

LEARNER-CENTRED TEACHING IN TANZANIA: GEOGRAPHY
TEACHERS' PERCEPTIONS AND EXPERIENCES

By

Evaristo Andreas Mtitu

A thesis

Submitted to Victoria University of Wellington
in fulfilment of the requirements for the degree of
Doctor of Philosophy

Victoria University of Wellington

(2014)

Contents

ABSTRACT	vii
ACKNOWLEDGEMENTS	ix
DEDICATION	xii
CHAPTER 1	13
THE CONTEXT AND THE NATURE OF THE STUDY	13
<i>Introduction</i>	13
<i>The Context of the Study</i>	13
<i>Historical overview of education</i>	16
<i>Education structure</i>	24
<i>Role and position of Geography in Tanzania Education System</i>	25
<i>Research background</i>	27
<i>Curriculum transformation and LCT</i>	28
<i>The research problem and research questions</i>	32
<i>Research significance</i>	33
<i>Statement of researcher's position</i>	33
<i>Chapter summary</i>	35
CHAPTER 2	36
LEARNER-CENTRED TEACHING AND THE COMPLEXITIES OF ITS IMPLEMENTATION: A CRITICAL PERSPECTIVE APPROACH	36
<i>Introduction</i>	36
<i>Origin of critical perspective stance</i>	37
<i>Critical perspective approach: Basic premises</i>	40
<i>Developing learner-autonomy</i>	43
<i>Complexities and contradictions in the implementation of LCT</i>	45
<i>Positioning of critical perspective theory to the study</i>	53
<i>Chapter summary</i>	57
CHAPTER 3	58
LITERATURE REVIEW	58
<i>Introduction</i>	58
<i>The relational instructional practice of LCT</i>	58
<i>Constructivism as a philosophy of knowledge construction</i>	69
<i>Criticism of constructivism as a philosophy of knowledge construction</i>	79
<i>Teacher's pedagogical reasoning and decision-making</i>	82
<i>Collaborative teaching and learning</i>	89

<i>Authentic evaluation and assessment</i>	91
<i>Teacher education</i>	93
<i>Geography education and LCT approaches.</i>	95
<i>Culturally responsive pedagogy</i>	102
<i>The gaps in the literature</i>	105
<i>Chapter summary</i>	105
CHAPTER 4	107
RESEARCH DESIGN AND METHODOLOGY	107
<i>Introduction</i>	107
<i>Research design: interpretive and constructivism.</i>	108
<i>Qualitative approach</i>	109
<i>Multiple case study approach</i>	111
<i>Rationale for qualitative case study</i>	113
<i>Sample selection</i>	114
<i>Specific sample selection criteria</i>	116
<i>Data collection methods and procedures</i>	118
<i>Data analysis, organisation and interpretation</i>	126
<i>Ethical considerations</i>	130
<i>Limitations of the study</i>	133
<i>Chapter summary</i>	135
CHAPTER 5	137
FINDINGS WITHIN CASE STUDIES	137
<i>Introduction</i>	137
<i>Contextual description of research site one</i>	137
<i>Description of case study one (Marco)</i>	138
Teacher's understandings of LCT approach	138
Teacher's pedagogical reasoning and decision-making during the planning process vis-à-vis LCT	139
Teacher's teaching practice vis-à-vis LCT approach.....	140
Teacher's evaluation of classroom instructional practices vis-à-vis learner-LCT approach	142
Opportunities in the implementation of LCT approaches.....	144
Challenges in the implementation of the LCT approach.....	145
Summary of Marco's descriptions	146
<i>Description of case study two (Agape)</i>	146
Teacher's understandings of LCT approach	147
Teacher's pedagogical reasoning during the planning process vis-à-vis LCT approach	147
Teacher's teaching practice vis-à-vis LCT	148
Teacher's evaluation of classroom instructional practices vis-à-vis LCT	152
Opportunities in the implementation of LCT approach	153
Challenges in the implementation of LCT approach.....	154
Summary of Agape's descriptions	155
<i>Description of case study three (Sigimba)</i>	156

Teacher's understanding of LCT approach.....	157
Teacher's pedagogical reasoning during the planning process vis-à-vis LCT.....	158
Teacher's teaching practice vis-à-vis LCT beliefs.....	159
Teacher's evaluation of classroom instruction practices vis-à-vis LCT approach.....	163
Opportunities in the implementation of LCT approach.....	164
Challenges in the implementation of LCT approach.....	165
Summary of Sigimba's descriptions.....	166
<i>Research site one findings description summary</i>	166
<i>Contextual descriptions of research site two</i>	168
<i>Description of case study four (Amos)</i>	168
Teacher's understandings of LCT approach.....	168
Teacher's pedagogical reasoning during the planning process vis-à-vis LCT.....	169
Teacher's teaching practices vis-à-vis learner-centred teaching beliefs.....	169
Teacher's evaluation of classroom instructional practices vis-à-vis LCT approach.....	173
Opportunities in the implementation of LCT approach.....	175
Challenges in the implementation of LCT approach.....	175
Summary of Amos' descriptions.....	176
<i>Description of case study five (Daniel)</i>	176
Teacher's understanding of LCT approach.....	176
Teacher's pedagogical reasoning during planning process vis-à-vis LCT.....	177
Teacher's teaching practice vis-à-vis LCT beliefs.....	179
Teacher's evaluation of classroom instructional practices vis-à-vis LCT.....	183
Opportunities in the implementation of LCT approach.....	185
Challenges in the implementation of LCT approach.....	185
Summary of Daniel's descriptions.....	186
<i>Description of case study six (Frida)</i>	187
Teacher's understandings of LCT approach.....	187
Teacher's pedagogical reasoning during the planning process vis-à-vis LCT.....	188
Teacher's teaching practice vis-à-vis LCT beliefs.....	189
Teacher's evaluation of classroom instructional practices vis-à-vis LCT.....	193
Opportunities in the implementation of LCT approach.....	195
Challenges in the implementation of LCT approach.....	195
Summary of Frida's descriptions.....	196
Research site two findings description summary.....	196
<i>Contextual description of research site three</i>	198
<i>Description of case study seven (Steven)</i>	198
Teacher's understandings of LCT approach.....	199
Teacher's pedagogical reasoning during planning process vis-à-vis LCT beliefs.....	199
Teacher's teaching practices vis-à-vis LCT beliefs.....	201
Teacher's evaluation of classroom instructional practices vis-à-vis LCT.....	203
Opportunities in the implementation of LCT.....	204
Challenges in the implementation of LCT approach.....	205
Summary of Steven's descriptions.....	205
<i>Description of case study eight (Heri)</i>	206
Teacher's understandings of LCT approach.....	206
Teacher's pedagogical reasoning during the planning process vis-à-vis LCT beliefs.....	207
Teacher's teaching practice vis-à-vis LCT beliefs.....	208
Teacher's evaluation of classroom instructional practices vis-à-vis LCT.....	210
Opportunities in the implementation of LCT.....	210
Challenges to the implementation of LCT.....	211
Summary of Heri's descriptions.....	211
<i>Description of case study nine (Gregory)</i>	212

