievement. During the fieldwork, teacher D was teaching chemistry subjects to form three and four students. The highest number of students' in his class was 60. Also, the teacher had 22 per week periods which is a normal teaching load.

Concerning the participation in the professional development programs, teacher D was privileged to some extent compared to other participants. He attended training thrice in a period of twelve years. In his school, there were no strategies organized to conduct school based training. This view indicates that the teacher missed opportunities that might be used for sharing

knowledge, skills, and experiences in teaching. Teacher D like the others in community schools is also not very much pleased with the working conditions in the teaching job. Nevertheless, he appreciated the motivation provided by the school management to teachers who assisted and enabled students to score grade A in the subject administered in national examinations. “I am not satisfied with the working conditions in the teaching job. I appreciate motivation from the school management regarding students who get grade A in the national examinations”. (D.234) This habit was reported to work positively because teachers who received the money have been observed working very hard, committed and more effectively. They always intended to put more effort to facilitate teaching better to increase the number of students scoring grade A.

The community secondary school D is located in an environment that is also remote. So students (day scholars) face the challenge of a long-distance to and from the school. However, the problem of transport services in this school was not high compared to school C. This is because school D is to some extent located not very far from the means of transport. The place and the school environment are somehow good. This phenomenon made school D have a good number of students. Actually, they do not depart the school as compared to school C. In general, the school area is calm, and there is no disturbance coming from outside.

School D compared to the other visited schools put an emphasis on quality education. It has an *educational motto that is intended to promote quality education for a better life* (school poster). To accomplish the motto it executes all instructions mentioned in the competence based curriculum. Concerning the English language, no efforts were noticed to continue in this school as it was observed in the other visited schools. Teachers and students most of the time were communicating in Swahili. This school discovered to have one English teacher during the fieldwork. He indeed complained about the teaching load because it was too large. He used most of his time in teaching and thus failed to conduct extra programs to improve English speaking in the school. In terms of the laboratory, school D like other community schools B and C lacked this essential scientific room. Even though the researcher observed the new laboratories were undergoing construction.

The literature indicated that the students’ performance has been influenced by several factors in the school. This study found school D and others (B and C) were surrounded with challenges towards the achievement of goals of learner centred teaching practices. Just to mention a few, it includes lack of a laboratory, poor conditions for students and teachers, long distance to and from the school, and a shortage of teachers. To show how much the school is affected, teachers

reported the whole school to have only one teacher teaching subjects such as English, mathematics, and physics. Even chemistry has only two teachers. The foregoing challenges and others affected the teaching, learning and students' performance in the national examination. They might be the factors that caused this school to perform poorly, as can be seen in Table 7.

Table 7: The National Examination performance ranking for secondary school D, 2012-2014

| Secondary school | Ranking level | Position 2012 | Position 2013 | Position 2014 |
|------------------|---------------|---------------|---------------|---------------|
| D | Regional | 210 (226) | 105 (238) | 100 (191) |

Source: National Examination Results for Ordinary Level, 2012-2014.

Perceptions of teacher D regarding the learner centred teaching

Teacher D reported perceiving the learner centred teaching as the method that emphasizes students' learning actively throughout the lesson. The teacher adopted methods of reinforcing students by giving a chance to carry out the concept they have learned in the lesson. According to him, practices assist students to build interest in the subject matter and thus learning and understand concepts clearly. The teacher has to be careful in providing practices that are appropriate to the concept under discussion. Teacher D emphasized his perceptions of the learner centred teaching and responded according to the following descriptions:

My role in the learner centered teaching is to give instructions and guide students to perform the learning practices by themselves. To help students learn actively, I employ a group discussion method and encourage students to cooperate and work together. (D.240-242)

Concerning the issue of tabula rasa, the teacher provided an account of how he understood this term. Teacher D was discovered to have broad knowledge about this concept compared to the other participants A, B, C. He reported tabula rasa as an old concept that made teachers build the notion that students are entering into the classroom knowing nothing. According to him, this idea proved wrong because experience showed that, students in modern times possess knowledge gained or obtained in a variety of ways. It includes discussions, the internet, television, radio, and magazines. Teacher D perceived further that under learner centred teaching, students are considered to have ideas that contributed to the learning practices. Based on this principle, students are regarded as individuals who possess knowledge that should be utilized in the

classrooms. Teachers can use that knowledge to connect students to the topic under discussion. The teachers' duty is to guide, develop, and encourage students' knowledge appropriately.

Teacher D had the following to say to criticize the notion that considers students as *tabula rasa*:

I am sure students possess knowledge that can be utilized in the classroom. I, therefore, disagree with the teachers assuming students are like containers always waiting to be filled with information. To confirm this, today I introduced a topic by asking questions, I came to realize that many students know much about the concept I was about to teach. (D.248-250)

Moreover, teacher D explained other practices he used to facilitate teaching in the classroom. One of the practices is the reading of textbooks. "I remark that the students can also learn in the learner centred teaching by reading the subject matter in the textbooks". (D.255) However, the analysis of the reading practices showed that it does not directly support learner centred practices. It does not help students learn actively. Therefore, it is not an appropriate practice for students learning. The manner teachers are carrying out reading makes students learn passively without interest and this affects their understanding. However, there is a possibility for the skilled teacher to guide students in interacting with reading materials successfully. Students can be read and then be given a chance to undertake various involving practices. Also, students can be asked questions that are linked to what they have read.

Likewise, teacher D criticized the principle of teaching a small portion of content and making students understand clearly the concept under the learner centred teaching. He contradicted the perception of teacher B at this point. He described the poor situation teachers face if they would teach a small portion of the topic. It is caused by the amount of materials teachers are required to cover at a particular time of the school calendar. The massive coverage of materials prescribed in the syllabus makes teachers ignore applying learner centred teaching practices. Instead, teachers opt for transmission methods that give room for broad or big coverage. However, understanding in this mode of teaching is not guaranteed. The technique of teaching a small portion could be possible if the teacher possesses sound knowledge and skills to balance the breadth and depth of the prescribed topics. The teacher should be able to help students learn deeply and at the same time cover what is supposed to be learned. In fact, the skill of handling both of these strategies needs an effective teacher. Particularly the one who has developed good pedagogical content knowledge and skills.

Teacher D expressed his opinion, which favors one group of students and leaves the other group. In this case, he advocated that “I perceive the learner centred teaching as the approach which makes students become active throughout the lesson”. (D.237) This study concurs with the teacher observation because it is true that students who have engaged actively in the classroom are always in a good position to gain knowledge and skills under this teaching paradigm. However, it is important to consider the principles that can be created by the teacher and make all students become active in the classrooms and thus benefit from the teaching process. Based on this reality, it is thought that the activeness of students relies heavily on how the teacher encourages students to participate enthusiastically in the teaching and learning process.

The learner centred teaching practices employed in different stages of the lesson development

- **Introduction**

The observation from this class showed one unusual character of teacher D as compared to the other participants A, B, C. In this regard, he started the lesson by presenting several concepts related to the main topic (*stoichiometry, mole concept, a relative quantity, and the balancing of a chemical equation*). Then he summarized these concepts on the chalkboard and students wrote notes. The teacher did not focus on examining the prior knowledge of the students as emphasized in the learner centred environment. He was not connecting the students' prior ideas and the new knowledge. He did not ask questions to examine students' existing knowledge. In actual fact, the teacher has not shown any interest in the previous knowledge. As a result, the teacher started directly by presenting information or concepts to students. This was against the characteristics of learner centred teaching practices. Most of the time, teachers attempt to ask questions at this stage to check students' pre-existing ideas that might help to interpret and link to the subsequent topic. Teaching and learning follow an organized series of concepts, so assessing previous knowledge help teachers to know the coverage and identify the ideas missing to students. This enables teachers to provide suitable classroom practices that help students study/learn new knowledge smoothly.

After describing the learner centred teaching practices in the introduction stage, the current study is presenting teachers' perceptions. The perception of teacher D is revealed similar information to what was explained by teachers A and B (see page 9, 23). Predominantly the perception demonstrated to be in line with the learner centred teaching practices. In this case, the teacher connected the subject matter to the students' everyday life and experiences. This process

simplifies the students' understanding based on the ideas they are familiar with. Under the learner centred teaching practices, teachers should motivate students' participation in the classroom. It should be achieved if students are cognizant and develop an interest in the new topic. The issue is to make sure students build an appropriate foundation for the new topic planned for accomplishment. The teacher D elaborated further that:

I start introducing the new topic by relating to the students lifestyles, examples, and environment to make sure they become aware. For example for the topic of a chemical equation, I start by giving examples like burning fuel and cooking food. This helps making students become interested in the topic under discussion. (D.260-262)

- **New knowledge**

Correspondingly, teacher D acted like teacher A by sparing most of the lesson time at this stage. It is where the teacher facilitates the required knowledge or ideas. He used mainly chalk and talk lecture methods while students were listening and copying notes. The teacher acted as the main speaker who stood in front of the classroom and presented the content. In all the teaching sessions, teacher D was noticed to follow the same trend of practices. He presented the sub-topic by starting with descriptions of the subject matter appearing in each section of the sub-topic. This was followed by making some calculations linked to the topic and providing the answers. In the end, the teacher called a few students to solve the questions on the chalkboard while other students are looking and copying answers.

The unfortunate behavior observed in this class was that the teacher did not guide students to discuss the questions and exchange ideas in the groups as it was written in the lesson plan. Instead, he gave students individual exercises. Many students who failed to understand the subject matter were left behind and could not be adequately engaged in classroom practices. The teacher did not apply collaborative practices to ensure students work and assist each other. It is important to note that in some cases, students are free to discuss and learn successfully with their peers rather than by the teacher transmitting information to them. Teachers should enhance the preceding practice because students have a preference for exchanging and sharing knowledge themselves. The teacher should organize and manage discussion practice so that it helps students learn successfully in the classroom.

Teacher D asked several questions and wanted students to respond so as to assess their understanding of the subject matter. One example is as follows:

How many moles of nitrogen gas are there in 5.2 liters of the gas at STP? This question was solved by following some procedures as follows:

1mole of gas \longrightarrow 22.4 liters

? \longrightarrow 5.2 liters

$\frac{1 \text{ mole of gas} \times 5.2 \text{ liters}}{22.4 \text{ liters}} = 0.232 \text{ mole}$

22.4 liters

What is the volume of 8 moles of oxygen at STP?

Calculate the molarity of the solution from 4g of sodium hydroxide in 2dm³ of the solution.

Determine the molar mass of Mg(NO₃)₂

How many moles of nitrogen would react with excess hydrogen molecule at 2.2dm³ of ammonia gas at STP?

In terms of the questions constructed by teacher D, the analysis indicated that they are similar to some extent to those of teacher B. These questions represent higher-order thinking skills and motivate students to develop a deep understanding of the subject matter and enhance thinking skills. These questions need students to reason, apply several rules/procedures, and organize answers in the approved manner. They need students to think extensively about how to solve the questions and reach the correct solution. These types of questions are supported in the learner centred teaching environment.

Figure 15 shows that the student was attempting to perform the question on the chalkboard while others were passively listening and watching if it was done correctly. Teacher D did not use this time to motivate students to ask questions or challenge the students performing questions on the blackboard. Students depended to get new knowledge from the presenter without exchanging ideas. They receive new knowledge without gaining more clarifications. They learn without showing any interest. Listening and copying information written on the blackboard will not develop a good understanding of the students. The practice is contradicting the principles of the learner centred teaching. It should be more productive if students were encouraged to discuss questions in small groups where all students have an opportunity of contributing, discuss, and exchange ideas. Also in groups, students learn cooperatively by sharing and supporting each

other freely. Therefore, the teachers have been encouraged to facilitate and motivate all students to learn actively in the learner centred environment.



Figure 15: The student in school D is performing the question on the chalkboard

In general, teacher D was observed most of the time employing chalk and talk lecture methods to impart new knowledge to students. Students were learning mainly by receiving information from the teacher when he made presentations and wrote in front of the class (see Figure 16). He is conducting teaching similar to teacher A. This teacher did not use practices that allow opportunities for students to cooperate and exchange ideas. He was not motivating students to solve problems by themselves. Therefore, many students were looking more passive than active. This contradicts learner centred characteristics. The phenomenon was not supposed to be the way it was because the topics of the mole concept and related calculations have many calculations. Therefore, it needed to give students various questions to practice on how to calculate the answers or solve problems and gain a good understanding of the concepts.



Figure 16: The teacher is writing on the chalkboard

After describing the learner centred teaching practices on the new knowledge stage, the current study is presenting teachers perceptions. In the interview, teacher D reported that he applies various teaching and learning practices in the new knowledge. One of the practices is to facilitate students learning by employing the group discussion method. He preferred this method because it can easily make students learn more interactively as prescribed by the learner centred approach. Students can talk and exchange ideas effectively. Teacher D expressed his perceptions on the group discussion and described the series of practices in the classroom:

I start teaching by making a presentation of the portion of the subject matter. Afterward, I facilitate learning by arranging students into the groups and allow them to discuss questions. As they continue with discussion, I pass to the groups clearing misconceptions and assess students learning progress. (D.264-265)

Teacher D elaborated further regarding the number of students in the groups. For the group to have productive interactions it has to have a maximum number of five students. According to this teacher, “a group of five students helps them learn successfully”. (D.266) A group of this kind makes students learn cooperatively compared to when they are taught as a whole class. He was of the view that “a group of more than seven students is not good”. (D.267) In such a group,

it could be difficult for students to have access to full participation and exchange of ideas and this is against learner centred teaching practices.

In the dialogue, teacher D indicated to prefer the use of chalk talk lecture when he begins to introduce the lesson. He maintained that a teacher must start the lesson by presenting a bit to give understanding to students concerning the subject matter. If the lecture is used well, then students can be actively engaged in the lesson. What is important is for the teacher to make sure he prepares the lesson entirely and incorporates various active practices. However, on the other standpoint, teacher D cautioned other teachers about the chalk talk lecture. It is because the method forces students to sit down and use much time to prepare thoroughly the subject matter expected to be present in the classroom. These activities make teachers become tired, tortured and sometimes due to these duties they prepare materials that are very shallow something which should not benefit students. In addition to the chalk talk lecture, teacher D provided an option when students fail to understand the subject matter. He agreed to opt for the method explained by teachers A and B (see page13, 28).

- **Assessment**

Teacher D was observed to assess students by asking questions and providing quizzes. He differentiated himself from the other participants by conducting an individual assessment during the period. He wrote a quiz and asked students to find answers, then, he passed to every student and marked the answers (Figure 17). This activity helped the teacher to know the performance of students and thus be in a correct position to provide his remarks that improve students' understanding. In terms of the continuous assessment process, it was observed that the assessment questions written by teacher D were confusing. This view is because instead of writing the assessment questions as suggested in the curriculum, the teacher wrote normal learning activities. It showed that teacher D did not have a clear understanding of how to write and even to conduct assessments continuously in the classroom. Without a doubt, teacher D needs to revise the procedures for writing the teacher activities successfully. He is required to share with colleagues the proper assessment practices in the learner centred environment.



Figure 17: The teacher is marking students quiz, and show the correct answer

After describing the learner centred teaching practices on the assessment stage, the current study is presenting teachers perceptions. Teacher D concurred with teacher B regarding the assessment. He was perceived to conduct assessments continuously in the period to assess students learning progress. It helps to know the level of students understanding as the lesson continues. In terms of assessing large classes, the teacher explained another strategy that might be helpful to teachers. “I arrange students into groups and provide questions to those groups. Afterward, I guide students to discuss and come up with answers that would be submitted to the teacher for marking”. (D.271-272) Therefore, instead of marking for the whole class, he marked a few papers representing each group of students. This technique helps to reduce the load of marking for all students.

Regarding questioning, teacher D supported the technique reported by teacher B. He emphasized the use of extra open questions requesting longer answers. These questions show clearly the level of understanding of the students. Therefore, teacher D has been advising fellow teachers to be more careful and make sure all the time asking open-ended questions that compel students to think more deeply. In another perspective, teacher D perceived similarly to teacher A concerning homework. He considered this practice as more useful for extending student learning beyond the regular school hours. To accomplish properly the homework, he wanted parents to be instructed and encouraged to provide students with supported learning in the home environment. Parents need to make sure students are always serious, working and completing their homework. They should ensure students perform homework successfully.

- **Classroom management**

Teacher D is observed to manage teaching materials in a poor way compared to the other teachers. He did not use textbooks, as other teachers participated in this research. The textbook is considered as the basic teaching and learning aid for many schools. Even the materials he wrote in the lesson plan (e.g., a pair of shoes and a dozen of scones) were not applied in the classroom. This situation confirmed the shortage of materials in this class. Likewise, in organizing students, teacher D used different practices compared to teachers A, B, C. He organized students for individual assignments. Also, the teacher guided a few students to do calculations on the chalkboard while others are listening and watching silently. The seating arrangement was not formulated successfully like the other visited schools (see Figure 18). The teachers seem to lack principles applied for developing an interactive classroom environment. They allow students to sit passively in the classrooms without involving active learning as it is instructed in the learner centred teaching approach. The researcher asked teacher D why schools fail to adopt an interactive seating arrangement, he responded that teachers are free to choose any arrangement they want to use. However, due to overcrowding, it is impossible to arrange students in interactive styles. Such a structure sometimes depends on the existing school situation. This is to perceive that the learning environment might predict what teachers and schools should apply or adopt regarding a specific type of student seating arrangement.

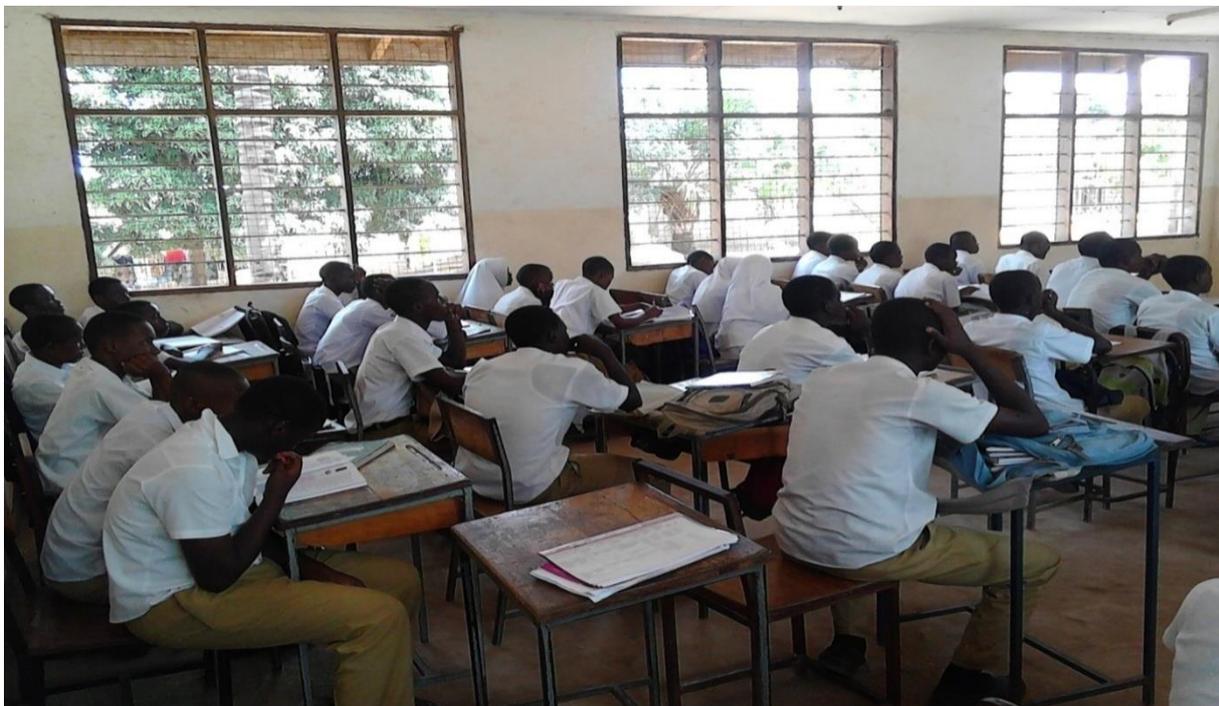


Figure 18: The seating arrangement in school D

After describing the learner centred teaching practices on the aspect of classroom management, this study is presenting teachers perceptions. In this case, teacher D aimed to create a classroom environment that helps students learn successfully. To facilitate that, the teacher agreed in the interview to employ various practices to manage and control students. “I generate methods to control students of bad behavior in the classroom. In this case, I guide students and make them busy throughout the lesson”. (D.274-275) The teacher tries to make sure misbehaving students are not idle, but always have practices to do in the classroom. Pertaining to the use of teaching and learning materials, teacher D was of the view to support this practice. The materials help students to learn by using various ways and thus understand the lesson better. He reported, “I use teaching materials, aids, and textbooks so as to assist students learning”. (D.276) However, teacher D indicated the challenge he encountered in using the materials. He pointed out the main problems encountering teachers and elucidated that, “I come across the challenge of the lack of materials and sometimes the lack of time to prepare or improvise teaching and learning materials”. (D.277) The experience showed a deficiency of studies that provide information/knowledge related to improvising in the science classrooms. Concerning the seating arrangement, teacher D agreed with the instructions of organizing students in an interactive manner. He showed his interest in the learner centred environment. To confirm this, he asserted, “If I would be given a chance to choose between traditional and interactive seating arrangement. I would choose the arrangement that makes students become interactive”. (D.279-280) Together with the positive desire, teacher D joined with other teachers A and B to complain about the challenge all participants encounter. The learning environment in schools does not favor appropriate and effective modes of seating arrangement.

5.4 The learner centred teaching practices on the reflection stage

The reflection stage gives a chance for students to explain the knowledge taught and how the lesson has been carried out. In this case, the learner centered teaching practices indicated that teachers A, B, D emphasize asking questions to assess the students' understanding of the subject matter. Teacher A attempted to search whether there is any problem, confusion, contribution, or anything from the students. The observation in classroom A showed that few students tried to respond to the questions while others remained silent. This behavior is not encouraged under the learner centered environment so the teacher has to find other ways of awakening and making students contribute ideas. Teacher B conducted reflection by asking students general questions such as: *Is it clear? Do you get me class? Do you get an idea? Any question so far? Do you have any questions? Do you still confuse about how to write a chemical formula?* These questions are

not suitable for real reflection practices because they were asked and give room for students to respond in a simple way. Students can just provide one word/answer mainly Yes or No. These questions were not suitable for soliciting students' real understanding of the subject matter. They limit students' learning and entertained chorus answers that are not recommended for reflection in the learner centered classrooms.

Furthermore, teacher C showed to differ from the other participants. In this case, he was observed that he did not perform any practice representing reflection. The teacher did not ask questions, he just conducted teaching and learning practices by following stages without examining students' understanding of the subject matter or their opinions about how the lesson was carried out. The teacher did not bother regarding reflection practices in the classroom. This phenomenon was contrary to the learner centered teaching because failing to perform reflection limits the teacher to be familiar with the students learning progress and how the practices in the classroom are facilitated. This observable fact indicates that the teaching and learning process is affected so there should be an effort to improve the reflection stage.

On the other side of reflection practice, it was discovered that teachers A, B, D performed in the same way according to their perceptions. They did not ask students for their opinions regarding how the lesson was carried out. This action was caused by the behavior built by many teachers to neglect reflection. They believe students cannot contribute anything to classroom practices. In reality, the behavior looks normal to teachers. It deprives teachers with sound views from students regarding how to improve classroom practices that benefit both teachers and students. It does not profit students because the teacher has not been updating the teaching method. When teacher A was asked after the lesson, as to why he did not ask for students' opinions, the teacher responded that he developed this behavior for a long time. It is common for him to teach without getting any feedback from students.

In general, educators expect teachers during the reflection stage to gain information related to how the lesson was organized and carried out. Teachers should allow students to examine themselves regarding the lesson. Sample questions are like: *Was the lesson implemented successfully? Did the students learn the lesson taught?* The teacher can get the feelings of students on the knowledge presented, the strategies used to present the knowledge, and even the teaching aids used. In fact, the teacher should use the reflection stage to acquire information that should help to review and as a result improve the facilitation of the teaching and learning process.

After describing the learner centred teaching practices on the reflection stage, this study is presenting teachers perceptions. Therefore, teachers A, B, C, D were required to provide their perceptions regarding the reflection practices in the classrooms. Teacher A explained reflection in the dialogue to mean the “process of asking questions to students to acquire information that helps to assess their understanding of the subject matter”. (A.54) Teacher B is using this stage to identify students who have gained the wrong understanding regarding concepts of the subject matter. She elucidated, “I employ reflection practice to test out if the student’s concepts are clear or not”. (B.135) If the lesson is not well understood the teacher tried to employ strategies to help students to clear their misconceptions. One of the techniques was to give more exercises and practices for students to perform until they gain a proper understanding of the concepts. Teacher D assesses knowledge gained by students from the teaching encounter and identifies the weaknesses affecting the teaching practices.

Teacher C perception towards reflection was found to be different compared to the other participants' A, B, D. He linked the reflection practices with how the mirror works. He considered reflection as a strategy for the teacher to see how teaching and learning are executed in the classroom. This teacher viewed reflection as an indicator for assessing students learning. It is where the teacher assesses students and collects the evidence as to what extent students have acquired the understanding of the concept under discussion. Teacher C had this to comment concerning reflection:

Reflection is like a mirror to the teacher because it gives an accurate picture of how the teacher facilitates the teaching and learning practices in the classroom. I usually use quiz or oral questions to examine students learning and understanding. (C.199-201)

In clarifying the reflection stage, teacher A had the following to articulate:

During reflection, I ask students questions to examine their understanding. To make reflection effective, I focus on answers from individual students and not the whole group. Normally I do not entertain chorus answers because they do not give a true picture of the students learning. (A.56-58)

Another part of the reflection practice is for the teacher to collect students' views regarding the teaching and learning process. Teachers A and B reported concerning the behavior that developed among teachers of not allowing students to provide views related to how teaching is carried out. They do not allow students to be free in providing suggestions concerning teaching and learning in the classroom. Teachers consider themselves as more educated, authoritative,

and experts in teaching and classroom practices. Therefore, they are not ready to receive, to work on, and deal with students' opinions. This tendency makes teachers neglect students' views and think students have nothing to contribute regarding the teaching and learning process. It is against the learner centred teaching practices that emphasize respecting ideas brought by students in the classrooms. In responding to these circumstances, teacher A provided the following statement:

All students are free to provide their views regarding how teaching is conducted in the classrooms. You know this is a private school, so students are allowed to exercise some power and the school is open and ready to receive students' views. Nevertheless, the major problem of this stage is that many teachers are not cooperative on matters related to reflection. *(A.59-61)*

When teacher B was asked further to clarify about reflection, she came to realize the importance of reflection and supported by emphasizing that:

Students' views and criticisms are important because they can be used to improve teaching practices. You know, based on the students' views, I can easily discover inappropriate teaching practices. In this situation, I am always ready to change and adopt appropriate practices. *(B.136-138)*

Teacher D provided perceptions that support students' opinions and asserted that:

I accept students' views and criticisms and take them as part of learning that could improve my practices in teaching. If students proved that the teaching practices are inappropriate, I am always ready to change and apply suitable practices. *(D.268-270)*

Teacher C responded professionally compared to other participating teachers A, B, D. He reported reflection practice as essential for disclosing how practices are conducted in the classrooms. Students are considered as essential for describing a real picture of the teaching practices. Based on the previous information, one should affirm that disregarding students' reflection hinders the chances for teachers to learn/know something important from students. It hinders teachers' information on how to conduct teaching effectively. This is to say that, the ideas on reflection practices if used well help teachers to examine and thus improve classroom practices.

In addition to the same perspective, teachers should be conscious of what classroom practices work best for their students. Students are the main stakeholders of teaching and learning practices

in the classrooms and are expected to achieve the stated objectives. They are required to gain knowledge, skills, behaviors, and competences. In the process of teaching, students should be given a chance to provide reflection regarding teaching and learning. They need to comment on how the teacher is facilitating classroom practices. They should say if teaching is effective or there are challenges that need improvement. We should understand that, teaching is complex; therefore, ongoing reflection helps to improve the teaching and learning process.

5.5 How students are involved in the learner centred teaching practices

Teachers A, B, C, D were observed to focus more on involving a few students who are showing to be more active and cooperative. They mainly asked questions, brainstormed, discussed, and facilitated the learning practices with the active/bright students and forgot silent and passive students. In several sessions, teachers called the same students to solve questions on the chalkboard and perform practices in the classrooms. Teachers developed this trait and the analysis indicated that it was common to almost all the visited teachers. They preferred to work with the so-called bright students because these students respond appropriately to questions. They respond in a meaningful manner. They are sharp and ready to carry out and perform whatever they were instructed by the teachers in the classrooms.

When teacher D was asked about students' involvement he responded that "I involve few bright students during the teaching and learning process. I called a student to come in front of the class and perform calculations on the chalkboard". (D.282) Teacher A provided the following statement to explicate why many students are not ready to respond to the questions in classrooms and why teachers are frequently deciding to work with few students who respond in the correct manner. The teacher wanted to get responses that are as accurate as possible. He provided the following clarification:

You have to know that in the classroom, we teach students possessing different behaviors and experiences. Some students always respond to questions, some do not like to respond, some do not know the answer, some are discouraged, and some are not ready to be discouraged. Therefore, teachers are always looking for a student who is ready to respond to the questions. As teachers, we have no option rather than accepting and supporting the student who is sharp and active. (A.79-82)

Correct responses provided by a few bright students made teacher C build confidence and thus consider these students as indicators of good student learning. When the teacher was asked concerning the foregoing trend, he explained to prefer to work with students who participate and

contribute ideas in the classroom. He disliked students who are not active, those who do not contribute ideas. Teacher C had the following remarks:

Students who are participating actively in the classroom motivate teachers to continue working closely with them. However, if students are passive and silent, they discourage teachers. These students build a bad picture that the lesson is likely not successfully conducted, and this is not good for teachers. (C.218-220)

According to teacher D, educators do not support involving a few students because it holds back the rights of the other students to receive attention from the teacher. Usually, teachers are obliged to work positively with all students. They should assist all students to learn as successfully as possible. Teachers are supposed to try as far as possible to avoid treating a few students unfairly because this hinders their learning. When the researcher asked opinions from teacher B regarding students' involvement, she supported involving many students as possible and clarified that:

I think it is a good thought to involve all students; this is because students differ in the way they think and understand. Therefore, it is the teachers' obligation to motivate and awake silent students to participate frequently in classroom practices until these students change their behavior and become active. Leaving such students in the way they behave (passive) is not good. (B.159-162)

The traits of visited teachers have been observed to go against the principle of involving all students during the teaching and learning process. This is to say that the students' involvement has not been practiced successfully. It affects the actual execution of the learner centred teaching. Therefore, teachers need to formulate some strategies of motivating students who are not active to change and become active in the classroom. They needed to orient all students more on talking, performing, questioning and implementing learning practices. Teacher C provided the technique to motivate slow/silent students. He wanted teachers to create what is called peer teaching. The teacher guides the students to form groups of mixed ability students. They should be motivated to teach one another. The bright and fast students sit together with slow students and help them in learning. This strategy is effective because students normally prefer to learn from their peers. They understand well the subject matter when taught by their fellow students than the teacher. Students do not afraid of other students, so can exchange information successfully. In actual fact, they will be free learning in the midst of themselves.

5.6 Support to improve the learner centred teaching practices

In order to improve the teaching, learning, and student performance in the classrooms Tanzania introduced learner centered teaching practices. To accomplish this initiative, the implementation of a secondary school curriculum instructed teachers to employ these practices. There variety of different types of learner centered teaching practices that have been stated such as Group discussion, Jigsaw, Debate, Role play, Games, Project, Laboratory work, Case study, Think Ink Pair and Share method, Field trips, etc. These practices encourage students to become actively involved and take responsibility for learning. Teachers should act as facilitators of the lesson and assist students to acquire the appropriate knowledge, skills, behaviors, and competences relevant for real-life experiences.

The present study found that the perception of teachers and their classroom practices demonstrated a mixture of learner centered, teacher centered, and other practices. In fact, teachers applied the group discussion, demonstration, question and answer, students' presentation, and chalk talk lecture. Teachers were observed to employ these practices in the classrooms. They did not use various learner centered teaching practices stated in the above paragraph according to the curriculum. The active practices have not been applied effectively to improve teaching, learning as well as students' performance. This is to say that, the implementation of the curriculum in the classrooms has not been accomplished as it was proposed.

Based on the observation made by this study, it is evident that teachers need support in various ways to encourage them to employ learner centered teaching practices as prescribed in the operating curriculum. In this case, teacher D recommended organizing in-service or school based training which focuses on learner centered teaching practices. The training is essential for imparting knowledge and skills to teachers that will improve their practices. According to teacher B, the training must be conducted as often as possible and make sure many teachers attend. In connection to that, teacher B wanted the ministry of education to prepare special courses that focus on upgrading, updating, and developing teachers' knowledge and skills. Teacher C added by saying that "teachers need more seminars so as to update knowledge and skills in teaching". (C.223)

In addition to that, teacher D suggested the funds provided for free education programs should be sent to improve the learning environment. He wanted teachers to be motivated by giving incentives, chances of attending seminars, respecting them, reducing teaching load especially for

science teachers and other welfares. Teacher D gave an example of how teachers can be supported to improve the learner centered teaching practices, that there are offers provided by the school and wanted other schools to imitate such initiative. The offers motivated him to do more to assist students in learning the subject matter. In our conversation, teacher D exemplified by providing the following statement:

A good example is a school and municipal provided me a certain amount of money as a motivation for the good performance of students in my subject. In addition to that, I was given a chance to attend a seminar coordinated by the British Council. These offers are good for the teachers' welfare. (D.285-287)

Teachers A and C recommended the relevant authority to improve teachers' conditions. In this case, teachers' welfare, salaries, houses, training, and transport need to be considered. To accomplish this, more funds need to be injected into the education sector and specifically into the teaching methods. According to teacher A, good, well-trained, and committed teachers prepare good students. They prepare, shape, and mold students the way they want students to be. In this respect, teacher A had this to elucidate:

I believe if teachers are committed to preparing good students they can. If we inspire students to be the best, they will become, but if we do not they will not. In our school teachers are motivated to the extent that they make frequent follow-ups and offer special programs to slow students so as to help them pass the examinations. (A.85-87)

One of the teachers from a remote community school directed the support to go to the schools located in unreachable areas. Teacher C recommended more efforts to put in solving the problem of poor transport affecting teachers and students in remote schools. Students used much of their time to go to and from school. Bus attendants every day disturb these students, and this affects their learning progress as well as performance in the examinations. In addition to the same perspective, teacher A suggested improving infrastructure supporting the implementation of learner centered teaching practices. He remarked "infrastructures like a laboratory, classrooms, hostels (for remote schools), transport means and the like need to be developed". (A.88) Furthermore, teachers C and D suggest the availability of teaching materials in secondary schools. In this case, the ministry of education should provide funds to support the supply of these materials. Likewise, teachers are encouraged to use the skills of improvising the local materials to address this problem.

Teacher C wanted improvement in the language of instruction. Students and teachers need to improve their English language skills to comprehend the subject matter. Deliberate efforts must be made by educational stakeholders to ensure that programs to assist students and teachers are introduced. In the same vein, students requested their teachers to try as much as possible to use the Swahili language when they are clarifying some of the difficult concepts. They also demanded a mix of Swahili and English for them to understand the subject matter clearly. On the issue related to students' attitudes, teacher B suggested educators inform all students on the importance of learner centered teaching so that they accept and easily become oriented during the teaching and learning process. The teacher suggested a good method for conducting seminars that describe the significance of this teaching model. Students need to know to what extent they ought to cooperate with teachers. They need to receive and work on the teachers' directives. Teacher B emphasized on this matter and had this to enunciate:

The Ministry of education needs to sensitize students to make them aware and accept the learner centered teaching. In fact, it needs to do something to change students' negative attitudes towards this teaching model. *(B.165-166)*

In connection with the preceding observation, the experience shows that students in this generation do not put the effort into their studies. Students do not like to work, study hard, and perform learning activities effectively. They do not follow instructions provided by educators regarding how students should carry out their everyday educational practices. Educators have been meeting and interacting with the students who are unwilling and not diligent in their studies. By referring to the foregoing behaviors, educators need to organize the methods or strategies that should assist students to change their minds, attitudes, and behaviors. This is to say that, there should be special programs or ways to ensure students put effort into their studies. Students should be diligent in their education programs.

CHAPTER SIX: DISCUSSION OF THE FINDINGS

6.1 Introduction

This chapter presents a discussion of the findings of the current study. It explains the themes that have constructed from the research results and responds to the research questions. The discussion presents findings and compares to educational researches reported by scholars from various national and cultural contexts. The chapter shows the contribution of findings to the constructivist theory, the learner centred teaching practices and the other educational practices taking place in the classrooms. It starts by presenting an overview of the discussion of findings. The main themes discussed in this chapter include perceptions reported by teachers regarding the learner centred teaching and the learner centred teaching practices employed by teachers in different stages of the lesson development. The preceding practices have accompanied with the perceptions of teachers in different stages of the lesson development. In addition, other themes have been discussing the learner centred teaching practices and perceptions of teachers focusing on the reflection stage and how students are involved in the visited classrooms. Finally, the support needed by teachers to improve the learner centred teaching practices has described.

6.2 Overview of the discussion of findings

Learner centred teaching practices have been implemented to improve teaching, learning, and student performance. These practices were adopted from foreign countries in the efforts of improving educational provision. The aim was to make the education system deliver quality education. The incorporation of preceding practices is in line with the characteristic of comparative education that focuses on providing information from various countries and the worldwide transfer of policies, practices, and other educational aspects. In this situation, educational programs have been moving from one country to another. It is confirmed by Schweisfurth (2015) when stated that the world is experiencing an increase of attention to the global transfer of educational policies and practices. Predominantly this study emphasized the transfer as well as the implementation of the learner centred teaching practices.