Teacher's understandings of LCT approach	213
Teacher's pedagogical reasoning during the planning process vis-à-vis LCT beliefs.....	214
Teacher's teaching practices vis-à-vis LCT beliefs.....	214
Teacher's evaluation of classroom instructional practices vis-à-vis LCT	216
Opportunities in the implementation of LCT	216
Challenges in the implementation of LCT	217
Summary of Gregory's descriptions.....	217
<i>Research site three findings description summary</i>	218
CHAPTER 6	220
ANALYSIS OF FINDINGS	220
<i>Introduction</i>	220
<i>Case studies' analysis from research site one</i>	220
Teachers' understanding of LCT	221
Teachers' pedagogical reasoning and decision-making during the planning process	222
Teachers' teaching practices.....	223
Teachers' evaluation of classroom instructional practices	228
Summary of data analysis from research site one.....	231
<i>Data analyses from research site two.</i>	231
Teachers' understanding of LCT	232
Teachers' pedagogical reasoning and decision-making during the planning process	233
Teachers' teaching practices.....	235
Teachers' evaluation of classroom instructional practices	240
Summary of data analysis from research site two.....	243
<i>Data analyses from research site three</i>	244
Teachers' understanding of LCT	244
Teachers' pedagogical reasoning and decision-making during the planning process of classroom teaching.....	246
Teachers' teaching practices.....	247
Teachers' evaluation of classroom instructional practices	251
Summary of data analysis from research site three	254
CHAPTER 7	256
DISCUSSION OF FINDINGS	256
<i>Introduction</i>	256
<i>The contestation of selected themes</i>	256
Constructivist view of knowledge construction	256
Language and cultural-context in LCT	258
Teacher-student power relation in LCT.....	260
The nature of the curriculum	263
Teacher's substantive and syntactic knowledge	267
Classroom organisation and management.....	268
<i>The perceived learner-centred teaching dilemmas</i>	271
Language barrier.....	271
Class sizes, curriculum design, and teacher shortage.....	272
Shortage of instructional resources.....	278
Lack of in-service training for LCT.....	279
Lack of cultural-context curriculum relevance	281
<i>Chapter summary</i>	282

CHAPTER 8	284
CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS	284
<i>Introduction</i>	284
<i>Conclusions</i>	284
<i>Implications</i>	286
<i>Recommendations</i>	287
Recommendations for policy action	287
Recommendations for practice	287
Recommendations for further research	288
<i>Chapter summary</i>	289
References	290
APPENDICES	314
<i>Appendix 1: Marco’s observed lesson plan.</i>	314
<i>Appendix 2: Frida’s observed lesson plan.</i>	316
<i>Appendix3: Victoria University of Wellington Faculty of Education Research Ethics Committee approval letter.</i>	318
<i>Appendix4: Request letter to undertake field work in Iringa municipality.</i>	319
<i>Appendix5: Permission letter to undertake field work in Iringa municipality.</i>	320
<i>Appendix 6: Information sheets for Teachers.</i>	321
<i>Appendix 7: Consent form for Teachers.</i>	324
<i>Appendix 8: Information sheet for students.</i>	325
<i>Appendix 9: Information sheet for parents/caregivers.</i>	327
<i>Appendix 10: Consent form for students and parents/caregivers.</i>	329
<i>Appendix 11: Consent form for students and parents/caregivers (Swahili version).</i>	331
<i>Appendix 12: Guiding semi-structured interview questions for secondary school geography teachers.</i>	333
<i>Appendix 13: Classroom observation schedule.</i>	334
<i>Appendix 14: List of tables and figures.</i>	335
<i>Appendix 15: Glossary of acronyms and research terms.</i>	336

ABSTRACT

The shift from teacher-centred to learner-centred teaching approaches is one of the aspects embarked on to address quality issues in delivery of secondary education in Tanzania. The basis for a shift in teaching paradigm has been motivated by the need for learners to effectively engage in the knowledge construction process. This thesis reports the findings about Learner-Centred Teaching (LCT) in Tanzania from the perceptions and experiences of secondary school geography teachers. Applying a lens of a critical perspective (CP) approach as a theoretical framework, the study sought to respond to the major question: how do geography teachers perceive and experience regarding Learner-Centred Teaching in Tanzania's secondary school? The main question was guided by four sub-research questions which included: how do geography teachers in Tanzania understand LCT?; how does a teacher's pedagogical reasoning and decision-making during the planning process reflect LCT beliefs?; how does a teacher's teaching practice reflect LCT beliefs?; and how does a teacher's evaluation of classroom instructional practices place the learner at the centre of instruction? The research focus was to assess the implementation of LCT approach as advocated by the educational policy and the mandated curriculum documents.

The study utilised the interpretive and constructivist qualitative case study approach involving nine case studies purposely selected from three research sites. The data were collected using semi-structured interviews, classroom observations and detailed reviews of teachers' own teaching portfolios. Applying an interpretive generative inductive data analysis approach, data were analysed based on the specific meaning patterns that were emerging from individual case studies. Themes were developed by comparing and contrasting meaning patterns within and across case studies.

Findings presented aspects which influence teachers' practices of LCT including: the constructivist view of knowledge construction, role of language and cultural

context in LCT, teacher-students' power relation, and the nature of the curriculum. Other aspects raised include: teachers' substantive and syntactic knowledge and classroom organisation and management. The study also presents some dilemmas against implementation of LCT. These dilemmas include language barrier, class sizes; curriculum design; and teacher shortage, and shortage of instructional resources. Other dilemmas include: lack of both in-service training for LCT and cultural-context specific curriculum relevance.

The researcher recommends the need to address dilemmas in the implementation of LCT approaches such as: class sizes, curriculum design, and teacher shortage; shortage of instructional resources and facilities; and the medium of instruction; geography curriculum should be designed to allow teachers' flexibility; and teachers' need of mastery in the substantive and syntactic knowledge. Other recommendations include: teachers' need of in-service training regarding the conceptual and theoretical understanding of LCT, its approaches, and application in geography classrooms; teachers' use of an integrated-formative evaluation and assessment approaches; and the need of further research on aspects around the same topic, taking into consideration different theoretical orientations and methodological approaches.

The study contributes knowledge to the international literature regarding LCT and its implementation complexities from the developing economy's perspectives. In particular, the study contributes to the understanding of LCT from a CP theoretical framework. It also provides an avenue for debate and consideration on the importance of initial and in-service teacher education, the curriculum, and the need to integrate learners' culture for effective implementation of LCT. The researcher has developed three models to support the practice of LCT. These are: the constructivist learning process; an integrated LCT based curriculum; and the classroom organisation and management framework models.

ACKNOWLEDGEMENTS

This thesis is the end of my four year long journey in obtaining my PhD. This end is the result of efforts and commitments of both the researcher and other people who in one way or another were involved in my study. I am therefore indebted to all those who resulted in this achievement. Since I cannot mention them all, I wish to particularly appreciate the following on behalf of all people who devoted their time, thought, and resources to ensure my PhD journey was successfully concluded.

I first of all, thank the management of the Open University of Tanzania (OUT) for granting me study leave permission of which without it, it could have been impossible to reach this climax. The OUT management decision to allow me to pursue a PhD cannot be taken for granted. I promise to deliver my service to the expectation of the OUT management and the wider community. I also wish to thank the Iringa Municipal Director for giving me permission to undertake my study in the region. I thank the schools, teachers, and students who made my data collection possible. I could not have completed my field work without their readiness and consent to participate in the study.

My PhD programme was funded by Research Trust Doctoral Assistantship Scholarships (VUWDASs) of Victoria University of Wellington. I gratefully appreciate the Victoria University of Wellington (New Zealand) for the scholarship which enabled me to undertake a full time PhD programme at the University and field research in Tanzania. The scholarship also enabled me to attend and present a scholarly paper at Kenyatta University International Conference for Educational Reforms and Innovations in Enhancing Quality and Equity, 20-22 February 2012.

My special thanks and appreciation are accorded to my principal supervisor Professor Wally Penetito (PhD) for his advice and guidance during my doctoral research period. As my supervisor, he always guided me to be focused on the thesis argumentation while raising critical issues to augment the existing body of

knowledge. His critiques helped me to broadly think about my study and thus gain confidence and a sense of study ownership.

I acknowledge the intellectual support from my secondary supervisor Dr Louise Starkey for her supervision and rich contribution throughout my entire course of study. Her deeper understanding of classroom processes and an extensive experience in educational research and critical reflection on my study made her a rich resource scholar for this thesis. Dr Starkey emphasised clarity and coherence of work that led to the compatibility between research aspects and chapters. Special thanks and appreciations are accorded to my thesis examiners: Associate Prof. Anangisye Sambo from the University of Dar Es Salaam (Tanzania), Dr. Greg Burnett from the University of Otago (New Zealand), and Dr. Anne Hynds from the Victoria University of Wellington (New Zealand). Their examination feedback formed a rich researcher's experience that enabled modification of the thesis from different thinking perspectives. Similar appreciation is accorded to the chair of the oral examination panel Prof. Paul Morris from the Victoria University of Wellington (New Zealand). Also, my kind appreciation is accorded to Beth Thomas who proofread this thesis.

In completing this PhD journey, I was accorded with support from the offices of post-graduate and the school of Te-Kura Maori. I thus take this opportunity to acknowledge Sheila, Alix and Pine for their kind and tireless administrative support to me in particular and the post-graduate students in general.

Furthermore, I would like to thank my wife, Feida for her patience and support especially during my study period. I understand that a PhD programme is pursued by a human being who needs to be nurtured, cared for, and always encouraged. My wife provided that kind of support in her usual generous, loving way. Besides her professional and career responsibilities, she also managed family responsibilities. I thank my daughters Christina, Prudensiana and Kandida for their patience during all the time of my absence. My parents, brothers and sisters have always been encouraging and praying for my achievement. I am so grateful to have them.

I also thank my fellow post-graduate students for their academic and social interactions which formed a significant development of my thesis. More importantly, my colleagues contributed much to my global educational experience. Lastly, by order of appreciation, I do acknowledge the social network links and bloggers for enriching me with current socio-economic and political information on Tanzania in particular and globally. In this I would like to mention the jamii forums, Ludewa@yahoogroups.com and Francis Godwin, Mjengwa and Michuzi blogs. I have gained abundant knowledge from these links which enabled me to feel as if I was doing my study at home.

DEDICATION

This thesis is dedicated to my wife, Feida, my late son Reagan, my daughters:
Christina, Prudensiana, and Kandida.

CHAPTER 1

THE CONTEXT AND THE NATURE OF THE STUDY

Introduction

This chapter introduces the thesis. The thesis examines the implementation of LCT approaches as directed by the 2005 competence-based curriculum. It examines the implementation of LCT from the perceptions and experiences of a group of secondary school geography teachers in Tanzania. As opposed to the teacher-centred teaching, LCT is a competence-based instructional approach which seeks teachers' active involvement of students in the classroom processes with emphasis on students' learning. Therefore, central to change in pedagogical orientation was the need to empower students through enhanced critical and reflective thoughts resulting from the integration of life experience they bring to school. Promoting students' creative, critical thinking, and problem-solving skills, the focus of LCT is to provide opportunities for students to construct knowledge and apply it beyond the school. Guided by the critical perspective approach (CP) as a theoretical framework, the thesis examines the implementation of LCT from the perceptions and experience of secondary school geography teachers.

The chapter constitutes eleven sections: the introduction; the context of the study; historical overview of Tanzania's education; and its current structure. Other sections include: the role and position of geography in Tanzania; the research background; curriculum transformation; the research problem and research questions; research significance; statement of the researcher's position; and the chapter summary.

The Context of the Study

The United Republic of Tanzania (URT) represents the context of this study. The URT is a country that belongs to the world's developing economies. Formed in April 1964, the URT came into existence after the union of two independent countries namely Tanganyika and Zanzibar (Kitta, 2004). According to Kitta, Tanganyika, the British mandated territory became independent on December 9th 1961 whereas,

Zanzibar gained its independence after the demise of Arabs' regime following the January 1962 Zanzibar Revolution. Immediately after independence of these countries, both Tanganyika and Zanzibar experienced serious socio-economic difficulties that resulted in massive poverty, increased diseases, and ignorance. It is argued that the post-colonial socio-economic conditions (Kitta, 2004) spearheaded the unification of Tanganyika and Zanzibar in 1964. This argument is also supported by Mushi (2012) when he explains that the need for increased resources mobilisation, socio-economic development, and internal and international security influenced the founder leaders for Tanganyika and Zanzibar to unite the two countries leading to the birth of the United Republic of Tanzania. Therefore, it could be agreed that the union of Tanganyika and Zanzibar was influenced by their both, similar colonial influence and socio-economic backgrounds. The United Republic of Tanzania (URT) is located in the central eastern part of Africa. It is one of the five countries that form the East African Community. Other countries in the East African Community include Kenya, Uganda, Rwanda, and Burundi.

The 2012 national census place the URT at a population of 44 million (URT, 2012). The Agriculture is the country's major economic activity that employs about 80 percent of the workforce and contributes half the Gross Domestic Product (GDP) (URT, 2012). Other economic activities according to the 2012 URT's national census report include tourism, mining, and small scale processing industries such as food, textiles, and timber. Immediate after independence, it was observed that the education provided since the birth of the United Republic of Tanzania, was still characterised by the colonial education legacy. The post colonial education was provided not only on the basis of socio-economic, cultural, and political status of individuals, it was also not relevant to the Tanzania's society. The education was more theoretical than practical lacking linkage of what is learned in school and students' real life (Mushi, 2012). Mushi equates Tanzania's education immediate after independence with the colonial education.

According to Mushi, the education provided soon after independence presented similar limitations to that provided during colonialism. He states that the education immediate after independence was provided not only on class basis, its curriculum was also not adequate in terms of depth, relevance, as well as comprehensiveness.

This could mean that the post-colonial education perpetuated the aims and objectives of the colonial education i.e. preparing few individuals to serve their masters. Considering the limitations of the Tanzania education immediate after independence, the former president of Tanzania mwalimu (teacher) J.K. Nyerere in the year 1967 developed the Education for Self-Reliance (ESR) as a philosophy and policy instrument to address the challenges of education inherited from the colonial education and provide guideline for planning and provision of education according to the learners' and society needs. The Education for Self-Reliance (ESR) according to Mushi (2012) critiqued the colonial education stating that its curriculum was not developed to enhance learners' acquisition of multiple skills; it instead, aimed to impose the colonial cultures and educate few people to serve the colonial administration.