The discussion gives a comprehensive picture of the study findings and contributes to the development of constructivist theory. This theory has been guiding educational practices that are effective in the classrooms. The knowledge and ideas of the preceding teaching practices are beneficial because they act as a means of improving the provision of education. It helps to extend educators' understanding as well as improve their educational experiences and perspectives. Various educators and education systems support the descriptions because they are imperative

for improving education provision. The discussion presents the similarities and differences of practices in various educational and cultural contexts. The process stimulates educators in one country to scrutinize their practices as compared to how others carry out similar practices. It helps to modify, develop and improve classroom practices and students' performance. In this regard, the educators from one country get a chance to choose and judge their practices in relation to other nations (Alexander et al., 1999; Alexander, 2000; Stigler et al., 1999). This situation gives a chance for scholars to examine their own practices from a new outlook (Hiebert et al., 2005).

Likewise, the discussion facilitates the foregoing processes by presenting, analyzing, and reporting the findings of the execution of learner centred teaching practices in selected secondary schools in Tanzania. It opens the boundary of the country's educational system and reveals ongoing progress related to the implementation of the foregoing practices. It also boosts the insights of educators on the development of the global transfer of educational policies and practices. The understanding is expected to alert educators in various nations and societies scrutinizing more on the learner centred teaching practices. The researches have been encouraging because the implementation of these practices discovered to cause several challenges in the developing countries. They might be caused by cultural differences and other factors. Tanzania is among the nations that come across the challenges as confirmed by several studies.

6.3 Perceptions regarding the learner centred teaching

The purpose of this theme is to explore the general knowledge and understanding of the teachers towards learner centred teaching. Teachers A, B, C, D reported various characteristics related to this paradigm. The analysis of this matter indicated that the perceptions of teachers concurred with some of the features of the learner centred teaching, but others do not directly agree. Furthermore, there were few practices, which were reported by teachers who participated in this study as good for supporting the teaching and learning process but are not in line with the foregoing approach of teaching practices.

For those characteristics reported to be in line with the learner centred teaching, teachers A, B, C, D in the visited schools reported that these practices are effective in facilitating teaching and learning in the classrooms. They make students active during the teaching and learning processes. Students are motivated to participate and at the same time think about the subject matter they are learning. They are engaged and learn cooperatively. The teachers in the schools

confirmed to concur with the characteristics of the learner centred teaching as to how they motivate students. The report from the visited teachers relates to what was reported by educators. In this case, Harris et al. (2013) show to agree with the primary purpose of the learner centred teaching of encouraging students to become active participants. Sunzuma et al. (2012) made a similar observation when they associate the preceding teaching approach with some constructivist ideas which emphasize students' activeness in constructing meaning and understanding of the subject matter.

Teachers B, C, D reported supporting learner centred teaching as it makes students become active in the classrooms. It helps to guide students learning by doing various practices in the classrooms. In general, the active engagement, problem solving, inquiry, and collaboration among learners characterize it. In accordance with this view, Murphy (1997) wanted teachers to ensure that they provide students with various learning activities throughout the period. In addition, Doyle (2008) reported how students in learner centred teaching are motivated to do more work and apply the correct practices as possible. It includes practices such as solving problems, asking and answering questions, debating, discussing, and brainstorming. This study confirms the literature because when students learn using the preceding methods, they should build understanding and experiences of what they perform. This fact concurs with the common assertion stating "practice makes perfect". So performing practices help students become perfect in operating the learner centred practices. It enhances students' understanding of the subject matter. It expects to improve the problem of poor performance that has been facing students.

Teachers in the visited schools continued to report that under learner centred teaching students are facilitated to gain knowledge and skill independently. In this respect, students are always encouraged to learn without depending much on receiving information and instructions from the teacher. The teacher focuses more on providing strategies and guidelines that help students carry out learning practices successfully. This view is compared to what was reported by Jones (2007) when he revealed the presence of students who did not depend much on receiving instructions, corrections, praises, and advice from teachers. Furthermore, Namangolwa (2013) showed interest in learner centred teaching because it gives students the opportunity to become real drivers of learning. They learn and receive guidance or assistance from the teacher and later continue organizing and completing the learning individually.

The present study supports students learning independently in the classroom as it was advocated by the theory of constructivist and learner centred practices. It agrees teachers allow students to become organizers and performers of their learning. It helps students to build a habit of managing

and learning independently. Nevertheless, the present study reminds educational stakeholders and practitioners that teachers are still having the responsibility of acting as guides for students and all they are doing. It requires teachers to organize an environment motivating students to accept and to take full responsibility for their learning. In short, this study specifies the fact that teachers' roles in the classrooms should remain fundamental for students becoming independent.

Furthermore, the teachers who are guiding students are considered in the learner centred teaching as facilitators. They typically plan and execute classroom practices by guiding students to perform appropriate learner centred practices. The present study prefers teachers who are facilitators and who make students learn successfully. It clarifies that, together with the poor learner centred environment, teachers should continue to perform their facilitation roles efficiently. They should become creative and committed to working in such a situation without being discouraged. It is through this process that the purpose of the education system to implement learner centred teaching might be accomplished. This study compares the argument of Silverthorn (1999) who suggested teachers be good facilitators and to have success in constructivist classroom practices. Also, scholars explained the teachers' main role in this approach of teaching to be that of guides and monitors of the learning process (Chaka, 1997; Murphy, 1997).

In another perspective, teachers B and D commented on the strategy of teaching a small portion of the subject matter as good because it makes students build a clear understanding of the subject matter. This idea is good as it can work in the classroom environment to help students learn effectively the content stipulated in the syllabus. It makes students retain and apply what they have learned. This fact is similar to the principle reported by Blumberg (2004) who encouraged teachers to cover a small portion of the topic to make students understand clearly. On the same token, Ang et al. (2001) and Blumberg (2008) emphasized the same point of teaching the small content that builds a strong knowledge foundation and develops good learning skills.

This study challenges the constructivist theory, learner centred, and scholars on the ground that learning is a complicated process. Therefore, there are no guarantees students will learn well if teachers teach a small or big portion of the subject matter. A teacher can present a small part, and still, the students misunderstand the lesson. This study distinguishes the fact that teaching a small portion is a good strategy. However, it should not be considered as the only solution for effective teaching and learning. Students could learn successfully even when the teacher presents a large portion. What matters here is how the teacher applies successfully the learner centred practices. In addition to the same perspective, teaching a small portion contradict the learning

environment in Tanzania as well as other developing countries. It is because most of the time teachers have been allocating a huge amount of topics to cover in a stipulated period. Teachers are compelled in such a situation to teach a large portion to cover the content according to the syllabus. This view confirms a contradiction between constructivist and learner centred characteristics and the real learning environment. The adopted educational practices from overseas do not come across a supportive or favorable learning environment.

In another finding, teachers A, B, C, D reported that students are not tabula rasa. Students are not empty in their heads but have something related to the topic under discussion. So they should regard as individuals who possess knowledge, skills, and ideas that are utilized for their learning. All teachers need to respect, support, and allow students to bring into the classroom background experiences. This finding is similar to Pepin (1998) who asserted all students come to school with existing knowledge and experience. This study continues to confirm the use of students' ideas in the classrooms. Therefore, teachers have to motivate students to speak what they know and think. It helps to enhance students' understanding and retain several science concepts. This view confirms the acceptance and application of learner centred teaching practices.

Moreover, it is important to note that some of the perceptions reported by teachers A, B, C, D in the visited schools were found to lack a direct connection to the learner centred teaching. One of them is the perception that this paradigm is a simple method to use in teaching. This study challenges teachers at this point. According to these teachers, learner centred is about questioning and discussion methods. This view indicates a limitation of teachers' knowledge and that is why they perceived learner centred is simple. But this is not true, because various studies have been conducted and reporting that many teachers opt to continue with the traditional approach since they found learner centred teaching is hard to execute. Teachers A, B, C, D proved to lack the correct knowledge, skills, and understanding of employing learner centred teaching practices. This study wants teachers to learn more, gain proper knowledge, improve understanding, and become committed to applying learner centred practices.

In addition, teachers B and C perception that the learner centred teaching favors active or fast students rather than slow ones who agree on one side but challenge on the other side. This view is because students' learning in the classrooms depends on how the teacher is facilitating learning. Active students indeed participate and learn successfully in the classrooms. Being active puts students in a better position to become motivated in the learning practices. However, it is important to perceive that skilled teachers can make all students (fast and slow) become

active and learn healthily. The issue here is the effective facilitation performed by the teacher during the teaching and learning process.

Generally, the guiding theme of the abovementioned practices indicates that the perceptions of teachers in the visited schools supported several characteristics of learner centred teaching. Few perceptions opposed this learning paradigm and supported practices that are against principles of the learner centred teaching. The findings showed that, although the curriculum has been emphasizing teachers to employ learner centred teaching their perceptions reported to focus and support a mixture or a combination of teaching and learning practices.

6.4 Learner centred teaching practices employed in different stages of the lesson development

- **Introduction**

The practices during the introduction stage were observed to be similar to what was reported by teachers during the interview. Teachers A, B, C, D were observed regularly asking questions to assess students' previous knowledge and understanding. This study confirms similar findings regarding the introduction of the lesson. In this case, Walters et al. (2014) found that teachers introduced the lesson by asking questions and inviting students to communicate their previous understanding that contributes to their learning. Similarly, Quist (2000) required teachers to adapt to the proper practices necessary for introducing the lesson. It was by assessing students' previous knowledge. Widodo (2004) wanted the previous knowledge to be given close attention because they play an essential role in helping the students learn. In addition to the same perspective, the scholar confirmed the value of existing knowledge. The educator quoted Ausubel to show that the most important single factor influencing learning is what the learner already knows (Thorpe, 2010). It is good for the teacher to discover what is missing to students and give a chance of focusing more on new knowledge.

This study found that the practices in the introduction stage are similar to the participating teachers. These teachers follow instructions from the curriculum, culture, teacher training. In spite of focusing on previous experiences and interests, it was observed that teachers in the visited secondary schools applied mostly questioning in introducing the lesson. Teachers understand this method as the only one for investigating the students' previous knowledge. This situation shows that teachers A, B, C, D are limited in terms of the strategies for introducing the lesson. They did not apply a variety of educational practices that are suitable in this stage. The limitation is likely to be caused by several factors, the main one is the fact that the learner centred

teaching practices do not apply absolutely in the learning environment of the participating secondary schools.

After describing the learner centered teaching practices, the current study is presenting the perceptions of teachers on the introduction stage. In this case, the study found that teachers A, B, C, D reported similar information. This characteristic might be influenced by the culture and environment around the learner centred teaching practices. It is also likely to be caused by the teacher training they have attended. In this regard, the participating teachers reported reminding students about their previous knowledge and experiences. Mainly, they try to assess what knowledge and skills students possess regarding the subject matter. In doing this, teachers attempted to make a connection between the previous and the new knowledge to help students understand the subject matter. According to Murphy (1997), students' previous knowledge is considered as a crucial aspect of the construction of new knowledge and for the proper understanding of the subject matter (Brooks & Brooks, 1999). Also, Booyse (2010) and Ormrod (2008) opined that it influences what students know and what students expected to learn, store, and retrieve during the teaching and learning process.

In connection with the foregoing arguments, it is important to note teachers' perceptions when introducing a lesson for the new topic. In this regard, teachers reported introducing the lesson by facilitating some practices that activate the students about the new topic. It is argued that learning a new topic depends much on what students have already accumulated. So existing knowledge and experience determine what students can construct from the new content. This perspective made Kapanadze and Eilks (2012) remind teachers to activate students learning a new topic by considering previous knowledge and interest. Baker and Westrup (2000) and Matsau (2007) added that teachers should start with what is familiar or experienced of students and slowly continue to introduce new knowledge. Also, Pepin (1998) described teachers introducing the lesson by explaining the concept and providing examples based on students' experiences. On the same token, Walters et al. (2014) demonstrated the connection between real-life experiences and the subject matter.

This study reveals the presence of the relationship between new knowledge and various students' characteristics. These attributes include the current experiences, interests, environment, society, surroundings, and students' real life. Teachers should try to establish a link to the new topic by referring to the preceding attributes. It simplifies the introduction of the lesson. Based on this reality, this study confirms that teachers before continuing with imparting new knowledge; need

to assure what students already know or are familiar with regarding the topic under discussion. This argument conforms to the characteristics of learner centred teaching practices.

- **New knowledge**

The observation from the actual practices during the new knowledge stage showed in some instances that the visited teachers managed to apply the active practices to facilitate learning, but in other cases, these teachers used traditional practices. The observation showed teachers A, B, C, D used a few creative practices to facilitate the teaching and learning process. They employed group discussion, questioning, chalk, and talk lectures, and teacher C used also demonstration practices to engage students. It is important to comprehend that there is no perfect way for student learning, so the teachers' role in this perspective is to try as much as possible to guide properly the students learning. Scholars supported this point that the teaching and learning environment for every student is unique, so teachers need to consider all students and employ various learning practices as possible (Prosser & Trigwell, 1999).

Furthermore, the evidence from the findings of this study and literature revealed teachers A, B, C, D used practices that fit in many ways. Sometimes in the same method, they start with active practices but end up with traditional practices and vice versa. What observed in this study, agrees with some scholars who conducted a study about the implementation of student centred learning. Walters et al. (2014) offered real evidence when found teachers implementing a blend of student and teacher centred practices. In some cases, (Zohrabi et al., 2012) found teacher centred practices were used more frequently than student centred practices. The experiences have been indicating that a teacher centred approach is easier to put into practice than student centred practices.

Preceding findings confirm the trend of different practices reported in the classrooms as observed by the researchers. Good examples are the studies conducted in five cultures (England, USA, India, Russia, and France) (Alexander, 2000) and four cultures (Gambia, China, Russia, and South Africa) (Schweisfurth, 2013) which reported similar trends about various practices occurring when teachers impart new knowledge. Classroom interactions found to involve different practices such as group discussion, active practices, and whole-class methods. Also, Ahmed (2013) called the trend that was also observed in the current study as a power balance between the teaching practices. It was a result of teachers guiding students in constructing new knowledge but at the same time maintaining teacher authority.

As it cites above the findings indicated the presence of contradictions as teachers in the visited secondary schools persist to opt for both teacher and student centred practices in engaging students with new knowledge. It could be interpreted that although the competence based curriculum emphasizes the application of learner centred practices, teachers continued with facilitating learning using a combination of practices. This study specifies that students have diverse learning needs and abilities. So teachers should employ various practices to meet students' learning needs. They have to encourage students' participation and varying learning activities frequently. Thus, mixed and flexible practices have to be promoted according to learner centred teaching practices.

In addition to group discussion, teachers A and B were observed to put students into groups and provide questions to discuss, exchange, and share their understanding. In this case, student-student interactions tend to enable students to share information and reasoning together in the group. The students in this environment were exposed to the practices that associate with what was observed in the literature. For example, Nagaraju et al. (2013) and Walters et al. (2014) found students working together in small groups, discussing, comparing and sharing their answers. Schweisfurth (2013) found students engaged and allowed to speak out what they have learned. Educational researchers have aligned student centred with good educational practices and teacher centred with bad educational practices. Student centred practices have been associated with reducing lectures and increasing group discussion (Thorpe, 2010). In this case, Jabbour (2013) required the classroom context which supports and promotes students to engage in small group discussion. One thing noted in the visited secondary schools was that the teachers did not facilitate well the students' engagement in exchanging ideas during the discussion. Out of the four visited classrooms, teacher A from the good performing school managed to motivate students' to exchange ideas in an active way. Teachers B, C, D did not stimulate properly the active discussion and therefore there was no evidence or demonstration of the active learning.

Furthermore, the findings of this study showed questioning as the practice used to engage students in new knowledge. The teachers were observed facilitating learning practices by asking questions and required students to respond to demonstrate the level of learning. Questioning practices were observed in this study to be applied very frequently by teachers A, B, C, D. The practice seemed to be more popular and used at any stage during the teaching and learning processes. What has happened in the visited schools was similar to the literature. In this case, Temu (1995) suggested teachers ask questions and give opportunities for students to respond as an important part of learning. Quist (2000) and Walters et al. (2014) reported the use of questions

to create students' interest and find what they already know. Questioning is considered the best method of involving students.

This study shares the view with the other educators that questioning is simple and can be applied fully in the lesson development for examining students learning and understanding of the subject matter. It makes the appropriate method that could be applied in learner centred teaching. This study goes further and requires teachers to prefer more and make use of higher-order thinking questions rather than lower-order thinking questions. Higher-order thinking questions guide students to develop sound knowledge and understanding of the subject matter. Teachers should know that well-formed questions help students develop critical thinking skills. Moreover, during the interview, teachers A, B, C, D agreed to know well discussion and questioning practices, but observation in the classrooms showed that there are still a few weaknesses on the side of teachers. They do not employ the preceding practices efficiently as was expected in the learner centred environment. Teachers in the visited schools distinguished themselves by displaying limitations on using these practices. It might be caused by the lack of enough knowledge, understanding, and other factors connected to learner centred teaching practices.

Moreover, the findings of this study showed the demonstration and practice to be applied in learner centred classrooms. Teacher B was observed to motivate students to come in front of the class and demonstrate how hydrogen gas is prepared in the laboratory. The study supports demonstration and practice in learner centred classrooms and emphasizes that it is more effective if it accompanies with students repeating the demonstrations by themselves and seeing how it works. Schweisfurth (2013) backed this point when conducting a study on this approach of teaching. The educator reported on how the teachers guided students to demonstrate while they stand aside and observe how they perform. To facilitate learning students are asked later to present and provide their thoughts on the subject matter. From the foregoing learning practices (discussion, questioning, demonstration, and practice), the instructor should confirm that they are vital for engaging students in the classrooms. If the practices are well organized, they tend to enhance understanding of the subject matter. This complies with what has been anticipated in the learner centred teaching practices.

At this juncture, it is instructive to present findings that showed to contrast with the learner centred teaching practices. In this perspective, teachers A, C, D observed using chalk talk lecture methods to present the subject matter. They usually stand in front of the class and present information to students who are passively listening. The teaching focused more on lecturing and reading textbooks. Also, the transmission methods made the teacher the information provider

and students as the information receivers. According to scholars in Schreurs and Al-Huneidi (2012) this method focus on the delivery of the content as defined in the curriculum. A good learner is one who memorizes more information from the content. The students are recipients of the teacher's knowledge and their organization of the learning process. Other scholars insisted that institutions should rely less on the lecture as the main method of teaching. If they want to prepare students who are creative, problem solvers who communicate well in the global world, collaborate well with others, and apply concepts across disciplines to solve complex problems thus lecture is not a good quality method (Doyle, 2011; Vanada & Adams, 2015).

The trend of employing lectures is likely to be caused by several factors. One of them is that many teachers have passed through the same experience during their school days as well as in the teacher education programs. Also, teachers used the lecture more due to time constraints for covering all the topics. Applying lectures in the classroom is not sure for students learning and actually, it is not recommended for effective teaching. In addition, educators found that the classrooms lack teaching and learning materials, students are not ready to work under learner centred class, teachers are not ready to implement this style of teaching. In general, the learning environment/classrooms discourage the application of learner centred teaching. Therefore, the preceding findings indicated that teachers in the visited secondary schools focused mainly on a few learner centred teaching practices. They were observed to employ group discussion, demonstration, and questioning in their classrooms. Teachers did not observe to use active practices such as role-play, debate, games, jigsaw, project, and laboratory experiment. Teachers seemed to possess a narrow understanding of these practices.