Given this emphasis, it is correct to say that the post colonial education was not relevant and applicable to socio-economic demands of the Tanzania's society. Therefore, the ESR was introduced in order to challenge and improve the education system that was inherited from the colonial legacy. The ESR emphasised the integration of education and societal real life. According to Nyerere (1967), there was a need for education to be integrated with community life and used as an important agent for socio-economic, cultural and political development.

However, despite the efforts undertaken to address the challenges of education provision in Tanzania immediate after independence, two decades later (1980s) the URT experienced the decline of education in terms of access, quality, and equity (Kitta, 2004). Kitta (2004) argued that the decline in the provision of education was caused by the economic crisis and reforms that placed structural and financial limitations in the provision of education services especially in the developing economies such as Tanzania. One of the major reforms that were meant to respond to the economic crisis was cost sharing. Cost sharing (Kitta, 2004) demanded people to contribute the services they get including education. Unfortunately this new policy according to Kitta (2004) and Mushi (2012) did not consider how the reforms affected people's economic production capacity and their ability to contribute to the services. As a result, many people failed to pay for their children's education, the situation that subsequently accelerated dropout and absenteeism rate. Mushi (2012)

explains about the effect of the 1980s socio-economic reforms on education stating that the reforms not only created social stratification on access to and acquisition of education; but also the reforms resulted in many parents not sending their children to school. This then drastically decreased enrolment rate that subsequently increased the illiterate rate (Mushi, 2012).

Mtitu (2008) critically presents that the financial limitation and complexities in educational planning and its provision in Tanzania was influenced by the global economic liquidation and the subsequent socio-economic reforms. According to Mtitu, the continued global socio-economic reforms have been adversely impacting the education systems of the developing economies including Tanzania. Mtitu suggests that many of these reforms have been associated with conditional ties attached in the aids and funding from the multilateral companies and International Monetary Fund and the World Bank (Mtitu, 2008). Mtitu is of the opinion that unless the challenges of the Western influences on the Tanzania's education system are adequately addressed, the provision of quality education will remain in vain.

Historical overview of education

Background to local pre-colonial context (elders, transmission, and indigenous pedagogies)

Bunyi (2006) presents a critique against the colonialists' belief that before their coming to Africa, Africans were purely uneducated and uncivilised due to the absence of African based education systems. According to Bunyi, before the colonial influence in Africa, Africans had their own ways of education provision to the young people. Bunyi explains that though African education before colonialists was not formalised i.e. it had no organised curriculum, school infrastructures, professional teachers, and formal education management systems and structures; the pre-colonial Africa education was relevant, useful, and well linked to the learners' real life. Bunyi explains further about the pre-colonial African education suggesting that it was worthwhile as it was provided according to the needs and individuals' roles, and interests (Bunyi, 2006). The colonial belief that Africans were uneducated during the

colonial imposition in Africa is also argued against by other scholars including Diallo (1997). According to Diallo, Africa had already developed an advanced civilisation and effective African based methods and approaches of educating its people even before the arrival of Europeans. Diallo provides some examples of how education was provided during pre-colonial period suggesting that elders (men and women) based on their different responsibilities had the role of transmitting knowledge, values, and customs to their children. As also noted before, the pre-colonial African education was provided according to the needs of the time, that is, it was intended to solve a particular problem or train individuals to take up potential societal roles. Bunyi (2006) says of pre-colonial African education (informal) that it built the philosophical foundation of the nature of today's formal education in terms of purpose and scope. According to Bunyi, African formal education systems were preceded by informal methods that guided the provision of education.

In Tanzania for example, pre-colonial African education system aimed at enhancing in the children the values of hospitality, bravery, the dignity of labour, respect for elders, and communal life (Diallo, 1997). Diallo's contention regarding the aim and nature of provision of the pre-colonial African education suggests that the pre-colonial education was based on inheritance and continuity from one generation to another. This could mean that the pre-colonial African education was provided on the basis of a life long process. The pre-colonial African education was not only integrated in the day to day community activities but also it was continually provided as from birth to cradle (Mushi, 2012). Mushi characterises the pre-colonial education when he states *'traditional education was not separated from other spheres of community activity. It was the whole life of the community and did not take place at a special time of a day or life' but all day and almost every day throughout life'* (p. 35). This means that the pre-colonial African education was holistic in nature, that is, it prepared the child for a complete life.

Siwale and Seif, (1997) also explain that during the pre-colonial period in Tanzania, children learnt what they lived. They further argue that children learnt through practical orientation based on their routine activities. Siwale's and Seif's assertion is also supported by Dlamini (2008) who reiterates that during the pre-colonial period, children learnt by doing, actively engaging in participatory education through

ceremonies, rituals, imitation, recitation, and demonstration. This could mean that children learnt through imitating what their elders did. Dlamini provides examples of how children were involved in the day to day activities according to sex suggesting that when men worked, hunted, or played, boys would imitate. Likewise, daughters were asked to imitate women activities with expectation they will eventually practice by themselves (Dlamini, 2008). Therefore, in terms of teaching and learning approaches used, it could be logically agreed that they were based on learners' involvement in field activities through direct observation and practice. The significant pre-colonial educational challenge was the transmission of the readymade curriculum content from generation to generation. This transmission approach seemed to limit learners' sharing of their lived experiences and therefore the approach did not promote learners' creativity, critical thinking, and problem solving at higher levels.

One of the features of the pre-colonial African education curriculum was its use of the mother tongue as medium of instruction (Siwale & Sefu, 1977). Different from the colonial and post-colonial period where English was used as the medium of instruction, during pre-colonial period, elders used their tribal languages to educate their children. Siwale and Sefu argued that the use of the mother tongue languages enhanced not only children's understanding of the topic under discussion but also they promoted children effective participation on the topic. The use of the mother tongue based on tribe languages according to Siwale and Sefu (1977) resulted in the development of learning autonomy, self-confidence, critical thinking and initiative among learners. Similarly, Bunyi (2006) explains about the role of language in enhancing learning stating that when the topic is discussed using the learner's first language it influences the learner to effectively constructs knowledge, i.e. easily internalising the topic by connecting the topic to the learner's routinely activities. This means that learner's first language promotes the learner to assimilate and confidently shares his/her learning experience resulting in the construction of new understanding of the topic. The learner's freedom and flexibility in the teaching and learning process according to Bunyi promotes his/her critical thinking, creativity, and problem solving skills. More importantly, the first language promotes learner's self-confidence and encourages effective participation in the classroom processes. This

subsequently necessitates learners' application of the acquired knowledge in their daily life i.e. learning to live.

Studies further explain about other means of education provision during pre-colonial period. They include mass media such as tales, legends, whereby children learnt history, geography, natural sciences, astronomy, and other subjects (Siwale and Sefu, 1997). Teaching according to Siwale and Sefu was mainly informal, though there were also elements of formal system. In the formal system (Kitta, 2004), elders with specific expertises offered special skills according to age, gender, sex, and individual's possession of special ethics in the community. These elders according to Kitta included men and women in the village or clan who were assigned to transmit specialised knowledge to selected boys and girls as they grew up. This means that pre-colonial education was provided based on the individual's sex, talents, and needs as from childhood to adulthood. The aim was to integrate children in the society's life as a whole (Kitta, 2004).