After explaining the learner centered teaching practices in the stage of new knowledge, this study is presenting the perceptions of teachers concerning this stage. Teachers A, B, C, D showed the learning experiences applied by teachers in the visited classrooms. Teachers reported being engaging students in the subject matter by employing various teaching practices. Their perceptions of new knowledge, seemed to support the learner centred teaching practices on one side but on the other side, they disregarded these practices. For those practices perceived to support the learner centred teaching, teachers cited mainly group discussion and questioning practices. These teachers reported engaging students by motivating them to form groups and then providing questions for discussion. During the execution of these learning practices, students usually are expected to talk, share, and exchange ideas.

The perceptions of research participants in the visited schools concur with the principles of the learner centred teaching practices explained by Doyle (2011) that discussions and questions help

students' display ideas in learner centred classrooms. They improve students' ability to answer, talk, listen, and these practices enhance students learning. This idea is in line with the views of scholars who wanted students to engage in new knowledge and make sure their questions, ideas, suggestions, and concerns are heard and worked out as they are vital for learning (Bishop et al., 2014; Mishra, 2007). Teachers in the visited schools should imitate those teachers who allow some authority to enable and favor students learning. Alexander (2000) explained American teachers' professional belief on the importance of student autonomy and empowerment, and their need to guarantee disciplined, hardworking classrooms (Schweisfurth, 2015).

Similarly, teachers need to motivate students to new knowledge by allowing them to speak freely regarding what they know. This practice helps students to be in a good position to clear existing misconceptions and as a result learn new knowledge successfully. This view compares to Baker and Westrup (2000) when they perceived group discussion as it gives students many practices that allow them to speak themselves freely. Quist (2000) added in the same vein that it increases students' freedom and the spirit of working together. Likewise, teachers discovered to have a narrow understanding of the various practices applied in learner centred teaching. Teachers' perceptions of these practices showed to rely on few participatory practices (mostly discussing and questioning). The observation and review from this study specify that the teachers' perceptions of the several learner centred practices are limited. This view has an impact on the implementation process and students' learning. This study contributes to the fact that teachers' perceptions of the various teaching practices have to be broadened as possible.

Teachers should build perceptions of various practices to help them meet the needs of all students and control the complexity of the classroom. They are encouraged by the constructivist theory to build a broad understanding of learner centred practices. This study acknowledges the literature that provided many options for teachers to apply. It includes questions, role-play, observation, recording, experimentation, identifying, classifying, sequencing, project work, and problem solving (Brooks & Brooks, 1999; Quist, 2000; Sunzuma et al., 2012). Other methods are asking questions, challenging students' answers, observing, and assessing (Byrd, 2008). Also, there are guiding discussions, cooperative practices, sharing ideas, and modifying teaching practices based on students' experiences and interests (Jones, 2007; Kim, 2005).

Meanwhile, the findings showed that teachers A, C, D have also reported other practices that are based on the teacher centred approach. In this regard, teachers described employing practices such as chalk talk lecture to present the subject matter and impart new knowledge to students. They considered acting as the main source of information and so transmitting knowledge to

passive students who listen and receive silently without questioning or criticizing. This study joins with teacher B who reported criticizing the chalk talk lecture because it is not appropriate for imparting to students' new knowledge. Learning by the transmission of content to secondary school students do not help them learn successfully. This study specifies that teachers can modify chalk talk lectures to become more interactive by associating it with various classroom practices.

Another practice that was perceived to rely more on the teacher centred approach was the reading of the textbooks. Teacher B supported educators who believe in providing students with textbooks and asking them learning by reading directly from the textbooks. This study does not agree with the perception of students learning passively by reading in the classrooms. This method is contrary to the constructivist theory and learner centred practices. However, education stakeholders should remember that it is possible to make reading effective. In this case, teachers can assign reading practices to students when preparing for the lesson or outside the classrooms. Reading in advance helps students build a general understanding of the topic, and this behavior promotes and improves learning.

- **Assessment**

Regarding assessment, the visited teachers have observed to assess students mainly by asking questions, providing quizzes and homework. They conducted these practices to collect feedback about the understanding of the subject matter and the achievement of lesson objectives. The observed findings showed to agree and disagree with the principles guiding the assessment of learner centred teaching practices. For those practices that concurred with the ideal methods, the findings observed the participating teachers rarely conduct a continuous assessment during the teaching and learning process. They did not check how students' learning continues or progresses in different stages of lesson development.

To carry out assessment efficiently and collect information from students require teachers to build the habit of conducting an assessment in an ongoing way. Assessment of this style helps teachers to identify students learning difficulties as they occur and thus motivate them to find the solution for the complications. The process helps teachers to be in the appropriate position to find the means of helping students learn. Schweisfurth (2013) recommended teachers consider learning progress and focus on continuous assessment. They should examine how students will cope with the learning tasks rather than waiting to give special tests. This study supports the scholar because learning is something that is operating as a flow of ideas that need a connection

to make meaning. To maintain these links, teachers have to follow questions written in the lesson plan to examine students continually.

Furthermore, the study observed teacher C providing homework for assessing students. The teacher then collected students' answers for marking and provided feedback about the learning and performance. Homework is good because it motivates students to work for extra time and learn successfully the subject matter. It gives time for students to go deep into the subject contents that are not presented in the classrooms. The finding confirms Alexander (2000) who considered homework as a good practice for helping students to cover the ideas not covered in the normal classroom time. Baker and Westrup (2000) reported about the teachers who applied homework as a follow-up activity of what was already taught during the regular lessons.

Also, teachers observed conducting an assessment using tests, quizzes, exercises, assignments in various ways. They have been giving feedback by looking into grades or scores students acquired. According to these teachers, grades or scores are likely to tell them everything about students learning. This point concurs with Pedersen and Liu (2003) who believed and supported grading as an essential part of student learning. They said grades motivate students to perform and learn well. This idea might work in some educational contexts, but it may not work everywhere. Although the finding seems to be similar to previous research, the present study challenges the assessment of the foregoing way. The main reason for this view is that students can score a good grade by just reproducing information taught without proper or thorough thinking and understanding of the subject matter. In this way, grading might be contrary to learner centred teaching.

After an explanation of the learner centered teaching practices in the assessment stage, the current study is presenting perceptions of visited teachers. The perceptions of teachers B and D appeared to support the assessment criteria on the learner centred teaching practices while teachers A and C criticized by promoting traditional ways of assessing students. Therefore, for those practices which comply with the learner centred teaching, teachers reported assessing students continuously to recognize how they progress in learning. The assessment described by teachers in the visited schools should be interpreted as a process of collecting information about the ongoing learning practices. Teaching is an active process, so it needs a close to follow up so as to be acquainted with the progress of students learning. The observation from the body of research (Murphy, 1997) maintained that productive assessment practices are those that go simultaneously with the teaching. Brooks and Brooks (1999) emphasized making assessment continuous during the process of instruction. They wanted the assessment to become part of the

learning process. It gives a chance for students to play a larger role in assessing their own progress (Nyback, 2013).

This study agrees with the perceptions of making assessments continuously. It is because ongoing assessment helps to identify any difficulties/obstacles students face in the course of learning. It also identifies misconceptions students have about different ideas taught in the classrooms. It gives the opportunity for teachers to attend to students' problem before it reaches the end of the lesson. This point interprets that to assess continually helps teachers to be in a good position to address and work with the students' problems and challenges. In addition, assessment should become part of the learning process for students to play a larger role in assessing their progress (Nyback, 2013).

In addition, the participants in this study reported the use of homework for assessing students. In this case, students have given exercise which they should attempt to answer after the regular school hours mainly at home. Parents get a chance to assess students' work and if necessary communicate to teachers about students' progress. This process helps parents to know what students are learning in school. Others use this chance to help students with several assignments. This study concurs with the importance of homework and joins with DeDe et al. (2008) to suggest improving students' learning by replacing traditional assessment with homework. Homework indeed helps students develop the habit of controlling learning themselves. Students improve sound learning strategies in an environment outside the classrooms. It stimulates students to put individual efforts into learning. Homework improves study habits and self-discipline towards learning practices. It promotes efficiency by using both classroom and home environments for learning.

Meanwhile, it is important to note that the participating teachers reported classroom assessment practices but are contrary to the learner centred teaching practices. They perceived supporting the process of grading students. This study does not concur with this method applied in the foregoing approach. It does not provide proper feedback to students. Blumberg and Pontiggia (2011) stated clearly that the assessment of assigning grades should now change by giving students feedbacks that help to promote learning rather than focusing on grades. Likewise, Booyse (2010) opposed grades and encouraged teachers to use an assessment that creates a healthy environment for students learning. This view contributes to the fact that teachers should focus more on providing real feedbacks rather than mere grades. Feedbacks help students to do corrections as it should be.

On the same token, participants reported that the assessment practices provided to students in the form of tests/quizzes/assignments assess lower-order thinking skills. The study argues against this perception because teachers can construct tests/quizzes/assignments that successfully test higher-order thinking skills. The questions need to be well structured to measure what is supposed to measure efficiently. On the other side, teachers can construct test/quiz/assignments with questions that test lower-order thinking skills and fulfill the learning practices. Therefore, what matters here is the teachers' knowledge, skills, and understanding in setting questions appropriately to accomplish the specific lesson objectives. However, it is a good practice for teachers to develop a habit of asking for higher-order thinking skills questions as they focus on examining students' deep understanding of the subject matter. It complies with the learner centred teaching practices.

Likewise, the teachers reported the use of other strategies to assess the students learning of the subject matter. In this case, teachers B and C provided the assignment and then collected students' answers for marking. However, due to a large number of students, teachers give feedback by displaying answers on the notes board and allowing all students to mark for themselves. This study cautioned teachers using this strategy that they need to create additional mechanisms for students to meet with teachers to discuss answers and build proper understanding. Teachers need to avoid students cramming the answers something that does not help. They need to be careful and make a close follow-up to avoid students cheating when marking for themselves. The preceding finding demonstrates the challenge teachers' encounter due to overcrowding classes. It indicates how teachers in Tanzania create strategies that do not follow the principles of learner centred to support sort of assessment in their learning environment. This is to say that, learner centred teaching practices need the appropriate learning environment for teachers' to conduct teaching successfully.

Another participant reported assessing students at the end of the period. Teacher A said to facilitate the teaching and learning process and before finishing the period, he provides questions to assess students' understanding of the subject matter. This finding is a good indication of the lack of correct knowledge and understanding as regards students' assessment in the learner centred environment. In fact, the deficiency in classroom assessment affects students learning. The foregoing teacher perception goes against scholars and learner centred paradigm. For example, Huba and Freed (2000) opposed assessing students at the end of the lesson. It is hard for the teacher to notice problems students face in learning if they focus on assessing at the end

of the period. Teachers need to build the habit of assessing students when the lesson is continuing. This process helps to control students' learning and understanding.

Additionally, the study provides the perception of one of the participants' who wanted teachers to conduct the assessment by examining students' notes. Teacher C focused on scrutinizing students' notes and checking whether there is anything written that misleads students. This teacher reported notes as an essential resource used by students when they refer, keep a record, revise for examination, and even read and understand the subject matter. This study argues that this practice does not directly relate to the learner centred teaching practices, although it helps to improve students' notes that also augment learning and understanding. The point here is students need to read and revise notes that are accurate as it helps build relevant knowledge. It is important to point out that notes are crucial for the learning environment facing a shortage of textbooks, library, and other written resources (Tanzania is not an exception in this observable fact). This opinion is supported because there are schools in remote places where sources of information are very scarce. Therefore, teachers' notes are likely to help students to have materials that should use to read and revise. This study contributes that there should be efforts to motivate and empower teachers to produce students' notes, especially in remote schools. This should be effectively accomplished by ensuring teachers are having enough resources of textbooks.

The perceptions related to students marking for themselves and examining notes might be new to various learning contexts or countries. They differentiate practices reported from Tanzania as it compares to the previous findings. They are likely caused by the situation or the local culture that has been established in the visited learning environment. This idea is to specify the fact that perceptions of teachers in the visited schools differ compared to other national and cultural contexts. However, other practices might be similar to various developing countries.

- **Classroom management**

Regarding the component of classroom management, teachers A, B, C, D employed practices which on one side support the learner centred teaching practices but on the other hand, they opposed these practices. For the learner centred practices, the visited teachers observed normally organize students in the classrooms. They organized students in various ways depending on the instructions provided by the teacher. The well-organized class provides a chance for effective and successful teaching and learning process and therefore educators recommend it. In this case, Jones (2007); Quist (2000); Yager (1991) have been instructing teachers to manage students using tasks such as moving in the classroom, listening to what they say, cooperating, and

encouraging students learning. The foregoing practices are usually supported by the proper organization of students.

Concerning the aspect of seating arrangements, all the participating teachers A, B, C, D did not show any effort in arranging students for productive classroom movements and interactions. They observed to behave similarly as they reported during the interviews. This study challenges what was observed in the visited secondary schools. Instead, it joins with scholars who suggested strategies for developing effective seating arrangements. Various scholars such as Jones (2007) who suggested thinking creatively about the seating arrangements have stated them and ensuring students perform learning practices comfortably. Alexander (2000) insisted on adopting what is called the “horseshoe arrangement where students face each other and the teacher and flexibly interact” (p.183). Also, Jones (2007) opined that the interactive method helps teachers monitor students’ group work by allowing moving around the class and observing students learning progress.

However, on another side, this study concurs with teachers A, B, C, D due to the difficulties or hindrances that occur in creating an interactive arrangement. Teachers agree upon this aspect but the classroom situation does not allow its effective implementation. Teachers complained about the lack of enough space caused by overcrowded classes. The problem made many teachers stop thinking about arranging students for active interactions. Teachers did not take the trouble of organizing the seating arrangement. They just allowed students to sit in a traditional way looking on the blackboard. This phenomenon refers to the challenges countries meet when they adopt learner centred practices from abroad. Some practices do not come across a supportive learning environment in the recipient nations, and that is what happening in Tanzania and other developing countries. This perspective proves the need for more discussion on how to implement an interactive seating arrangement.

Regarding teaching materials and resources, the findings observed that the visited teachers in the secondary schools were mainly using textbooks in the classrooms. Teachers were found to have not prepared or even improvised teaching aids for their classroom instruction. One should interpret that these teachers tend to limit themselves in using various materials instructed in the curriculum as well as the subject syllabus. This behavior goes against the proper management that promoted the use of varieties of materials and resources to motivate students learning. The findings from the schools are different compared to previous research. In this regard, McCombs and Whistler (1997) and Murphy (1997) suggested the use of a variety of instructional materials as instrumental in making the learning environment realistic and authentic. Comparative research

showed that higher levels of school materials and resources associate with higher performance. Students in schools with enough materials and resources are usually performing better than students who encounter the scarcity of resources (Mullis et al., 2012; Mullis & Martin, 2015).

This study agrees with the use of various materials and resources. These substances motivate students' learning practices and involvement in the classrooms. They stimulate students' activeness and participation in the classrooms. Therefore, for the educational environment to be effective for students learning, it should contain various materials and resources. It is an important school factor for the students' good performance. However, experience indicates that many countries adopting learner centred teaching practices from overseas come across similar problems. In fact, the learning environment should be improved to support the implementation of learner centred teaching practices.

After the descriptions of what was observed on the subject of classroom management, this study is demonstrating the perceptions of teachers. In this case, teachers A, B, C, D showed the methods and strategies that are applied in the classrooms. It is important to be aware of the learner centred teaching practices that take place in the classrooms need good classroom management on the part of teachers to allow these practices to take place smoothly. Teachers who investigated in the visited schools reported being managing students using various ways. Teachers A and B stated to students the rules and procedures needed to follow in the classrooms. Typically, students enter secondary schools and bring with them various behaviors acquired from home and family backgrounds. The classroom is a learning context so it needs to have rules that guide and organize all students. Therefore, to ensure learning is taking place smoothly, a set of basic rules or procedures are important to align all students with the required conditions.

The present study supported the provision of rules in the learning environment because they help to control students in learner centred classrooms. The rules contribute to making students behave in good manners. They promote students' active participation during learning. Teachers need to understand that, regardless of how well students behave in the classrooms, students still need rules and procedures to help them act in a manner that makes the learning environment remain conducive. To show the importance of this aspect, Garrett (2008) urged teachers to establish classroom rules/procedures/routines to prevent students from misbehaving. This study confirms the perceptions of the foregoing author, however, it advises teachers to note that the learning environment differs in many ways. Therefore, they should be flexible to create rules that work for a specific context. Rules working in Tanzania might be different compared to other national

and cultural contexts. How students misbehave in Tanzania could be interpreted differently compared to students in other foreign nations.

Likewise, it was found that teachers did not consider students' seating arrangements as important. The teachers reported accepting a traditional seating arrangement. They argued that it is the common structure used in almost all secondary schools in Tanzania. This research challenges teachers that should change their attitude and mindset and attempt to create an interactive seating arrangement in the classrooms. They should stick to the principles stated by the learner centred theorists and competence based curriculum instead of compromising with the situation in the learning environment. They need to learn from successful national and cultural contexts that managed to maintain an environment supporting interactive seating arrangement. It is in line with Marzano (2007) who wanted teachers to create conditions that facilitate and support arrangements allowing students free movement.

Also, teacher D reported the use of teaching materials as useful to organize and stimulate students learning in learner centred teaching. Materials help to support and build knowledge and understanding in different ways. Mostly teachers B and C used textbooks. This study agrees with the use of teaching and learning materials because they assist students in learning by using different senses that improve the understanding of the subject matter. It is important for teachers to use the materials that possess the required qualities needed for teaching and learning practices. Baker and Westrup (2000) motivated teachers to make sure they use teaching and learning resources in the classrooms for effective student learning made a similar report in a study.

Moreover, other classroom management practices could be considered reflecting the learner centred teaching practices, and teachers in the visited schools reported to have used them in the classrooms. For example, teachers tried to speak friendly or psychologically to students to build a healthy relationship. They inspired students to see the importance of school for their life, and this helps to alert them to behave well in the classrooms. This practice is associated with the learner centred principle of valuing students and creating a positive climate for enhancing learning (Schuh, 2004). According to Marzano (2007), the teacher and students' relationship is the basis of effective management in the classrooms. The teacher needs to provide guidance and control students both emotionally and academically.

In summary, teachers' classroom practices and perceptions regarding the implementation of learner centred teaching practices in different stages of the lesson development shown to possess various practices, views, ideas, and principles. There are classroom practices and perceptions

that supported the learner centred practices, the teacher centred practices, and practices created by teachers to support teaching and learning process. These results confirm the presence of a mixture or a combination of practices and perceptions towards the learner centred teaching practices. So teachers' practices and perceptions indicate that teachers have been demonstrating a mixed manner of performing teaching and learning practices. Learner centered practices recommended in the curriculum have not been implemented effectively. Teachers who participated in this study show misunderstanding of some of the learner centred teaching practices such as jigsaw, role play, projects, and debates. Teachers show the lacking of appropriate knowledge and skills; they show poor attitudes and beliefs, poor training, and a poor learning environment. This study shows there is a poor linkage between perceptions and practices. What teachers talk about is not what they really practice in the classrooms. On that basis, it is important to find a solution concerning the foregoing matter.