Given the nature and methods of education provision during pre-colonial period in Tanzania, it could be agreed that the indigenous education was provided to both sexes where, emphasis was focused on the responsibilities and relationships that were attached to each sex. In terms of methods, it could be argued that both teacher-centred and learner-centred approaches were concurrently used. The elders were the source of knowledge to their children. Children learnt by doing and imitating what their elders did, and thus, the education provided reflected the day to day needs of the children and the community. According to Kelly (1999), indigenous education enabled children to learn survival skills through experiences and instructions from the elders thus effectively adapting to different environments. Despite all the merits of the pre-colonial education in Tanzania, the nature of education and its provision posed the need for serious critiques and challenges.

The pre-colonial education system presented some structural and curriculum challenges. According to Siwale and Sefu (1977), the education developed conservative attitudes and superstition among children. Siwale and Sefu suggest that some curricular topics were secretly taught to one or a few individuals. They further explain their concern that important knowledge in medicine for example, was

transmitted to one or few members of the village or clan chosen by an expert according to individual's specific characteristics including secrecy, memory, and interest. Thus in the event of an expert dying unexpectedly, valuable knowledge was not adequately passed on. The absence of writing in most cases challenged the capacity for abstraction and capitalisation of knowledge. Odora (1994) suggests that due to the absence of libraries and/or recorded words, people devised alternative ways of acquiring knowledge. These different ways of knowledge acquisition included learning from pictures that covered the walls of tombs, temples, and pyramids. They also used proverbs and writings on caves to construct and record knowledge (Odora, 1994). These forms and nature of knowledge acquisition during the pre-colonial period, presented a limit on the active engagement of children in the learning process. More importantly the system of education posed some features of curriculum inequalities and stratification among learners.

Colonial period and the construction of local elites

Literature presents that during the colonial period in Africa, education was provided according to societal stratification. According to Siwale and Sefu (1977), the stratification in the provision of education was determined by colour, socio-economic status, and educational needs of that time. The Arabs who mainly traded on slaves and ivory (Siwale & Sefu, 1977) settled along the coast where they taught Islamic education that aimed at converting people from different Christianity backgrounds. Thus, the Arab education was mainly provided on the basis of sex where women were segregated in favour of men. Siwale and Sefu, say of Arabs that they made the converted believe that education for women was not necessary and that the place for women was the kitchen. Women were also not allowed to mix with the opposite sex, even during pray. According to Siwale and Sefu, girls, were allowed to mix with boys during the learning of Koran, when they were taught to read and write it. Classes were organised either indoors or on verandas of distinguished individuals. The Islamic education was subsequently spread far interior where the Arabs had much influence especially in big towns.

In Tanganyika, the Germans came after the Arabs. Different from the Arab period, the provision of education during the German period aimed to educate few Africans

who would serve the German administrative and managerial interests. Siwale and Sefu (1977) state that the German missionaries (Roman Catholics and Protestants) taught indigenous people how to read and write. The aim of such teaching was to expand Christianity in Tanganyika by enabling African people to read the bible. They set indigenous languages including Swahili, into script to simplify understanding the bible. The German influence resulted in the disruption of traditional culture without being replaced by relevant values, norms, and African based knowledge. (Mushi, 2012) reiterates some of the African culture that included tribal languages as symbols of unity, communal production, and love and respect for all especially elders. According to Mushi (2012) and Siwale and Seif (1997) the colonial influence despised the African cultures as it was an old fashioned style of living that involved uncivilised practices. Siwale and Sefu (1977) suggest that the converted despised traditional culture, whereas, the unconverted developed an inferiority complex, especially towards the white man. This could mean that the German did not only distort African long lived culture, but also broke the African unity into different classes. Similar to the Arab education, the German curriculum was also limited to religious teachings, gardening, domestic work, and the fundamentals of literacy and cultivation lacking the kind of education that could cater the needs of the local people. The education provided was more religious oriented. The church elders and the schools (Siwale & Sefu, 1977) were placed in strategic places to check the spread of Islam or other denominations. As already stated herein, the goal of German educational system was to teach selected Africans to understand and carry out the German administrative activities (Siwale & Sefu, 1977). This is unlike the British education that aimed at teaching general knowledge and educating the whole man to become a responsible citizen. The British for example taught the crafts necessary for building and trained African personnel for subordinate posts in the civil service. Generally, like the Arab education, German education was also segregative in nature, and was not relevant to the African settings. This means that the education aimed at getting few African elites who would sustain and support the colonial interests.

Unlike the Germans (Siwale & Sefu, 1977), the British were slow in the provision of education that was also restricted to the few individuals earmarked to serve colonial administrative needs. The British education curricula were designed according to

race and that each race had its own schools. Kitta (2004) identifies the British schools in Tanganyika including Europeans, Asians, and Africans with each school having its own educational objectives and curriculum orientation. According to Osaki (2002), European schools' curriculum focused on academics and grammar, whereas the Asian schools focused on commercial studies. An integrated curriculum was offered to African children. Osaki characterises an integrated curriculum to include a combination of related subjects. Kitta (2004) outlines the subjects taught in the curriculum for African students including; gardening, agriculture, rural studies and general science. According to Kitta, the aim of teaching these subjects was to orient African students with basic skills that would enable them to survive. The African students also learnt woodwork, masonry and carpentry. As discussed herein, it could be agreed that despite the challenges of colonial education system in Tanzania in particular, and Africa in general, the colonial education produced African elites who not only fought for independence of African countries but also these elites played a significant role in the planning and management of education immediately after independence.

Generally, the analysis of the colonial education in Africa and Tanzania in particular suggests that while the Arab education concentrated on Quranic Teaching (Madrasa), Christian missionaries' education was mainly secular in content and scope. Christian education was multi-discipline in composition exposing students to knowledge across disciplines such as carpentry, masonry, Geography, Geometry, Arithmetic, History, English, and many other subjects. Therefore, the Christian education as distinguished from the Arab education became necessary for employment in the colonial administration, education progression, qualification and recognition in the colonial and post-colonial frame of social stratification.

Post –colonial continuance of the elites

Immediate after independence of the former Tanganyika, the colonial education system had to be reviewed and transformed in order to reflect and respond to the educational settings and needs of the majority Africans. The aim was to provide all children with opportunities and access to education regardless their difference in cultural and socio-economic backgrounds (Mushi, 2012). However, the object to

provide education to all children (Mushi, 2012) did not succeed. Mushi states that education provision in the early years of Tanganyika's independence was still rooted on the colonial education system. Mushi characterises the nature of post-colonial education immediate after independence to include more theory than practical, and provision of education on the basis of racial and socio-economic stratification. According to Mushi (2012), the curriculum immediate after independence presented many features of colonial influence. Mushi further explains that the education immediate after independence was still provided on the basis of segregation and socio-economic status.

According to Mushi, children from rich families went to their own schools that were well furnished, highly equipped with resources, and staffed with qualified teachers different to children from poor families. Children from poor families were sent to the schools that had limited teaching and learning resources and staffed with unqualified teachers (Mushi, 2012). Nevertheless, despite the provision of education on the basis of socio-economic stratification, the major education challenge immediate after independence was its lack of practical orientation. The curriculum (Mushi, 2012) was too theoretical to prepare children to effectively participate in production activities. As a result of this curriculum challenge, school leavers at both primary and secondary levels preferred office jobs to field works. Mushi explains that those who got education felt superior over those who did not. Thus, the post-colonial education continued the superiority complex among the educated and developed inferiority complex among those who lacked formal education. Due to the challenges of the post-colonial education immediate after independence, the former president of Tanganyika then Tanzania, the late Julius Nyerere founded the Education for Self-Reliance (ESR) in 1967 as a policy and philosophy that would guide the provision of education in the country.

The ESR was one of the instrumentation instruments of the Arusha Declaration, the declaration that formed the foundation and country's philosophy guiding the socio-economic, cultural, and political development initiatives (Nyerere, 1967). In terms of education, the ESR focused on the development of an egalitarian society characterised by high-minded individuals who are creative, problem solvers, and who can adapt to different environmental and socio-economic contexts. It could be

seen that Nyerere's philosophy on Tanzania's education focused on the need to provide a kind of education that was complete by itself. He proposed the provision of education that promoted students' critical and independent thinking, as well as one that would develop in student a sense of love and respect to one another and effective participation in productive activities (Nyerere, 1967). Therefore, according to Nyerere, realisation of the ESR underpinned by the Arusha declaration presented the need for curriculum transformation in both content and pedagogical approaches. Meaning that, there was a need for a curriculum to be tailored on the teachers' and students' daily life and that classroom practices needed to connect students' real life what Nyerere called "praxis" (Nyerere, 1967). In order to achieve this, teachers needed to actively engage learners in their teaching and learning processes using LCT approaches. Thus the change of the curriculum and the instructional approaches were meant to transform the long-lived theoretical-based education and teacher-students relation with the aim of enhancing students' critical, creative, and independent thinking in the knowledge construction and life in general (Ishumi, 1976; MOEC, 1995).

Therefore, this thesis about Learner-Centred Teaching in Tanzania's secondary schools' geography classrooms was meant to contribute knowledge and understanding of curriculum innovations in particular and transformation of education systems in general from the developing economy's experience. The study particularly examined the implementation of the 2005 competence –based geography curriculum from the experiences and perceptions of a group of geography teachers in Tanzania's secondary schools.

Education structure

In Tanzania, all ministries are in one way or another responsible for provision and administration of education. However, education and training is organised mainly by two ministries namely; the Ministry of Education and Training and the Ministry of Regional Administration and Local Government (The Government of the United Republic of Tanzania (GoURT, 2001). In terms of structure, the formal system of education is divided into four major levels which are; level one (2 years of pre-

primary school), level two (7years of primary school), level three (six years of secondary school that is 4 years of ordinary level and two years of advanced level), and level four (3 plus years of university education (Meena, 2009). Meena explains that at the end of each level a student may decide to exit for professional training at certificate or diploma level or may proceed to the next level depending on individual's pass marks at the respective level. Though the pre-primary and primary education is compulsory, yet due to educational resources and administration challenges not all children attend school at these two levels whereas few of those who manage to get the pre-primary and primary education proceed with higher educational levels.

Role and position of Geography in Tanzania Education System

Geography is a compulsory subject from the pre-primary to ordinary level secondary school. It is the subject considered important not only in addressing spatial distribution of geographical phenomena but also the subject which details Tanzania's wealth in terms of resource endowment such as water, minerals, soil, mountains and valleys, flora and fauna, and the general biodiversity (Tanzania Education and Training Policy (TETP), 1995).

During the first year of ordinary level secondary education, our geography teacher defined geography from different perspectives. One of the interesting definitions that I still remember was "geography is the study of the earth as a home of man". This definition now reminds me of the other critical role of geography to people. Geography as a discipline, describes the earth such that it exposes and enables people to survive across a range of different geographical backgrounds. This means that, geography is not only important to Tanzania and/or Africa; it is also important to global communities and countries for their existence and sustained development.

Considering the rationale of geography in socio-economic, cultural and political development in Tanzania in particular, and across the world, the government of the United Republic of Tanzania (GoURT) through the Ministry of Education and Vocational Training (MoEVT) considered the importance of incorporating the subject across all education levels. Geography is also taught in advanced secondary schools within relevant subject combinations such as history, geography and English

language (HGL), history, geography and Kiswahili (HGK), economics, geography and mathematics (EGM), physics, geography and mathematics (PGM) and chemistry, biology and geography (CBG). The student is selected in one of the subject combinations based on student's choices and performance in the form four national examinations.

Moreover, geography is taught in higher educational institutions including the universities. At this level, the subject is more specialised across different subject domains such as geography and environmental sciences, geography and natural resources management, environmental engineering, land use management and environmental conservation and food security. Others include statistical geography, land survey and general practice in geography, environmental impact assessment, population geography and development, physical geography and geomorphology, climatology studies, geology and many other geography related studies. Thus, realisation of the importance of geography across sectors in Tanzania and the globe is seen within the broad objective of enhancement and development of secondary school students with critical thinking and reflective practices about environmental resources and their influence on the socio-economic development (GoURT, 1995).

Therefore, the thesis aimed to examine how teachers facilitate classroom instruction in a way that provides students with opportunity to reflect on the subject matter from their cultural understanding and experience of geographical phenomena. The researcher's interest was to assess how classroom instructional practices connect theories and principles of geography to students' actual life, what Freire (1970) labelled "praxis teaching". Praxis teaching according to Freire is when the teacher supports students to learn by connecting the topics to their everyday life and prior understandings. Freire sees that students build understanding of the topics when they are freely and actively involved in the topics that relate to their experiences and prior knowledge. Freire's conception of teaching relates to LCT which requires teachers' pedagogical reasoning and decision-making to be directed on students. This means that teachers in LCT environments use students' experiences and prior knowledge as the basis for teaching and facilitate students to take charge of their own learning.

Research background

The history of LCT in Tanzania's formal schooling can be traced to 1967 when a philosophy of education for self-reliance (ESR) was founded. As an upshot of the Arusha Declaration, ESR was founded in order to guide the provision of education at all levels. It challenged the limitations of the education system that was characterised by the colonial legacy. Nyerere (1967) identified the challenges of the then education which included:

- (a) That the education was provided to few individuals on the basis of stratification;
- (b) That the education provided lacked linkage to students' real life. The curriculum divorced students from the society it was intended for;
- (c) That the education provided relied heavily on written sources while despising the education children got through other means as they interacted with different people; and
- (d) That the education provided was more theoretical lacking practical experience from students' routine activities and worse enough, it did not orient children life competencies i.e. acquisition of basic skills such as creativity, critical thinking, problem solving, as well as analytical skills.

These educational challenges provoked Nyerere to the extent of stating that:

...we cannot integrate the pupils and students into the future society simply by theoretical teaching, however well designed it is. Neither can the society fully benefit from an education system which is thoroughly integrated into local life but does not teach people the basic skills-for example of literacy and arithmetic, or which fails to excite in them a curiosity about ideas (p. 243).