6.5 Learner centred teaching practices employed in the reflection stage

Concerning the learner centred teaching practices on the reflection stage, the teachers reflected similarly as they perceived in the interview. In fact, teachers in the visited school observed to put low emphasis on the reflection practices. Nevertheless, this study considers reflection as an important practice for examining the learning development of the students in the classroom. It supports and encourages teachers to conduct reflection when implementing learner centred teaching practices. This idea is similar to what was reported by educators who encouraged teachers to be reflective in their everyday classroom practices to enhance students learning (Brown, 2002; Hightower et al., 2011). Another educator found reflection assists teachers to adjust practices that do not work, this strategy made them become problem solvers (Frank, 1999).

The study advocates that to promote successfully the learner centred teaching student views and ideas should be taken into consideration. This strategy is one way used for the improvement of learner centred teaching practices and it also improves teachers' professional practices. This phenomenon is similar to Borich and Cooper (2004) when advised teachers to realize that they are reflection practitioners who continually evaluate the effects of their practices in the classrooms. This process helps them to grow professionally. Brown (2002) advised teachers to make sure the reflection practices become the common aspect of their professional practices in learner centred teaching.

This study specifies that teachers and other stakeholders should perform reflection practices seriously. It supports the fact that students are the primary clients in the classroom. They observe

how teaching is conducted and assess whether they gain what was taught or not. Sometimes students know more about the strengths and weaknesses of the teacher rather than the teacher himself/herself. It makes students be essential reviewers of teaching and learning. Based on this reality teachers should not ignore the students' opinions in the classroom. They need to build an understanding that as human beings, teachers are not a hundred percent perfect so they must reflect to acquire information about how teaching is progressing. That should be a good way to acquire feedback helping to correct, improve and change the educational practices.

Reflection continues to confirm how learner centred teaching practices have not been successfully employed in the classrooms. This study challenges curriculum developers and teacher educators for indicating reflection as a stage, however, it does not well apply to teaching. This habit might be caused by a lack of knowledge and understanding of teachers. It could also be caused by several factors related to how practices from a foreign country are incorporated into the Tanzanian learning environment. Based on that reality this study specifies what teachers should do to accomplish reflection. First, by asking students questions about the understanding of the subject matter, and second, by seeking students' views on how the lesson was executed.

Educators should know that active learning requires reflection in the classrooms. One quality makes good teachers as they conduct a reflection on what, why, how they execute classroom practices. The process of reflection helps teachers to learn if classroom practices do not progress well according to the plan. It helps to learn every lesson they teach and evaluate what they perform in the classrooms. It requires teachers to develop practices through regular reflection and, in fact, it is the key to successful teaching and learning. If teachers allow reflection, they encourage students to reflect, analyze, evaluate and improve learning. Teachers should value reflection of their practices, and many of the effective teachers are made because of reflection practices. Therefore, reflection is an underpinning value and is the key to becoming a professional teacher (Scales, 2012).

Relating to the perceptions of reflection, the visited teachers reported using this stage to collect feedback about the students' understanding of the subject matter. It helps teachers to collect opinions about the lesson development. All teachers find out students with learning problems and those who need individual assistance. To conduct reflection in the classrooms, teachers A, B, C, D mainly asked questions of students. This finding confirms Doyle (2008) who opined that reflection makes teachers pose questions to students to assess their understanding and use of knowledge to solve problems. This argument focuses more on one side of reflection. On the other side, reports from participants indicated that they did not consider the views presented by

students. Visited teachers agreed that they did not give a chance for students to describe how they observe classroom practices. This practice was also observed in previous studies. In this case, Hardman et al. (2009) reported that students were rarely encouraged to contribute ideas, opinions, and views on the teaching practices employed in their learning process. Schweisfurth (2011) opined teachers in different contexts did not encourage students to say anything about teaching taking place in their classrooms.

The preceding trait is designated in this study as a weakness. It might be caused by the local culture surrounding teacher education, the education system as well as the nature of the classroom environment. This attribute is contrary to the learner centred teaching practices adopted from abroad. According to the constructivist theory, teachers should use the reflection stage to acquire information on how classroom practices are supporting students learning. The reflection practices give a chance for students to explain the real situation of how teachers carry out the lesson. It confirms to Mishra (2007) who advised teachers to ask questions and give a chance for students to speak out their responses on the execution of the subject matter.

This study considered students as important clients in the classroom. They are the ones expected to accomplish the objectives under the facilitation of the teacher. Participating teachers confirmed that students are not tabula rasa. Students normally possess some information connected to what is taking place in the classroom. In line with this point, Yager (1991) encouraged the class to respect and use ideas from students and allow the structuring of their ideas during this stage. Mishra (2007) wanted opportunities to be given to students to talk about their reactions to what and how the subject was taught. For the same reason, Harris et al. (2013) required teachers to listen to students and give them the chance to express their views and ideas. This study summarizes that students' opinions on the teaching process should be taken into consideration.

6.6 How students are involved in the visited classrooms

Regarding the issue of how teachers involved students in the classroom, it was observed that teachers A, B, C, D have not engaged all students during the teaching and learning process. They did not involve all students successfully to perform the learner centred practices and accomplish the lesson objectives. Observation showed that teachers asked questions to only a few active and bright students and did not ask questions to the silent and passive students. They preferred calling bright students by names and interacting more with those students. The literature reported similar findings when teachers observed that they did not encourage or pay attention to silent and quiet

students. They only focused on and or engaged a few bright students in the learning practices and left the slow students unengaged (Metto & Makewa, 2014; UNESCO, 2006; Zohrabi et al., 2012).

This study considers the foregoing trait is not acceptable in the learner centred environment because it hindered some students from interacting actively in the lesson. Teachers should know that the classes contain students with mixed intellectual capabilities. There are those of higher, middle, and lower abilities. Therefore, teachers are obligated to be responsible and make sure they encourage all students to participate in the classroom. Teachers need to promote the engagement of all students as possible. Such classes might cause challenges for teachers because it is hard to manage and cater to the learning difficulties of all students. Teachers have to bear with slow and passive students and involve accordingly.

Different notions and concepts teachers have been developing in the teaching process might cause leaving some students not engaged. It was also caused by the situation in the teaching and learning environment. One of the beliefs is stated in a study (UNESCO, 2006) and reported teachers who concur that it is impossible to pay attention to all students in the classrooms. The present study perceives the preceding belief as it goes against the learner centred teaching practices. Teachers should understand that it is possible to involve all students. When teachers are writing the specific objectives in the lesson plan, they always mention an individual student. Thus, teachers are required to assist every student in the classroom. To support this idea, Henson (2003) asked teachers to create a learner centred environment by striving to cater to the needs and interests of all students. Such an environment is against teaching by the transmission of information (teacher centred) and paved the way for the growth of student centred learning. In this case, scholars presented the principle of student centred learning that involvement is necessary for learning (Brandes & Ginnis, 1986; O'Neill & McMahon, 2005).

Meaningful student involvement emphasizes the practical and empowering involvement of students in the teaching and learning process in order to improve academic achievement. It constructs a structure that helps to involve students in the classrooms. The involvement should encourage motivation and commitment; enhancing critical thinking, self-directed learning, active problem solving, clear communication; developing strong connections to students and teachers; increasing educators' commitment to students; fostering safe and supportive learning environments (Fletcher, 2003). Teachers should learn that the classroom is the main context where teachers and students come into contact to share information about the subject matter. Therefore, the characteristics above confirmed the importance of involvement in learner centred

classrooms. Teachers need to be informed and oriented about the students' involvement to engage all students and achieve the lesson objectives.

Furthermore, teachers should also learn that the learning environment might sometimes create behavior where students would not want to be involved. The causes of the non-involvement of the students may be caused by the following reasons: A tendency of the teacher to encourage one-way communication pattern. Lack of involvement and interest in what is happening. Students do not participate unless they are encouraged or rewarded. Students expect the teacher to provide all the essential information. Students who do not want to talk in front of the group for fear of students and teachers (Bergquist & Phillips, 1975). Therefore, teachers as facilitators of learning should control the classroom and provide assistance that improves students' involvement. Students need to be motivated and become involved in learner centred practices.

Overall, the practices observed in different themes related to this study continued to confirm the existence of a mixture of practices between teacher and learner centred practices in various stages of the lesson development. There are practices observed to support the constructivist or learner centred theory and others are in contrast with the theory. Also, some practices do not propose in theory, but they are just created by teachers to enhance the teaching and learning process in a particular environment. The study discusses findings that indicate several difficulties in the course. It shows how the policies and practices from abroad have been executed. This study confirms how the learner centred practices adopted from foreign countries have not been implemented successfully in the recipient countries such as Tanzania.

6.7 Support to improve the learner centred teaching practices

Teachers were asked to suggest how they could be supported to implement the curriculum effectively. To achieve this purpose, teachers A, B, C, D cited in-service or school based training as important. The training is expected to impart proper knowledge and skills regarding the execution of the learner centred teaching practices. The training needs to be conducted as frequently as possible and ensure that many teachers get the opportunity to attend. Similar support was stated and proposed to start conducting ongoing professional development and school based training for teachers to gain and improve knowledge in teaching (Darder, 2012; Hardman et al., 2009). They suggested in-service training and retraining compulsory for teachers (Chedié et al., 2000; Komba & Mwandanji, 2015).

This study concurs with the suggestion because teachers are the ones who conduct learner centred teaching practices. So they know exactly the knowledge, skills, and practices that are

needed to help them improve educational provision. This study connects the suggestion to be appropriate, especially to the problem of poor performance facing secondary schools in Tanzania. Wenglinsky (2001) found a positive relationship existing between reform on professional development and classroom practices and student performance corroborates the idea. In general, the teacher is the primary factor to consider for quality education. According to Vanada and Adams (2015), teachers are essential because they design the kinds of learning experiences and environments that develop students' independent, creative, and flexible actions. Teachers as facilitators of learning need a proper program that improves the teaching process.

Pertaining to the use of English language as a medium of instruction according to Tanzania's education and training policy, the teachers who participated in this study admitted the English language to play a primary role in the students learning at the secondary school level. It is a crucial tool needed by both teachers and students to implement well the learner centred curriculum. It is a means used to transfer information from one person to another, thus for high-quality communication teachers and students must understand each other. Vygotsky (1962) made a similar observation when showed a close relationship between language and learning. These attributes depend on, support, and interact with each other to help students communicate and understand the subject matter. The present study and others revealed the existence of the problem of poor language proficiency among students and teachers. In some classes, students have not discussed and exchanged ideas in the group discussion. Other sessions observed students remained silent because of language barriers. A similar observation was made by (Metto & Makewa, 2014; Schweisfurth, 2013) when discovered teachers opted to ask close-ended questions which used short phrases and expressions so as to hide language weaknesses. Sumra and Rajani (2006) reported that many secondary school teachers and students lacked fluency in the language of instruction.

On the issue related to teachers' conditions and incentives, the findings of this study revealed teachers need improvement in these aspects. They wanted the ministry responsible for education to increase the budget of the education sector and specifically to enhance classroom practices. Teachers in the visited secondary schools complained about the poor environment they come across every day in performing academic duties, and this reduces their commitment. It is important to know that, teaching is a laborious job and not all can manage to maintain sound relationships with students in this environment. Teachers need encouragement to keep a positive attitude toward teaching jobs (Brooks & Brooks, 1999; Schweisfurth, 2013). In connection to

that, Sumra and Rajani (2006) proposed the review of teachers' welfare like salaries, houses, arrears, training with the aim of improving them.

Another aspect reported by participants is the relationship between teachers and parents. Teachers wanted these stakeholders to work together, build a good rapport and ensure students are learning successfully. Teachers advised the school to provide counseling to parents on how to guide students at home. Parents need to carefully monitor and control the use of technological instruments (mobile phones, laptops, television, etc.). Students should use these devices appropriately and mainly for educational purposes. To achieve this view communication and relationships between parents, community members, and teachers need more emphasis (Borich & Cooper, 2004; Darder, 2012).

Teachers suggested changing the mindset of students to agree positively with the learner centred practices in the classrooms. Experience showed, it is common to find students and even teachers resist new teaching methods. It may be because they think those methods as not good/familiar to them, or they lack a supportive teaching and learning environment. Both students and teachers need to have a good understanding of how they benefit from these practices. To help to change their attitude, then the suggestions from educators are crucial. In this regard, Mullis and Martin (2013) recommended looking at culture, social, political, and economic factors because they might contribute either in encouraging or discouraging student learning. Students need proper guidance to orient themselves to new teaching methods.

Moreover, the students in the visited secondary schools suggested teachers conduct assessments frequently. Testing regularly helps students to know their educational position and thus encourages learning and acquiring good results. The study finds this idea as good and recommends teachers carry out assessments repeatedly to improve students' acquisition of knowledge. It helps to inform teachers and students about the learning progress, and this is crucial for learner centred classrooms. Harris et al. (2013) consider assessment practices as central to students learning. They motivate students to learn and identify areas that need emphasis, correction, and development. To make assessment practices useful, Doyle (2008) said it requires teachers to carry out more evaluations and more feedback and share the results with students.

This study encourages teachers to put more effort into students' feedback because it provides a real picture of teaching and learning practices. It increases students' self-assurance to motivate and as a result perform well. The present study concurs with what was said by Hattie (2009).

The scholar opined feedback as the most compelling factor for enhancing achievement. Therefore, students' and teachers' views have to create situations for teachers to receive more feedback. Teachers need to make sure that the classroom setting is welcome and foster errors. It is because students learn very much from errors, and errors are key levers for enhancing learning (Hattie, 2009).

The strategy of assessing students is frequently used in good performing schools. They adopted methods of administering weekly or monthly tests. This approach is working, and many of these schools maintain good performance for several years. It motivates students in various ways. If students perform well, are motivated to do better. Even those who failed to get a chance to evaluate themselves on the failure and then perform better. This study considers the preceding ideas as good for contribution. They make students modify their learning habits and later improve performance. To achieve this, schools should adopt the practice of administering assessments frequently.

Likewise, the study quotes suggestions to assist teachers and students in performing learner centred practices in the classrooms. In this case, it is important to cite recommendations provided by Doyle (2008) and Bishop et al. (2014). Scholars identified procedures to follow in the course of changing the attitude towards learner centred teaching practices. These procedures are: First, to understand why teachers and students are resistant to learner centred practices. Second, to share with teachers and students the reasons why they need to accept preceding practices. Third, to teach teachers and students the new learning skills that will make them successful in these practices.

In addition to the teachers' suggestions, it is also important to present some views provided by students in the visited schools. This point is supported by the fact that learner centred teaching emphasizes the sharing of power and control between students and teachers (Weimer, 2002). In this case, the goals and objectives are normally derived by the student or in negotiation with the teacher (Murphy, 1997). Students are allowed to formulate the procedures for guiding classroom practices and share the responsibilities (Garret, 2008), and be involved in the decisions in such a way that they see themselves are treated like adults and trusted (Harris & Cullen, 2010). These points support students to be free and open in providing their views.

So it is crucial to get students' perspectives related to this approach because they are the main clients in the implementation of learner centred teaching practices. The study wants to get views from students to know exactly what are the practices taking place in the classrooms and how

they perceive these practices. The opinions could help educational stakeholders to see how to improve the preceding practices as well as the provision of education in Tanzania. For example, the study showed some students to agree the shift towards student centred was very important to the learning process. They reported that learner centred teaching is more helpful than the traditional lecture method. Students learn best when they find personal significance in the subject matter they study. They appreciate learner centred because it creates a comfortable learning environment. Students worked harder and smarter when less emphasis was placed on grades, quizzes, and memorization. The class showed a quiet departure from the old teaching style to the student centred teaching, which they enjoyed (Dede, 2008).

CHAPTER SEVEN: CONCLUDING PERSPECTIVES AND RECOMMENDATIONS

7.1 Introduction

This chapter discusses concluding perspectives and recommendations. It summarizes the key information presented in various chapters of this study. The chapter describes the background of the study and the context of the research problem. It presents the purpose of this study and the areas addressing the research questions and this follows with the research methodology applied to collect and analyze data. It summarizes the findings captured in this study and the progress of the implementation of the learner centered teaching practices. Also, the chapter discusses the aspects focusing on the limitations encountered during the research process. It ends by providing the recommendations relating to this study and further research.

7.2 Concluding perspectives

Various educational organizations and scholars have been carrying out research to address several topics related to the provision of education. The studies have been describing how various factors influence the educational process. It includes aspects such as curriculum, teaching, learning, assessment, and students' performance. The research reported findings that generate knowledge and understanding of the implementation of learner centered teaching practices in different national and cultural contexts. Literature indicated that there are efforts to improve the curriculum implementation process and students' performance. Likewise, the chapter describes the obstacles that were discovered to hinder the implementation process. The foregoing trends confirm the need for conducting research to enlighten the learner centered teaching practices as well as the students' performance.

Researchers presented information that provides development of the major teaching and learning approaches such as teacher centered and learner centered. In the teacher centered approach the teacher is the master and is respected to a high degree and believed to know the information/ideas best for students. The students are regarded as passive and empty vessels that always wait for an expert (teacher) to fill them with knowledge. Students are expected to follow all the information from the teacher in order to learn the subject matter. This approach is characterized by the traditional methods of teaching such as formal lectures, seminars, and examinations. In general, students in the classroom normally sit quietly and neatly (de la Sablonnière, Taylor, Sadykova, 2009, Jabbour, 2013).

In relation to student centered teaching, it is generally supported by educators in different countries. It essentially requires teachers and students to modify their thinking and actions towards the provision of education. Teachers should put emphasis on students' prior knowledge and use them to orient, guide, and activate students learning. The teachers' role in this approach is that of acting as a facilitator of the learning process. Thorpe (2010) provided reasons to make use of student centered in teaching. This approach builds student-teacher relationships, promotes peer communication and active learning, strengthens student motivation, and it is responsible for student's own learning. The development of student centered teaching is founded on the characteristics of constructivist theory. It emphasizes that students should construct meaning during the learning process. In fact, a student is an active thinker who constructs an understanding of the world (de la Sabronnie`re, Taylor, Sadykova, 2009).

Educational institutions have been claiming to put student centered teaching into practice, but in reality, they are not. There are several challenges and difficulties in its implementation. O'Sullivan (2003) described student centered as a Western approach, so it might not necessarily transfer to the developing countries, where there are limited resources and different learning cultures. Also, the belief system of the students and teachers and knowledge of student centered teaching is poor, in some educational institutions university students have not even heard this term (O'Neill & McMahon, 2005). Besides, the research confirms the resistance to student centered teaching because teachers feel themselves to be more comfortable with the teacher centered approach. Student teachers stated the difficulties or complexities of student centered teaching. Teachers might inappropriately employ it. Some of the activities, presentations, and implementations are boring and do not take the attention of students, also the physical characteristics of the classroom (ie inappropriate physical setting, seating arrangement, crowded class size, lack of resources) are obstacles to the effective implementation of the student centered pedagogy (Zek & Güneyl, 2014).

This study builds interest in the preceding education approach. It accomplished the aim by exploring the learner centered teaching practices in selected secondary schools in Tanzania. It was intended to address the problem of poor performance that existed for several years. This study was impressed by the suggestions made by various educational programs as well as the competence based curriculum. They advised researchers to focus on learner centered teaching practices. The preceding practices have been considered suitable for improving teaching and learning as well as the students' performance. Scholars who comprehended that the approach is

productive as it causes a positive influence in teaching, learning, knowledge retention, and students' performance (Froyd & Simpson, 2008) have supported this fact.

The present study collected information that is useful for providing an understanding of learner centered teaching practices. The study has investigated teachers' perceptions and practices towards learner centered teaching practices in various stages of lesson development. Also, the study explored the support teachers need to employ learner centered teaching practices successfully. The foregoing arguments represent the research questions. The study adopted a qualitative design that follows the ethnographic strategy. The preceding approach facilitated exploring the educational practices and built an understanding of what is taking place in the classrooms. It was preferred because it provided a chance to explore cultural practices occurring every day in the visited schools. Teachers were studied extensively in their classroom environment. The study used the same set of data collection methods. It included semi structured interviews and participant observations. Data from the fieldwork were organized and analyzed by using thematic techniques. This is a widely used technique for qualitative data analysis. It is a useful research tool, which provides a rich and detailed account of the data (Braun & Clarke, 2006).

Findings discovered that teachers' perceptions of the learner centered teaching and perceptions and practices of the learner centered teaching in various stages of the lesson development displayed application of the mixed practices in classrooms. In this case, teachers were observed to perceive and employ the teacher and learner centered and other created practices. The teachers discovered lacking deep knowledge of various learner centered teaching practices applied in the classrooms. They discovered to have limited knowledge of the foregoing teaching methods.

Findings of practices (what teachers practiced) and perceptions (what teachers reported) fall into three categories. Those aligned with the learner centered are described as: discussing, demonstrating, homework, ongoing assessment, higher-order questioning, giving various questions, writing a lesson plan in detail, interactive seating arrangement, passing to groups during the discussion, teaching a small piece of content, and students presentation. Those aligned with the teacher centered are described as: lecturing, reading textbooks, end of the period assessment, lower-order questioning, neglecting students' views, traditional seating arrangement, and writing the lesson plan in brief. Others created by the teacher are: students marking for themselves, slow students acting as indicators of learning and understanding, examining notes, involving few students, performing questions on the chalkboard, watching the entire class, and remedial teaching (they were created due to several reasons). To support

teachers, there are improvements needed in the areas such as in-service training, school based training, teachers' conditions, infrastructures and materials, additional science teachers, and testing students frequently. In general, the findings from visited schools in Tanzania added to the database of the implementation of the learner centered teaching practices.

Furthermore, the discussion of findings attempted to show how the findings address the progress of constructivist theory and learner centered teaching practices. It also provides a chance for educators and researchers to learn from what was collected in the selected secondary schools. Likewise, the discussion presents the comparisons of findings produced from various learning contexts. Findings presented in a foregoing manner are essential for developing educational provision. On the other side, the discussion confirms how the transfer and borrowing of policies and practices affect recipient nations. Various factors account for the poor implementation of learner centered teaching practices. These practices come across complications that should be caused by economic, social, cultural, technological, and other reasons and factors.

Moreover, the general observation of the study findings showed that there are findings that are similar to the studies reported in the literature, while other findings appear to be different compared to what was reported. For similar results, this study confirms previous studies that addressed comparable results. It is in line with UNESCO (1985) which confirmed that the teaching methods throughout the world insinuate to be similar. In the same vein, scholars quoted by Schweisfurth (2013) observed the same trend, showing schools to have some elements of likeness throughout the world. The views are evident because the same learning theory guides these practices. Also, in some places, teachers followed the same school curriculum. This phenomenon provided the possibility for teachers in various cultures displaying similar forms of learner centered teaching. On the other side, the studies presented the possibility for teachers to perform different practices. It follows the idea that the learning environment is unique, thus display different characteristics. Likewise, factors influencing learner centered teaching practices might cause differences. These phenomena have been manifesting even in the present study.

Findings of the learner centered teaching practices observed in this study seem to raise various views when compared to the literature. These results supported the learner centered and teacher centered practices. This fact indicated that no one method could be said it dominated the classroom practices. This fact complies with an argument raised by OECD (2009) which opined that there is no single or well-defined best way of teaching. What is needed is the combination of constructivist and more direct methods. Also, educators suggested that students might learn

best through teacher centered approaches or a combination of teacher centered and learner centered approaches. Zhao et al. (2014) stated further, there are no actual teaching practices that are acceptable and positively influence students' learning and performance. The mixed observations indicate the need for future research in the learner centered approach. This study facilitates the same purpose.

Other studies presented results that showed how the implementation of learner centered teaching has been hindered because of various circumstances. In this regard, the research by Brackenbury (2012) found curricula in many countries emphasize the use of learner centered teaching practices although teachers continued with teacher centered practices. It means that the directed practices have not been well and successfully implemented. It might be caused by what was explained by Hudson and Meyer (2011) when cautioned educators to be careful since it is possible to have a paradigm shift in theory but it does not yet cause a change in teachers' actual classroom practices. A good example is when teachers are directed by the curriculum to change towards learner centered, but in the real sense, they are not ready or committed to changes. Alexander (2000) explained this as the differences that occurred between teachers' adopted theory and their actual theory in use.

This study perceives that, there was a lack of clear understanding and interpretation of the learner centered teaching practices. Some educators associate these practices with methods such as group work. Others relate these practices when the teacher gives little instruction and students find out for themselves. Others consider the lack of understanding of the philosophy guiding these practices. Several interpretations about learner centered teaching practices have proved the lack of correct understanding among educators and teachers in the visited secondary schools. Therefore, the learner centered teaching practices have been stated by the curriculum but teachers continue with teacher centered practices in the classrooms. They apply a lecture, which is considered an ineffective method to apply in the 21st century. Therefore, learner centered practices recommended in the curriculum have not been implemented effectively. Teachers show the lacking of appropriate knowledge, skills, competences; they show unsatisfactory reactions in attitudes, beliefs, training, and situation of the learning environment. This study shows there is a poor linkage between perceptions and practices. What teachers talk about is not what they practice in the classrooms. On that basis, educational stakeholders should kindly find a solution concerning the foregoing matters.

The above arguments give an impression to this study that there are various practices applied during the teaching and learning processes. Therefore, there is no conclusion on genuine

practices. This is connected to the result of this study that exhibited a mixed or varied of classroom practices. It suggests that although the educational reforms and operating curriculum directed teachers to employ learner centered practices, still results showed a mixed of practices. This is to say that, the application of the preceding practices is still encountering challenges. What was projected about quality education has not yet been achieved in several countries? Thus, more research on learner centered teaching practices is still needed. Educators should find a solution that will improve the execution of these educational practices. The poor situation or challenges stated by scholars might be the reason that compelled Schweisfurth (2015) to come up with questions such as: Why keep trying to change something that has failed to change for 150 years? Is it worth the effort? And to what end? I think it is time to stop and ponder (p.35). Educators and practitioners should sit down, think, discuss and deliberate about how to improve teaching and learning practices in the classrooms.

7.3 Limitations of the study

Some limitations encountered in the research activities of the current study. They are caused by the complexities of the schools and classroom contexts. In general, teachers, students, activities, materials, and the learning environment might cause them. One of the limitations was the large class size. In this case, it was expected the number of students in a class to be 40 according to the competence based curriculum. This figure considered the productive interactions needed in learner centered classrooms. Nevertheless, almost all classes visited consisted of students of more than the required number. It was difficult for the teacher and researcher to adjust the number of students. This situation in one way or another affected how teachers facilitated the learner centered practices as well as the data collection.

Another limitation is caused by teachers' and students' reactivity. This phenomenon is common in some cultures, and it normally occurs when there is a presence of an investigator in the classrooms. The observation showed that teachers and students attempt to behave or react in a way to satisfies the researcher. They tried to perform learner centered practices perfectly. This process makes them appear more interactive. It affected the data collection and interpretations because the practices exhibited by teachers might be not real. In addition, a collection of pictures and recordings by video gadgets are likely to cause teachers and students to try to react in unusual ways. The abnormal behaviors created by teachers and students have been occurring in various contexts. They are not new when you research in the classrooms. It corroborates descriptions of educators that the abnormal behaviors frequently occur when teachers and students try to modify

their behavior when observed during the teaching and learning practices (Anderson-Levitt, 2006; Kaya, 2014; Zohrabi, 2013).

To control these traits and maintain the authenticity of findings, the researcher informed teachers in advance to ensure that they should behave in a normal condition. The researcher used his experience in teaching and requested teachers to relax and conduct teaching as if there is no observer in the classroom. He let teachers know the importance of authentic information that provide insights and improve the quality of education. In addition, the researcher conducted multiple sessions of data collection to lower the participants' reactivity and thus collect authentic data. However, in the real sense, it was hard to know whether teachers and even students are behaving in a normal way or there were some manipulations (note that humans are complicated beings).

In another observation, the study findings appear to be similar among the four teachers. In this case, teachers' perceptions and practices of learner centered teaching are alike at some stages. This limitation might be caused by the social and cultural attributes surrounding participating teachers located in the small area (this study was conducted in four schools in the same region). The teachers might have attended similar courses in teacher education. Also, they have been guided by a similar curriculum and scheme of work and other similar educational aspects/factors/beliefs.

Furthermore, the small sample size of participants in this study caused limitations. The study represents findings based on what was perceived, practiced, collected from participants at a particular time and location (Mayring, 2007). This idea is to clarify that the influence of few visited secondary schools located in Dar es Salaam city is likely to be minimal in such a way that it cannot be considered to produce results representing the whole nation. In line with the preceding view, Renkema (1998) advised researchers not to generalize findings obtained from case studies. It is because ethnographic case studies aim to conduct extensive observation and description of contemporary real-life educational processes. The knowledge resulting from such case studies is to provide an understanding of the particular context, not to generalize a law. This study presents insights based on what was captured in one region.

However, Mayring (2007) provided room for generalization in qualitative ethnographic studies. This idea concurs with this study when considering several aspects. In this case, the study is guided by the constructivist theory and learner centered practices. These educational paradigms stated characteristics and practices that have been shared and applied in research in different

contexts. This view gives room for generalization. Furthermore, the study used participant observations and semi structured interviews. These research instruments are common and are always used by researchers to conclude. In another perspective, the four schools/teachers who participated in this study can be considered as independent cases which could be extended and allow for generalization. This point is in line with (Mayring, 2007) who considered widening the cases that facilitate the generalization.

7.4 Recommendations

The report from teachers and other educators signifies challenges in the implementation of the learner centred teaching practices in secondary schools in Tanzania. To reduce and control these challenges then a comprehensive analysis needs to be done frequently and create an educational environment that supports the execution of these practices in the classrooms. To improve the implementation of the learner centered teaching practices, this study provides the following recommendations:

- There must be ongoing efforts of assessing secondary school teachers' execution of the learner centered teaching practices in various stages of the lesson development and providing constructive feedback for the improvement.
- The universities should improve the teacher education programs to produce secondary school teachers with a clear understanding and appropriate attitude towards learner centered teaching practices.
- Schools should be supported to develop school based training programs. These programs will provide teachers the opportunity of sharing and exchanging knowledge and skills regarding learner centered teaching practices in a continuous manner.
- Secondary school infrastructures, classrooms environment and educational materials/ resources should be improved effectively in all the required aspects. Likewise, students need to be oriented concerning the learner centered practices.
- The agencies in the ministry of education such as curriculum developers, school quality assurers, examination councils, and colleges of education should cooperatively work and accomplish successfully their educational objectives, practices and activities.

The present study recommends the following topics for further research:

- Exploring the learner centered teaching practices in various stages of the lesson development in secondary schools located in different regions of Tanzania.
- Exploring the learner centered teaching practices at different levels of the education system in Tanzania.

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APPENDICES

Appendix I: Classroom observation schedule

Name of a teacher _____ Class _____ Time _____ No. of students _____

Subject _____ Main/Sub topic _____

| Components/Stages | Classroom practices |
|----------------------|---------------------|
| Introduction | |
| New knowledge | |
| Assessment | |
| Classroom management | |
| Reflection | |
| Students involvement | |

Teachers participated in the classroom observations

| | |
|--------------------------|---|
| Name of a teacher | A |
| Subject | Chemistry |
| Main/Sub topic | Redox reaction |
| Class | Form three |
| Time | 40/80 min |
| Number of students | 60 |
| Name of a teacher | B |
| Subject | Chemistry |
| Main/Sub topic | Chemical equation and molecular formula |
| Class | Form two |
| Time | 40/80 min |
| Number of students | 50 |
| Name of a teacher | C |
| Subject | Chemistry |
| Main/Sub topic | Hydrogen gas |
| Class | Form one |
| Time | 40/80 min |
| Number of students | 25 |
| Name of a teacher | D |
| Subject | Chemistry |
| Main/Sub topic | Mole concept |

| | |
|--------------------|------------|
| Class | Form three |
| Time | 40/80 min |
| Number of students | 60 |

Some examples of the classroom observations (Teachers A, B, C, D)

| | |
|---------------|---|
| Introduction | <p>Teacher A introduces the lesson by describing the sub topics that have already been taught and the new ones that are intended to be covered. The analysis on this component indicates that the teacher tried to use jokes and questions so as to stimulate students providing previous knowledge that could be linked to the new knowledge.</p> <p>In different periods the teacher A introduces sub topics such as valence, chemical formula, double decomposition reaction, redox reaction, and ionic equation.</p> |
| New knowledge | <p>Teacher A was found to employ different practices so as to make sure students learn successfully and achieve the lesson objectives. Teacher A engaged students by giving explanations related to sub topics. He applied the chalk and talk lecture methods and present the subject matter while students were listening and copying notes written on the chalkboard.</p> <p>In employing the discussion method, students in the classroom were observed interacting and exchanging ideas in their groups with lots of noise which could be heard by the researcher. Teacher A passed around to groups and find out how students have been performing learning activities.</p> <p>Teacher A in most of the practices used lower order thinking questions to assess students' knowledge and understanding of the subject matter.</p> |
| Assessment | <p>Teacher A was found assessing students using some methods so as to get feedback of the students understanding of the subject matter and the accomplishment of the lesson objectives. For example during</p> |

| | |
|----------------------|--|
| | <p>group discussion, he supplied questions and required students to discuss and exchange ideas together and then write their responses which were later assessed.</p> |
| Classroom management | <p>It was observed in the component of management that, teacher A attempted to organize students in various ways. He organized students so as to help them interact successfully and guide them to do various practices.</p> <p>Concerning with the seating arrangement, observations from the classrooms showed that some students in the class taught by teacher A were found to sit in places that hinder their movement and interactions.</p> <p>Teacher A was observed to focus more on involving few/bright students who were cooperative in the classroom. He concentrated much on asking questions, brainstorming, discussing and facilitating the learning practices with few/bright students and forgot silent and passive students.</p> |
| Reflection | <p>Teacher A was observed to conduct reflection by focusing on asking questions to assess the students understanding of the subject matter.</p> |
| Students involvement | <p>Teacher A observed to involve a few active/bright students.</p> |
| Introduction | <p>In the real classroom practices the teacher B observation indicated that she mainly introduced the lesson by reminding students regarding the sub topics that already learned and those expected to be learned.</p> <p>In different periods the teacher B asked some questions such as: Anyone who can tell me the meaning of molecular formula? Anyone who can tell me the formula of hydrogen peroxide and potassium chlorate? Anyone who can mention the common methods of preparing oxygen gas?</p> <p>She introduced sub topics such as chemical equation, molecular formula, empirical formula, preparation and uses of oxygen.</p> |

| | |
|---------------|--|
| New knowledge | <p>During the new knowledge, teacher B used to facilitate students learning the subject matter. She was found to employ classroom practices to make sure students learn successfully and achieve the lesson objectives.</p> <p>Teacher B normally insisted and adopted the same series which started by supplying questions to students and then asking them to discuss in their groups and summarize important points. Later on, one student from each group was invited to present answers in front of the classroom.</p> <p>The questions are more of the higher order type, they needed students to use knowledge, thinking and reasoning to provide correct answers. In their groups, students interacted to make sure they respond to the questions correctly.</p> <p>In another session, she used lower order questions. In this case, students have just memorized information or procedures so as to answer correctly. In this practice students attempted to guess and try to get the correct answers.</p> <p>When, I asked why some students were silent in the classroom, the teacher explained that students' poor English language proficiency was a constraint against interactive discussions.</p> |
| Assessment | <p>In the actual assessment practices, teacher B examined students mainly by asking questions and giving assignments. These practices helped the teacher to know the students understanding. Further observation indicated that the teacher B did not perform assessment practices as it was written in the lesson plan.</p> |

| | |
|----------------------|---|
| Classroom management | <p>In terms of classroom management, teacher B attempted to organize the students to participate and perform the classroom practices successfully.</p> <p>Regarding seating arrangements, the observation from teacher B classroom was similar to other schools. In this case, students were seating close to each other looking on the chalkboard.</p> <p>She was observed to make use of the textbooks as the main materials/resources for supporting students learning in the classrooms.</p> <p>In involving students, teacher B was observed to focus more on working with few/bright students during the teaching and learning processes.</p> |
| Reflection | <p>In order to know what was learned by students in the classrooms teachers need to do reflection practices. Teacher B like others has asked questions to see to what extent students understood the subject matter related to chemical equation and molecular formula.</p> <p>In the process she asked questions such as: Is it clear? Do you get me class? Do you get an idea? Any question so far? Do you have any question? Do you still confuse on how to write a chemical equation and molecular formula?</p> |
| Students involvement | Teacher B observed to involve a few active/bright students. |
| Introduction | Teacher C was found to introduce the lesson in a different way compared to other teachers. He started by demonstrating the hydrogen gas. The teacher distributed chemicals and wanted students in pairs to mix and observe the reaction. The students performed well the practice and the teacher asked some questions such as: Have you heard about hydrogen gas? Do you know anything about hydrogen gas? Is hydrogen gas found in air or not? Write the chemical formula of any compound you know. |

| | |
|----------------------|---|
| | <p>In different periods the teacher C introduces sub topics such as hydrogen gas, chemical equation, chemical formula, balancing of the equation, and electronic configuration.</p> |
| New knowledge | <p>In the new knowledge the teacher C used most of the time to impart to students' knowledge using the various teaching and learning practices. He applied chalk talk lecture, questioning, and demonstration methods. He explained the stages of how hydrogen gas is prepared in the laboratory and instructed students to fill the blanks so as to assess their understanding of the subject matter.</p> <p>The questions asked by teacher C focused on the lower order thinking.</p> <p>One aspect noted to teacher C was that, he dominated the classroom practices and did not give chance for students exchanging information. No discussion was conducted in this class and this is not normal for learner centered classroom.</p> |
| Assessment | <p>The teacher C focused on assessing students by asking questions and providing quiz especially during the end of the lesson. No ongoing assessment was performed in this class.</p> |
| Classroom management | <p>In the seating arrangement, observations indicated that this component was not well organized to assist students learning. The students were few and the classroom has enough size but the teacher C failed to arrange students in an interactive manner.</p> <p>In terms of classroom management the teacher C was observed using textbooks and other laboratory materials to support students learning in the classrooms. He also guided students learning through the classroom demonstration activities.</p> <p>Few students were involved in the demonstration of the test of hydrogen gas. The teacher attempted to work closely with active students.</p> |

| | |
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| Reflection | In terms of reflection, the teacher C did not perform the required practices. He did not ask questions about the hydrogen gas as it is written in the lesson plan. Therefore, reflection was not conducted as planned. |
| Students involvement | Teacher C observed to involve a few active/bright students. |
| Introduction | <p>The teacher D started the lesson by presenting several concepts related to the main topic. He summarized on the chalkboard the concepts such as mole concept, stoichiometry, relative quantity and the balancing of chemical equation.</p> <p>The observation showed the teacher started and continued with the lesson without examining the previous knowledge of the students. He did not use examples from the environment to link students to the subtopic under discussion.</p> |
| New knowledge | <p>Teacher D engaged students mainly by presenting the small part of the subject matter in front of the class. He used mainly chalk talk lecture method while students were listening and copying notes.</p> <p>During teaching the teacher D preferred to present the subject matter and providing examples. He called few students to solve questions on the chalkboard while others are looking and copying answers. He organized students to do individual assignments and marking in the classrooms.</p> <p>The teacher asked more of the higher order questions that develop students thinking skills and understanding. However, he did not guide students to discuss questions and exchange ideas in the groups.</p> |
| Assessment | Teacher D assessed students by asking questions, providing quizzes and homework. He organized the students' to do individual assignments during the lesson. He passed to students and marked the individual work. |