Nyerere's idea according to ESR was the need to empower students with critical thoughts and problem solving skills based on their experiences and everyday life. It could be argued that Nyerere wanted the kind of education which provided opportunities for students to build understandings of the topics from their prior knowledge and experiences and thus using the knowledge to solve societal problems and improve their life. This means that Nyerere emphasised the need for curriculum to integrate theory with students' real life. He emphasised the idea of connecting the classroom practices beyond the school stating:

Tanzania educational system has to prepare the young people, among others; to play a dynamic and constructive part in the development of a society...it must inculcate a sense of commitment to the total community, and help the pupils to accept the values appropriate to our kind of future, not those appropriate to our colonial past (Nyerere, 1967, p. 239).

Nyerere viewed education as a holistic process that took place in many places other than the formal schooling system. Therefore, according to Nyerere, a child brought to school rich and diverse understanding and experience that were significant in the teacher's effective classroom practice. Therefore, the structuring and implementation of the learner-centred curriculum was underpinned by ESR on the one hand and constructivist learning beliefs on the other.

Based on Tanzania's government 2025 Development Vision and education policy documents (GoURT, 2000, 2010; GoURT, 1995; TIE, 2005/2009), the mandated curriculum requires teachers to change from teacher-centred to LCT. The focus of this thesis was to examine the implementation of LCT from the perceptions and experience of secondary school geography teachers. The study was influenced, among other factors, by the paucity of research on the teachers' influence on learning and limited application of critical perspective theoretical framework in understanding teachers' pedagogical practices (Yandila, 1999; Yilmaz, 2008).

Curriculum transformation and LCT

Tanzania's government has embarked on curriculum transformation and innovation since its independence. The transformation aims to improve both access to education and provision of quality education at all levels (Nyerere, 1967; Government of the United Republic of Tanzania (GoURT), 1995/2000). The 1995 Tanzania education and training policy states clearly the need to provide quality education services both quantitatively and qualitatively. The policy explains that quality classroom practices will result from the supply of adequate school infrastructures including classrooms, well equipped laboratories and libraries, ICTs facilities, as well as high qualified teachers (GoURT, 1995).

The policy also reflects the 2025 Development Vision which focuses to have highly qualified people across different sectors placed to enhance socio-economic

development consequently alleviating poverty in the country. Particularly, the Tanzania 2025 development vision focuses to:

- (a) Provide high quality education at all school levels that will result in the production of qualified individuals who are competitive at both national and the globe;
- (b) To have many educated people who are dynamic, creative, critical, and flexible in their mindset. The vision also focuses to enhance people with a sense of love and respect to one another, and more importantly to have people who can effectively participate in the socio-economic, political, and cultural development activities; and
- (c) To have a self-reliant society whose people live confidently and independently whereas all human basic needs are sufficiently provided (GoURT, 2000).

Therefore, among curriculum transformations and innovations have been the restructuring of the curriculum contents, pedagogy and instructional approaches in order to enhance teachers' instructional decision-making processes and move from teacher-centred to learner-centred education (Hardman & Smith, 2008; Jessop & Penny, 1998; GoURT, 1995; Tanzania Institute of Education, 2005; GoURT, 2010). The learner-centred education in Tanzania has been developed using different labels: LCT, inspirational teaching and learning, active learning, and participatory methods (Msonde, 2011). Based on the policy documents and curriculum vision, LCT is the implementation of a competency-based curriculum with emphasis on constructivist learning theory where methods of teaching and assessment focus on students' learning (GoURT, 1995; TIE, 2005/2009). The curriculum characterises LCT to include the following features: the learner participates in the learning (performs activities); the learner observes and constructs his/her knowledge from multiple experiences; the learner acquires competencies (skills, knowledge, and attitudes); the school, the curriculum planners, community, and the teachers collaboratively work together to influence learners to learn; and the teacher becomes a facilitator of learning focusing on the students' diverse needs, interests, and abilities (Kafumu, 2010).

As already stated, central to the change in teaching orientation was the need for the development of competencies among learners (TIE, 2005; Tanzania Ministry of

Education and Vocational Training (TMoEVT), 2008). The emphasis of LCT curriculum is on developing competencies among learners. Learning competencies according to MoEVT (2008) include but not limited to the following; an acquisition of multiple life skills; creativity; critical, reflective, and independent thinking; problem solving skills; and an ability to adopt to cutting edge technology (TIE, 2005/2009; GoURT, 2010). The Tanzania Ministry of Education and Vocational Training (2008) explain that the positive effect of LCT approaches has resulted in a shift of paradigm in instructional practices. Adopting a constructivist approach, teachers' teaching practices need to focus on learners whereby learners are actively involved in the lesson and are guided to construct their own knowledge and understanding of the subject matter from their diverse socio-cultural experiences. According to TIE (2005/2009), teaching in LCT environment needs to be a more reflective practice by increasing and integrating awareness of different learners' backgrounds, experiences and learning needs.

Recent transformation in secondary education in Tanzania

As already stated about education structure in Tanzania, the secondary education is divided in two levels namely level one and two: level one takes four years and include students between 13 and 17 years. At the end of the fourth year students sit for an ordinary level certificate of secondary education examination (CSEE). Level two takes two years and include students mainly between 18 and 19 years whereas, at the end of year two students write an advanced level certificate of secondary education examination (ACSEE). Students joining the first level are selected from amongst primary school leavers who pass primary school national examination (PSNE) as per set pass marks in the respective year.

The GoURT embarked on ambitious educational transformation at all levels since the 1990s. The aim of the transformation was the need to respond to the socio-economic challenges facing the country in particular and adherence to the world consensus and commitment on the provision of high quality education for all people (Jomtien, 1990; United Nations Millennium Declaration, 2000; TMoEVT, 2005, 2011).

In this regard, the United Republic of Tanzania educational transformations are geared to provide high quality education at all levels using highly qualified

professionals, locally and modern instructional resources, as well as the use of modern instructional approaches that enhance active students' participation in the construction of knowledge. The aim of education transformation is to use students' prior knowledge, experiences, and their different talents to positively influence their learning. The ultimate goal of educational transformation is to have the kind of education that produces not only individuals with creative, critical, independent, and reflective thoughts but also those who can positively contribute to the development of their society thus improving peoples' lives (World Education Forum (WEF), 2000).

Therefore, Tanzania has since then been implementing educational programmes focused on addressing educational challenges to achieve national and international commitments to the provision of high quality education for all people within time frame of the respective memorandum of understandings (MOUs). In Tanzania, expansion of education has been being realised by Sector wide Approach, where all stake holders participate in the transformation process. Like in primary education, transformation in secondary education has been a massive scheme whose overarching objectives included expansion and access, improving quality of education, and enhancing equity and efficiency in the provision and management of education. Expansion of secondary education has been taking place in two phases, namely: secondary education development plans SEDPs 2004/2009 and 2009/2014 respectively. SEDPs are involved in expanding existing schools, building new schools, teachers' houses, and a massive increase in enrolment. The government encourages and supports the private sector to participate in the transformation process through investment in education.

As a result of secondary education expansion programmes, secondary schools increased from 2289 in 2006 to 4266 by June 2011 making an increase of 1977 schools in just five years (TMoEVT, 2006; 2011). Within this period, the government and private schools increased from 1690 to 3397 and from 599 to 869 respectively. The increase in secondary schools resulted in a dramatic increase in enrolment which reached 1, 638,699 students in June 2011. Out of those students; ordinary level students totalled 1,566,685 comprised of 699,951 girls and 866,734 boys (TMoEVT, 2011).