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| Classroom management | <p>Teacher D did not use textbooks like other teachers and even the materials he wrote in the lesson plan such as a pair of shoes and a dozen of scones were not actually applied during the lesson. In general, the teacher did not make use of teaching materials and resources. This affected students learning in the learner centered classroom.</p> <p>Teacher D uses traditional seating arrangement in the classroom. Students were looking on the chalkboard and there was no chance for free interactions. Due to overcrowding, it is impossible to arrange students in interactive styles.</p> <p>Teacher D did not organize well students for active classroom practices. He guided students to perform classroom practices individually. He was observed to involve and work most of the time with few students during the teaching and learning processes.</p> |
| Reflection | <p>Teacher D like others used reflection stage to ask questions, to receive answers and examine students understanding of the subject matter. The teacher did not search for the students opinions concerning teaching.</p> |
| Students involvement | <p>Teacher D observed to involve a few active/bright students.</p> |

Appendix II: Semi structured interview for teachers

Interview guiding questions:

1. What do you understand by the term learner centered teaching?
2. What are the main teaching practices do you know in the learner centered teaching?
3. What can you say about the different stages of the lesson development? Is it necessary to follow the stages? Explain briefly.
4. What role do you play in employing the learner centered teaching practices in different stages of the lesson development? Explain briefly by focusing on the introduction, new knowledge, and assessment.
5. How do you manage and control students in the classrooms?
6. Do you agree with the duty of writing the lesson plan? Explain briefly.
7. What practices do you perform during the reflection stage?
8. Provide your opinion regarding students involvement.
9. What role do students play in the learner centered classroom?
10. Why many teachers prefer to employ teacher centered approach rather than learner centered approach?
11. What support do you need in order to improve the learner centered teaching practices in the secondary schools?

Teachers' participated in the interviews

| | |
|--|---|
| Name of a teacher | A |
| Date/Time | 10 am |
| Academic qualification | Bachelor of Science with Education |
| Teaching experience | Three years |
| Participation to in-service training | Not attended |
| Participation to school based training | No school based training |
| Name of a teacher | B |
| Date/Time | 9 am |
| Academic qualification | Bachelor of Science with Education |
| Teaching experience | Six years |
| Participation to in-service training | Attended once |
| Participation to school based training | Attended frequently |
| Name of a teacher | C |
| Date/Time | 13 pm |
| Academic qualification | Bachelor of Science with Education |
| Teaching experience | Eight years |
| Participation to in-service training | Not attended |
| Participation to school based training | No school based training |
| Name of a teacher | D |
| Date/Time | 11 am |
| Academic qualification | Diploma Education and Bachelor of Science Procurement |

| | |
|--|--------------------------|
| Teaching experience | Twelve years |
| Participation to in-service training | Attended three times |
| Participation to school based training | No school based training |

Interviews

| No. | Statements from teachers A, B, C, D |
|-----|--|
| 1 | R: What can you say about the different stages of the lesson development? Is it necessary to follow stages? Explain briefly. |
| 2 | |
| 3 | A: The stages of the lesson development as good because they help teachers to conduct teaching systematically. |
| 4 | |
| 5 | A: The stages of the lesson development provide a good roadmap of the lesson and this helps the teacher to facilitate learning in a systematic manner. |
| 6 | R: What can you say about the working environment? |
| 7 | A: I am satisfied to some extent with the working conditions in this school. |
| 8 | R: What do you understand by the term learner centered teaching? |
| 9 | A: The learner centered teaching is the method which makes students participating fully during the teaching and learning processes. |
| 10 | |
| 11 | A: I guide the lesson by providing some parts of the topic for students to discuss in groups. After the discussion, I ask each group to present ideas in front of the class. |
| 12 | I encourage everyone to participate by asking questions and then discussing together. Also, I note down the ideas which need more clarification, and finally, I summarize all issues raised during the discussion. |
| 13 | |
| 14 | R: How students should be regarded in the learner centered teaching? |
| 15 | A: Under the learner centered teaching students are considered to have ideas which can be contributed to the lesson. I demonstrate to respect and support students |
| 16 | |
| 17 | |

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| 18 | because “mwanafunzi sio debe tupu” which means, “a student should not be regarded as an empty vessel” or “the student is not a tabula rasa”. |
| 19 | A: Every student in the classroom knows something related to what he/she learns. |
| 20 | These students and especially those studying in English medium schools possess many ideas gained from different educational sources. It is important to understand |
| 21 | that, good proficiency in the English language enables students access and learn various educational documents. |
| 22 | |
| 23 | R: What are the main teaching practices do you know in the learner centered teaching? |
| 24 | |
| 25 | A: I guide the lesson by providing some parts of the topic for students to discuss in groups. After the discussion, I ask each group to present ideas in front of the class. |
| 26 | I encourage everyone to participate by asking questions and then discuss together. |
| 27 | Also, I note down the ideas which need more clarification, and finally I summarize all issues raised during the discussion. |
| 28 | |
| 29 | R: What role do you play in employing the learner centered teaching practices in different stages of the lesson development? Explain briefly by focusing on the components like introduction, new knowledge, reflection, and assessment. What role do students play in the learner centered classroom? |
| 30 | |
| 31 | A: I introduce the lesson by using common practices employed by many teachers in the classrooms. I am doing so by asking questions and examine students understanding of the subject matter. |
| 32 | |
| 33 | |
| 34 | A: If I continue with the same topic, I test students’ prior knowledge and find out if it could be related to the topic that follows. In accomplishing this, I usually brainstorm with students by focusing on the relationship that exists between the prior knowledge and the new knowledge. |
| 35 | |
| 36 | A: If the topic is new, I always find something that is interesting and helps to catch the attention of the students. For example, for some topics in chemistry, I provide chemicals that relate to students’ everyday life. In biology, I use different strategies |
| 37 | |
| 38 | |

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| 39 | like drawing pictures and naming living organisms to stimulate the interest of the students towards the new topic. |
| 40 | A: In facilitating practices in the stage of new knowledge, I perceive to be exposing students to new knowledge by employing various teaching and learning practices. |
| 41 | |
| 42 | |
| 43 | A: These factors include the nature of topic under discussion as for whether it is simple or complicated, time allocated to cover the topics prescribed in the syllabus, the number of students present in the classrooms, and the understanding capacities of the students. |
| 44 | |
| 45 | |
| 46 | A: Group discussion is among the practice that is frequently used in the classrooms. |
| 47 | |
| 48 | A: I use chalk talk lecture to teach some parts of the subject matter. In this regard, I prepare and make presentation of the content in front of the class while students listen and copy. I should say that lecture is unavoidable because it is used by teachers to present and build the foundation of the subject matter. |
| 49 | |
| 50 | |
| 51 | A: If I discover that a particular concept is not clear to many students, I normally arrange a remedial session to help them to clear their misunderstanding of the subject matter. This activity is very important because learning follows a logical flow. If you neglect one subject matter, then it will continue to cause a gap in the students learning of the next topic. |
| 52 | |
| 53 | |
| 54 | |
| 55 | A: Process of asking questions to students to acquire information that helps to assess their understanding of the subject matter |
| 56 | |
| 57 | A: During reflection, I ask students questions to examine their understanding. To make reflection effective, I focus on answers from individual students and not the whole group. Normally I do not entertain chorus answers because they do not give a true picture of the students learning. |
| 58 | |
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| 61 | A: All students are free to provide their views regarding how teaching is conducted in the classrooms. You know this is a private school, so students are allowed to exercise some power and the school is open and ready to receive students' views. |
| 62 | Nevertheless, the major problem of this stage is that many teachers are not cooperative on matters related to reflection. |
| 63 | A: I use practices such as asking questions, giving quizzes and tests. I prefer more the application of homework. |
| 64 | A: I carry out an assessment at the end of the lesson to check students understanding. |
| 65 | R: How do you manage and control students in the classrooms? |
| 66 | A: I alert students regarding the rules and good behavior expected in the classroom. |
| 67 | I require students to respond and behave appropriately without stubbornness. This |
| 68 | instruction to students helps to support teaching and learning practices and ensure it progresses smoothly and with the required effectiveness. |
| 69 | A: Sometimes, depending on the nature of the problem I can order the student to |
| 70 | kneel down or get beaten by a stick. |
| 71 | A: I show my preference for interactive seating arrangement and said that |
| 72 | interactive seating arrangement is allowed in the school because it improves the student learning. |
| 73 | A: In this school, class teachers have set the seating arrangement to comply with |
| 74 | the real situation in the classrooms. Therefore, it is very difficult for a subject |
| 75 | teacher like me to try adjusting this arrangement. What I do in order to interact with |
| 76 | all students I create an environment enabling me passing to reach all students. |
| 77 | R: Provide your opinion regarding students involvement. |
| 78 | |
| 79 | A: You have to know that in the classroom, we teach students possessing different |
| 80 | behaviors and experiences. Some students always respond to questions, some do |
| 81 | not like to respond, some do not know the answer, some are discouraged, and some |

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| <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> | <p>are not ready to be discouraged. Therefore, teachers are always looking for a student who is ready to respond to the questions. As teachers, we have no option rather than accepting and supporting the student who is sharp and active.</p> <p>R: How teachers can be supported to improve the learner centered teaching practices?</p> <p>A: I believe if teachers are committed to preparing good students they can. If we inspire students to be the best, they will become, but if we do not they will not. In our school teachers are motivated to the extent that they make frequent follow-ups and offer special programs to slow students so as to help them pass the examinations</p> <p>A: Infrastructures like a laboratory, classrooms, hostels (for remote schools), transport means and the like need to be developed.</p> |
| <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p> <p>101</p> <p>102</p> <p>103</p> | <p>R: What can you say about the different stages of the lesson development? Is it necessary to follow the stages? Explain briefly.</p> <p>B: I perceive the stages of the lesson development to be good because they help teachers to conduct teaching systematically.</p> <p>B: Stages assist the teacher to simplify teaching and learning practices and thus help to make students learn more effectively. Stages provide an appropriate structure that guides and helps the teacher to accomplish the lesson objectives.</p> <p>R: What can you say about the working environment?</p> <p>B: I am not satisfied with the working conditions. It lowers the motivation towards the teaching job.</p> <p>R: What do you understand by the term learner centered teaching?</p> <p>B: The learner centered teaching is the approach that helps students to become active during the lesson. I guide and provide chances to students to practice what they have learned in the classroom.</p> |

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| 104 | R: What are the main teaching practices do you know in the learner centered teaching? |
| 105 | B: I guide students to perform the learning practices that make them active |
| 106 | throughout the lesson. I facilitate this by providing chances for students to practice |
| 107 | what they have learned. Not only that, but I believe that by regularly repeating the |
| 108 | practices, it helps them understand the concepts as they should be. |
| 109 | B: I always encourage students to put more effort and find answers to the questions |
| 110 | I provided to them. To simplify this task, I instruct them to search for information |
| 111 | from various sources such as books, the library, the internet and other means of |
| 112 | communication. |
| 113 | B: I believe students will master the concepts and understand easily if I present a |
| 114 | small portion of the subject matter rather than teaching an enormous amount of |
| 115 | materials that are difficult for students to understand. |
| 116 | R: How students should be regarded in the learner centered teaching? |
| 117 | B: Students are not tabula rasa they must possess some ideas. Proof of this is |
| 118 | occurring in cases where you find a teacher learning information from students. You |
| 119 | know these days, there are many sources that students can access and acquire |
| 120 | information. I suggest teachers and parents build the habit of motivating students to |
| 121 | search for information. |
| 122 | R: What role do you play in employing the learner centered teaching practices in |
| 123 | different stages of the lesson development? Explain briefly by focusing on the |
| 124 | introduction, new knowledge, reflection, and assessment. What role do students |
| 125 | play in the learner centered classroom? |
| | B: If I continue with the same topic, I start the lesson by reminding students about |
| | the concepts we discussed together in the classroom. Then I ask questions to |
| | scrutinize whether there is a link between the previous knowledge and the new |
| | knowledge. |
| | B: I introduce the new topic by using many examples and try to present the subject |
| | matter using various styles until it becomes clear to students. |

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| 126 | B: I start teaching by arranging students into groups, and then I supply questions |
| 127 | for discussion. Afterward, I motivate students to participate and exchange ideas to |
| 128 | answer the questions. After finishing the discussion, each group presents the |
| 129 | answers in front of the class and then receives comments from the teacher. |
| 130 | B: Students learn well when you use practices which are preferred by them. |
| 131 | B: Lecture makes students to be passive throughout the period, unless the teacher is |
| 132 | skilled enough to incorporate other learning practices. |
| 133 | B: If the topic is not understood, I repeat it by using appropriate teaching methods. |
| 134 | If it fails to work, I sometimes invite my colleagues who are teaching the same |
| 135 | subject to come to my class and teach the same topic again. |
| 136 | B: I employ reflection practice to test out if the student's concepts are clear or not. |
| 137 | B: Students' views and criticisms are important because they can be used to improve |
| 138 | teaching practices. You know based on the students views, I can easily discover the |
| 139 | teaching practices that are inappropriate. In this situation I am always ready to |
| 140 | change and adopt appropriate practices. |
| 141 | B: In the assessment, I do not use simple questions which can be answered by Yes |
| 142 | or No. |
| 143 | B: I conduct assessment of students' when the teaching continues. This process |
| 144 | helps me to discover learning problems as they arise. What I do is that, after |
| 145 | finishing teaching a small portion of the subject matter, I provide some questions to |
| 146 | examine students understanding of that portion. |
| 147 | B: What I know is that assessing and marking are the duties of the teacher. So let |
| | us emphasize and practice our profession without compromising because of several |
| | challenges. To accomplish assessment as it should be we, as teachers need to |
| | involve ourselves in this practice without leaving it to students. |
| | R: How do you manage and control students in the classrooms? |

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| 148 | B: You know it is my duty to caution students that the classroom is a place that |
| 149 | requires discipline. This environment helps to make all the practices to being carried |
| 150 | out successfully and thus benefit all students. It is important to note that students |
| 151 | who always misbehave cannot succeed in their school life. |
| 152 | B: To manage students, I visit each group, asking questions and motivating all |
| 153 | students to participate fully in learning. Sometimes I employ a technique of |
| 154 | exchanging a few students from one group to go to another group where I think they |
| 155 | can learn good behaviors that promote learning and understanding. |
| 156 | B: I prefer the U-type, round or interactive method of seating arrangement because |
| 157 | it supports the learner centered practices. |
| 158 | B: You know I support the interactive seating arrangement. It is preferred because |
| 159 | this format enhances the teaching and learning process. However, the problem is |
| 160 | that students and teachers have been experiencing traditional arrangement for a long |
| 161 | time thus it might be difficult to change. |
| 162 | R: Provide opinion regarding students involvement. |
| 163 | |
| 164 | B: I think it is a good thought to involve all students; this is because students differ |
| 165 | in the way they think and understand. Therefore, it is the teachers' obligation to |
| 166 | motivate and awake silent students to participate frequently in classroom practices |
| 167 | until these students change their behavior and become active. Leaving such students |
| 168 | in the way they behave (passive) is not good. |
| 169 | R: How teachers can be supported to improve the learner centered teaching |
| 170 | practices? |
| 171 | B: The Ministry of education needs to sensitize students to make them aware and |
| 172 | accept the learner centered teaching. In fact, it needs to do something to change |
| 173 | students' negative attitudes towards this teaching model. |
| 174 | R: What can you say about the different stages of the lesson development? Is it |
| 175 | necessary to follow the stages? Explain briefly. |

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| 169 | C: Good organization of the lesson by following stages enhances teachers' practices |
| 170 | of presenting the lesson which follows a good logical flow. |
| 171 | C: Stages assist the teacher to move smoothly from one point to another. It can be |
| 172 | from simple knowledge to the complex knowledge in order to achieve the lesson |
| 173 | objectives successfully. |
| 174 | R: What can you say about the working environment? |
| 175 | C: Both teachers and students experience several difficulties that affect everyday |
| 176 | academic activities. One is the long distance and lack of good transport to reach the |
| 177 | school. Many students after reporting to this school shift to other schools due to this |
| 178 | problem. |
| 179 | R: What do you understand by the term learner centered teaching? |
| 180 | C: The learner centered teaching motivates students to learn almost independently |
| 181 | without depending much on receiving information, ideas and knowledge from the |
| 182 | teacher. |
| 183 | C: This teaching style is surrounded by several challenges hindering its effective |
| 184 | implementation. |
| 185 | R: How students should be regarded in the learner centered teaching? |
| 186 | C: Students are not tabula rasa; they possess some ideas gained from their |
| 187 | background experiences. Therefore, a teacher must build an understanding that |
| 188 | students know or remember something from what they have learned in the lower |
| 189 | classes. |
| 190 | R: What are the main teaching practices do you know in the learner centered |
| 191 | teaching? |
| | C: The role of the teacher is mainly that of guiding, monitoring, instructing and |
| | facilitating students' practices. The teacher acts more as the facilitator of the |
| | students learning. |
| | R: What role do you play in employing the learner centered teaching practices in |
| | different stages of the lesson development? Explain briefly by focusing on the |

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| 192 | introduction, new knowledge, reflection, and assessment. What role do students play in the learner centered classroom? |
| 193 | C: If I continue with the same topic, I start the lesson by describing the concepts that already taught and examined whether there is a connection between the |
| 194 | previous knowledge and new knowledge. If I teach a new topic, I start slowly to |
| 195 | describe to students why that topic is important or whether it has any relationship |
| 196 | with what they see and hear in their everyday life. It helps to remind students and start searching for information connected to the new topic. |
| 197 | C: To me, the lecture is good for coverage of large amount of materials prescribed |
| 198 | in the syllabus. While learner centered teaching is good for making students active, learning well and understanding the subject matter. |
| 199 | C: Reflection is like a mirror to the teacher because it gives an accurate picture of |
| 200 | how the teacher facilitates the teaching and learning practices in the classroom. To |
| 201 | accomplish this practice, I usually use quiz or oral questions to examine students learning and understanding. |
| 202 | C: I assess students in a continuous manner by asking students oral or written |
| 203 | questions. This process helps me to identify students who are facing learning |
| 204 | problems. It alerts me to find the ways of helping these students. |
| 205 | C: To assess large classes, I use the technique of assessing slow students and see |
| 206 | how they respond to the questions. If I find they provide correct answers, it gives |
| 207 | me an indication that the entire class has already developed a good understanding of the subject matter. |
| 208 | C: I examine students' notes to check whether they have been writing correctly or not. Students' notes are the fundamental learning resources. |
| 209 | R: How do you manage and control students in the classrooms? |
| 210 | C: I frequently remind students that they need to discipline themselves when they |
| 211 | are in the classrooms. I tell students that good behavior is important for students. It |
| 212 | will help them learning effectively, pass examinations, and succeed in their life. |

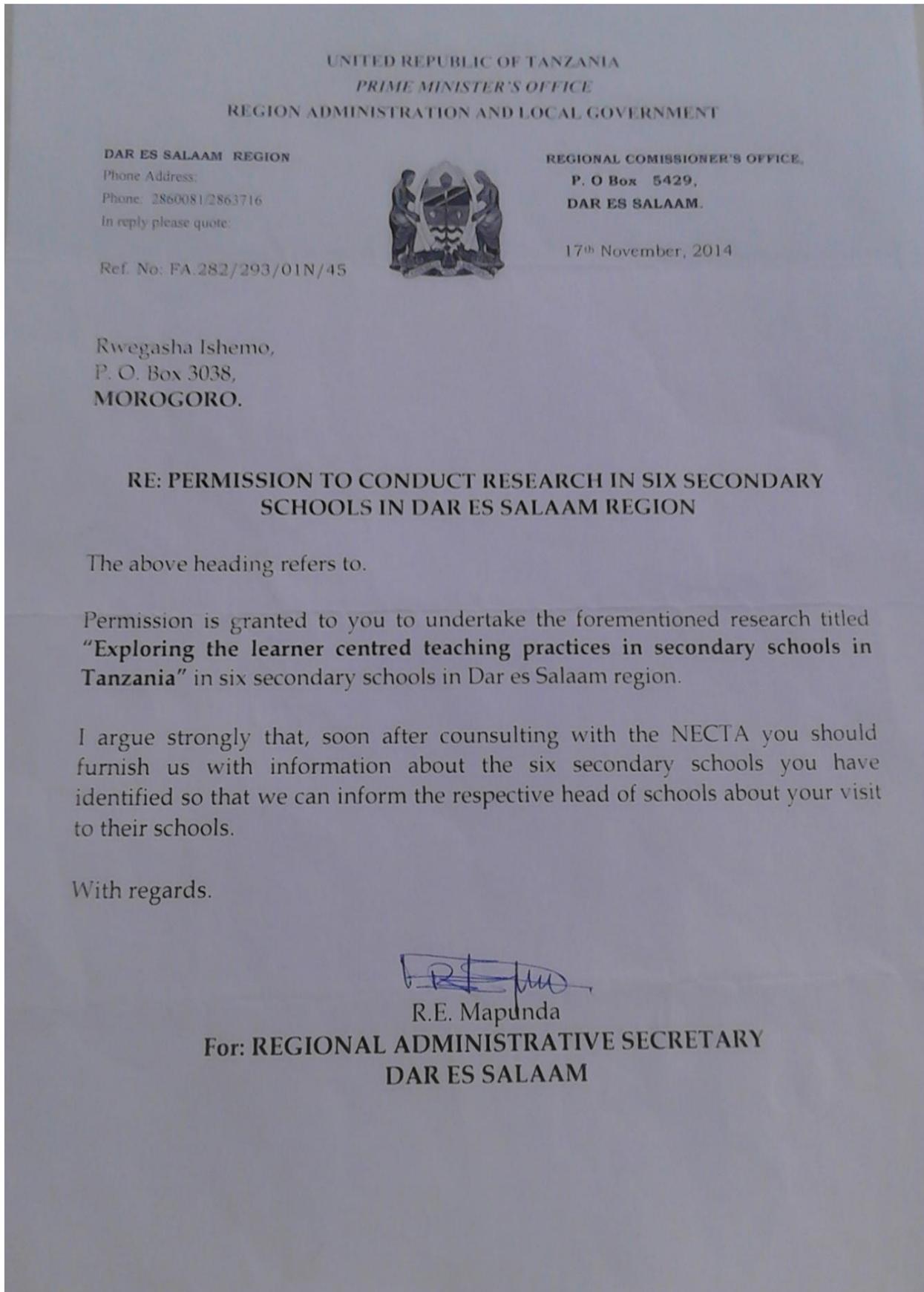
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| 213 | C: I try as much as possible to be attentive and watch the entire class to observe all |
| 214 | the activities students are performing. Doing this practice helps me to discover any |
| 215 | activity interfering with students' learning in the classroom. |
| 216 | C: I prefer a good arrangement of students because it allows effective classroom |
| 217 | interaction. |
| 218 | R: Provide opinion regarding students involvement. |
| 219 | C: Students who are participating actively in the classroom motivate teachers to |
| 220 | continue working closely with them. However, if students are passive and silent, |
| 221 | they discourage teachers. These students build a bad picture that the lesson is likely |
| 222 | not successfully conducted and this is not good for teachers. |
| 223 | R: How teachers can be supported to improve the learner centered teaching |
| 224 | practices? |
| 225 | C: Teachers need more seminars so as to update knowledge and skills in teaching. |
| 226 | R: What can you say about the different stages of the lesson development? Is it |
| 227 | necessary to follow the stages? Explain briefly. |
| 228 | D: I support the idea of following stages in teaching. Such arrangements assist the |
| 229 | teacher to appraise the students' progress as the lesson continues. The teacher uses |
| 230 | stages to discover students who have already comprehended the topic under |
| 231 | discussion and those who are still having misconceptions. |
| 232 | D: Stages are interconnected and each stage depends on how the teacher presents |
| 233 | the preceding one. Each stage is known to have a specific function of guiding |
| 234 | students to learn the subject content and finally be able to accomplish the lesson |
| 235 | objectives. |
| | R: What can you say about the working environment? |
| | D: I am not satisfied with the working conditions in the teaching job. I appreciate |
| | motivation from the school management regarding students who get grade A in the |
| | national examinations. |

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| 236 | R: What do you understand by the term learner centered teaching? |
| 237 | D: I perceive the learner centered teaching as the approach which makes students |
| 238 | become active throughout the lesson. |
| 239 | R: What are the main teaching practices do you know in the learner centered |
| 240 | teaching? |
| 241 | D: My role in the learner centered teaching is to give instructions and guide students |
| 242 | performing the learning practices by themselves. To help students learn actively, I |
| 243 | employ a group discussion method and encourage students to cooperate and work |
| 244 | together. |
| 245 | R: How students should be regarded in the learner centered teaching? |
| 246 | D: The concept tabula rasa is an old concept which made teachers to have the notion |
| 247 | that students are entering into the classroom knowing nothing. The concept was |
| 248 | proved wrong because the experience showed that, students in the modern times |
| 249 | possess knowledge gained through different ways to mention few are discussions, |
| 250 | the internet, television, radio, and magazines. |
| 251 | D: I am sure students possess knowledge that can be utilized in the classroom. I |
| 252 | therefore, disagree with the teachers assuming students are like containers always |
| 253 | waiting to be filled with information. To confirm this, today I introduced a topic by |
| 254 | asking questions, I came to realize that many students know much about the concept |
| 255 | I was about to teach. |
| 256 | R: What role do you play in employing the learner centered teaching practices in |
| 257 | different stages of the lesson development? Explain briefly by focusing on the |
| | introduction, new knowledge, reflection, and assessment. What role do students |
| | play in the learner centered classroom? |
| | D: I remark that the students can also learn in the learner centered teaching by |
| | reading the subject matter in the textbooks. |
| | D: Students can read and then be given a chance to undergo various active practices. |

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| 258 | D: I criticize the idea of teaching a small portion of content and make students understand clearly the concept under the learner centered teaching. |
| 259 | |
| 260 | D: I start introducing the new topic by relating to the students lifestyles, examples, and environment to make sure they become aware. For example for the topic of a |
| 261 | chemical equation, I start by giving examples like burning fuel and cooking food. |
| 262 | This helps making students become interested in the topic under discussion.. |
| 263 | |
| 264 | D: I start teaching by making a presentation of the portion of the subject matter. Afterward, I facilitate learning by arranging students into the groups and allow them |
| 265 | to discuss questions. As they continue with the discussion, I pass to the groups |
| 266 | clearing misconceptions and assess students learning progress. |
| 267 | D: A group of five students helps them learn successfully. A group of more than |
| 268 | seven students is not good. |
| 269 | D: I accept students' views and criticisms and take them as part of learning that |
| 270 | could improve my practices in teaching. If students proved that the teaching |
| 271 | practices are inappropriate, I am always ready to change and apply suitable |
| 272 | practices. |
| 273 | D: I arrange students into groups and provide questions to those groups. Afterward, |
| 274 | I guide students to discuss and come up with answers that would be submitted to |
| 275 | the teacher for marking. |
| 276 | R: How do you manage and control students in the classrooms? |
| 277 | D: I generate methods to control students of bad behavior in the classroom. In this |
| 278 | case, I guide students and make them busy throughout the lesson. |
| | D: I use teaching materials, aids, and textbooks so as to assist students in learning. |
| | D: I come across the challenge of the lack of materials and sometimes the lack of |
| | time to prepare or improvise teaching and learning materials. |

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| 279 | D: If I would be given a chance to choose between traditional and interactive seating |
| 280 | arrangement. I would choose the arrangement that makes students become |
| | interactive. |
| 281 | R: Provide opinion regarding students involvement. |
| 282 | D: I involve few bright students during the teaching and learning process. I called a |
| 283 | student to come in front of the class and perform calculations on the chalkboard. |
| 284 | R: How teachers can be supported to improve the learner centered teaching |
| 285 | practices? |
| 286 | D: A good example is the school and municipal provided me a certain amount of |
| 287 | money as a motivation for the good performance of students in my subject. In |
| 288 | addition to that, I was given a chance to attend a seminar coordinated by the British |
| | Council. These offers are good for the teachers' welfare. |
| 289 | |

Appendix III: Permission letter from regional education officer



UNITED REPUBLIC OF TANZANIA
PRIME MINISTER'S OFFICE
REGION ADMINISTRATION AND LOCAL GOVERNMENT

DAR ES SALAAM REGION

Phone Address:

Phone: 2860081/2863716

In reply please quote:

Ref. No: FA.282/293/01N/45



REGIONAL COMISSIONER'S OFFICE,

P. O Box 5429,

DAR ES SALAAM.

17th November, 2014

Rwegasha Ishemo,
P. O. Box 3038,
MOROGORO.

**RE: PERMISSION TO CONDUCT RESEARCH IN SIX SECONDARY
SCHOOLS IN DAR ES SALAAM REGION**

The above heading refers to.

Permission is granted to you to undertake the forementioned research titled
"Exploring the learner centred teaching practices in secondary schools in
Tanzania" in six secondary schools in Dar es Salaam region.

I argue strongly that, soon after counsulting with the NECTA you should
furnish us with information about the six secondary schools you have
identified so that we can inform the respective head of schools about your visit
to their schools.

With regards.

R.E. Mapunda

**For: REGIONAL ADMINISTRATIVE SECRETARY
DAR ES SALAAM**

Appendix IV: Consent letter from teacher A

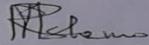
Rwegasha Ishemo
P.O. Box 3038
Morogoro

Dear participant,

You are kindly invited to participate in the research aimed at exploring the learner centered teaching practices in secondary schools in Tanzania. Specifically the research will investigate teachers' perceptions and their learner centered teaching practices. Your information is important to the research and the effort of improving the provision of education in Tanzania.

The research activities will involve collection of data by using semi structured interviews and multiple classroom observations. In addition, audio and video instruments will be used to record some information and practices, also, analysis of teaching documents will be made. Your participation is voluntary and in the process you will not be asked to reveal any information that allows your identity to be recognized. Therefore, confidentiality will be guaranteed and you may withdraw at any stage you wish not to continue with the research activities.

If you are willing to participate in the research activities, please sign this letter as declaration of your consent to participate willingly. The information collected will only be used for the purpose of this research.

Sincerely,

Rwegasha Ishemo

CONSENT

I agree to participate in the research with the title "Exploring the learner centered teaching practices in secondary schools in Tanzania" as outlined in the consent letter above.

Signature: 

Date: 23rd Jan, 2015

Appendix V: Consent letter from teacher B

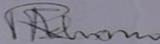
Rwegasha Ishemo
P.O. Box 3038
Morogoro

Dear participant,

You are kindly invited to participate in the research aimed at exploring the learner centered teaching practices in secondary schools in Tanzania. Specifically the research will investigate teachers' perceptions and their learner centered teaching practices. Your information is important to the research and the effort of improving the provision of education in Tanzania.

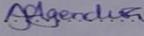
The research activities will involve collection of data by using semi structured interviews and multiple classroom observations. In addition, audio and video instruments will be used to record some information and practices, also, analysis of teaching documents will be made. Your participation is voluntary and in the process you will not be asked to reveal any information that allows your identity to be recognized. Therefore, confidentiality will be guaranteed and you may withdraw at any stage you wish not to continue with the research activities.

If you are willing to participate in the research activities, please sign this letter as declaration of your consent to participate willingly. The information collected will only be used for the purpose of this research.

Sincerely,

Rwegasha Ishemo

CONSENT

I agree to participate in the research with the title "Exploring the learner centered teaching practices in secondary schools in Tanzania" as outlined in the consent letter above.

Signature: 

Date: 27-01-2015

Appendix VI: Consent letter from teacher C

Rwegasha Ishemo
P.O. Box 3038
Morogoro

Dear participant,

You are kindly invited to participate in the research aimed at exploring the learner centered teaching practices in secondary schools in Tanzania. Specifically the research will investigate teachers' perceptions and their learner centered teaching practices. Your information is important to the research and the effort of improving the provision of education in Tanzania.

The research activities will involve collection of data by using semi structured interviews and multiple classroom observations. In addition, audio and video instruments will be used to record some information and practices, also, analysis of teaching documents will be made. Your participation is voluntary and in the process you will not be asked to reveal any information that allows your identity to be recognized. Therefore, confidentiality will be guaranteed and you may withdraw at any stage you wish not to continue with the research activities.

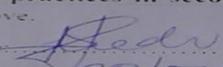
If you are willing to participate in the research activities, please sign this letter as declaration of your consent to participate willingly. The information collected will only be used for the purpose of this research.

Sincerely,

Rwegasha Ishemo

CONSENT

I agree to participate in the research with the title "Exploring the learner centered teaching practices in secondary schools in Tanzania" as outlined in the consent letter above.

Signature: .....
Date: 28/07/2015.....

Appendix VII: Consent letter from teacher D

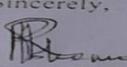
Rwegasha Ishemo
P.O. Box 3038
Morogoro

Dear participant,

You are kindly invited to participate in the research aimed at exploring the learner centered teaching practices in secondary schools in Tanzania. Specifically the research will investigate teachers' perceptions and their learner centered teaching practices. Your information is important to the research and the effort of improving the provision of education in Tanzania.

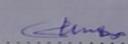
The research activities will involve collection of data by using semi structured interviews and multiple classroom observations. In addition, audio and video instruments will be used to record some information and practices, also, analysis of teaching documents will be made. Your participation is voluntary and in the process you will not be asked to reveal any information that allows your identity to be recognized. Therefore, confidentiality will be guaranteed and you may withdraw at any stage you wish not to continue with the research activities.

If you are willing to participate in the research activities, please sign this letter as declaration of your consent to participate willingly. The information collected will only be used for the purpose of this research.

Sincerely,

Rwegasha Ishemo

CONSENT

I agree to participate in the research with the title "Exploring the learner centered teaching practices in secondary schools in Tanzania" as outlined in the consent letter above.

Signature: .....
Date: 24/2/2015.....

Appendix VIII: Guidelines to consider for preparing, executing and assessing the learner centered teaching practices

| Components/Stages | Classroom practices |
|-------------------|--|
| Planning | <p>Make a deep and well thought preparation of the lesson</p> <p>Understand and establish the flow of the lesson</p> <p>Write a detailed lesson plan</p> <p>Prepare teaching and learning materials in advance</p> |
| Introduction | <p>Introduce the lesson by examining students previous knowledge</p> <p>Introduce new topic by relating to students real life experiences</p> <p>Introduce the lesson using various engaging methods</p> |
| New knowledge | <p>Present the subject matter in various ways (use multiple teaching methods)</p> <p>Make sure the students learn actively by doing many practices</p> <p>Provide questions which develop students thinking</p> <p>Ask questions that focuses on why and how</p> <p>Make the connections between subject matter and real life experiences</p> <p>Guide students seeking knowledge by themselves</p> <p>Encourage free discussions</p> <p>Encourage students presenting and defending their ideas</p> <p>Encourage students critiquing others</p> <p>Motivate students thinking by initiating a controversial discussion</p> <p>Cover a small amount of materials that lead to deeper understanding</p> |
| Management | <p>Organize the students, classroom arrangement, time, materials</p> <p>Encourage students cooperation and sharing of ideas</p> <p>Make sure learning environment is real and authentic</p> <p>Encourage students to express ideas in a definite language</p> <p>Make use of the students existing language skills to support learning</p> <p>If students do not talk in their groups see how to assist and motivate</p> |
| Reflection | <p>Inviting student questions, answers, ideas and challenges</p> <p>Giving students opportunity to talk about their views and reflect</p> <p>Share power with students to promote their engagement</p> |
| Assessment | <p>Examine students understanding of the subject matter</p> <p>Assessment should be conducted during teaching in an ongoing manner</p> <p>Help students judging their learning progress</p> |
| Materials | <p>Use real materials</p> <p>Encourage the use of various tools</p> <p>Use various materials beyond the standard ones</p> |
| Conclusion | <p>Make sure the lesson objectives have been achieved</p> <p>Summarize key concepts and identify the points to be remembered and prepared for the next lesson and give homework</p> |

Schriftliche Erklärung

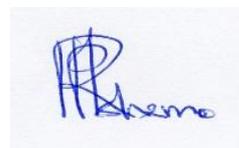
Hiermit versichere ich, dass die vorliegende Arbeit ohne unzulässige Hilfe und ohne Benetzung anderer als der angegebenen Hilfsmittel angefertigt wurde, und dass die aus fremden Quellen direkt oder indirekt übernommenen Gedanken in der Arbeit als solche kenntlich gemacht sind.

Es wurde nicht die Hilfe eines Promotionsberaters in Anspruch genommen und es waren keine Personen bei der geistigen Herstellung der vorliegenden Arbeit beteiligt.

Die vorgelegte Arbeit wurde weder im Inland noch in Ausland in gleicher oder in ähnlicher Form einer anderen Prüfungsbehörde zum Zwecke einer Promotion oder eines anderen Prüfungsverfahrens vorgelegt oder veröffentlicht.

Es haben keine früheren erfolglosen Promotionsversuche stattgefunden.

Leipzig, den 30. März 2022

A handwritten signature in blue ink, appearing to be 'R. Keme' or similar, written on a light blue background.