In order to improve the quality of education, the government sought the need to reform the curriculum in content and pedagogy as well as training and re-training of enough teachers and educational officers (TMoEVT, 2005; 2007; 2011). The most significant curriculum transformation was the move in teaching and learning approaches from teacher-centred to learner-centred instructional methods. The focus was to cultivate learning competencies amongst students to enable them to contribute to their own development and national socio-economic development and also live competitively in the rapid changing global knowledge society (GoURT, 2000; TMoEVT, 2005; 2007).

Despite the positive effects of educational expansion and transformation in terms of an increase in students' enrolment caused by school expansion, the transformation brings critical questions with regard to the quality of education and its future prospects. Among the questions asked is how teachers, as direct stakeholders of education perceive and experience the new pedagogical approach. The researcher believes that teachers' pedagogical decision-making and practices have significant impact on enhancing effective implementation of LCT. The researcher thought understanding teachers' experience and perceptions regarding LCT would inform the government and educational stake holders and assist to plan and support both schools and teachers for effective instructional practices.

The research problem and research questions

Central to this study, the research problem examined is: "Learner-Centred Teaching in Tanzania: Geography Teachers' Perceptions and Experiences." The study was conducted in three secondary schools in Iringa Region. The selection of Iringa region was due to its representativeness among more than twenty five regions in the country. The region has good number of ordinary level secondary schools with characteristics compliant to the research purpose and focus. The study was guided by four research questions as follows:

- (a) What do geography teachers in Tanzania understand about LCT?
- (b) How does a teacher's pedagogical reasoning during the planning process reflect LCT beliefs?
- (c) How does a teacher's teaching practice reflect LCT beliefs?

- (d) How does a teacher's evaluation of classroom instructional practices place the learner at the centre of instruction?

Research significance

This study is significant for the Tanzanian education system in that it throws further light regarding the implementation of LCT approaches in a period of pedagogical change and emphasis from teacher-centred to LCT. Findings of this study might be useful in many ways. They might inform teachers, teacher educators, and curriculum developers regarding the implementation of the LCT approach in the Tanzanian context. The study provides information about the opportunities and challenges facing a group of geography teachers in the implementation of LCT.

Statement of researcher's position

In qualitative research (Creswell, 2007), the researcher becomes the main instrument for data collection and analysis. Thus, according to Creswell, it is imperative for the researcher to be aware of personal biases and experiences in order to adequately describe participants' insights of the phenomenon under investigation. This means that the researcher needs to consider participants' perceptions and experiences about the topic regardless their contradictions with the researcher's own assumptions and understanding of the topic. Researcher's position and influence in the collection and analysis of qualitative data influenced Moustakas' (1994) reflection of the same to the extent of stating that in the event, the researcher only collect information and make meaning of it based on the guiding research questions and the instruments used to gather that information. In this case, the researcher does not go to the field with readymade information; rather, he/she relies on the participants' actual conception and experience of the topic under investigation. This challenged the researcher to attain the Epoch, "the pure state of being required for fresh perceiving and experiencing" (1994, p.87). Therefore, the researcher went to the field with this in mind trying to identify existing researcher's own assumptions and biases on the research topic and detaching them from the data and conversations with the group of geography teachers who participated in the study.

The researcher's aim was not to use his understanding of geography and teaching experience to influence participants' reflection of the study, rather, the aim was to

understand teachers' experience of the implementation of LCT from the actors involved (Goethals, Sorenson, & MacGregor, 2004), that is, teachers rather than describing it from the outside and researcher's own bias. The researcher assumed that it is necessary that the researcher possesses basic knowledge in the topic of investigation. Therefore, guided with research ethics, the researcher's knowledge and extensive teaching experience in geography subject and a skilful application of multiple data collection methods allowed him to collect the data with minimal chances of bias, thus ensuring the trustworthiness of the thesis's findings. Goethals, *et al* (2004) say of the researcher's position in qualitative studies that in order to adequately undertake a qualitative study, the researcher needs to have substantial knowledge of the research problem, methods and methodologies, and more importantly, the research context.

The researcher's interest for the topic was motivated by his extensive teaching experience in a developing economy's educational context. The researcher has taught in secondary schools, teachers' colleges, and both publicly-owned and private universities, all based in Tanzania. The researcher specializes in geography education, social science research methods, critical theory and pedagogy, teacher education and rural and remote education. Other areas of specialization include cultural-based education and curriculum theory and practice. The researcher's extensive teaching experience and initiative in the academic and professional development has resulted in understanding of multiple classroom instructional approaches, strategies, and techniques across different educational contexts. Therefore, the researcher's interest on Tanzania's LCT was motivated by his understanding of geography education, extensive teaching experience, more importantly, researcher's knowledge base on qualitative research.

Thus, the researcher's extensive teaching experience and understanding of qualitative research methods influenced his insider role, which is, being able to flexibly and adequately interpret and understand the research problem, questions, and methodological approaches. This subsequently resulted in the collection of reliable, valid, and detailed information regarding LCT in Tanzania's context. Besides using teachers' portfolio review in the collection of data, the researcher employed skilled observational and semi-structured interview methods to "see what is there to see and

hear what there is to hear” (Patton, 2002, p.260). This resulted in the development of thick descriptions and quotations that consequently lead to the emergence of themes building up the thesis. Throughout the study, the researcher remained transparent whenever he identified existing biases (Patton, 2002).

Chapter summary

The aim of this chapter is to introduce the thesis focusing on its main theme-LCT-teaching based on active involvement of students in the classroom processes with emphasis on students’ learning. The chapter has sequentially discussed the historical development of education in Tanzania before, during, and after colonialism. The chapter has thus shown how each period had contribution to the current debates regarding the theoretical and practical instructional approaches from the context of developing economies such as Tanzania. Therefore, from the onset, the chapter has presented the context and nature of the study, historical overview of education, and Tanzania’s education structure. Other sections include the study background preceded by positioning of geography as a subject in the Tanzanian education system. Issues relating to curriculum transformation and recent expansion of secondary education have been presented in line with their implications for LCT practices. The chapter has also presented the research problem and research questions that guided the study. Lastly, the chapter presents the research significance, statement of researcher’s position, and chapter summary. Chapter two presents a critical perspective (CP) approach as the theoretical framework to depict among others, the LCT and its implementation complexities with respect to Tanzania’s educational and cultural contexts.

CHAPTER 2

LEARNER-CENTRED TEACHING AND THE COMPLEXITIES OF ITS IMPLEMENTATION: A CRITICAL PERSPECTIVE APPROACH

Introduction

This chapter applies a critical perspective (CP) approach as a theoretical framework to present the complexities and contradictions of teaching geography using the LCT approach. The theory originates from the Critical Theory based on Hegelian and Marxism philosophy of 1770-1831 and 1818-1883 respectively. This philosophy is popularly known as the Hegelian-Marxism philosophy. The theory uses a critical approach to critique and present geography teachers' perceptions and experiences regarding implementation of LCT in Tanzanian secondary school geography classes. Based on thoughts of eminent critical theorists such as Dewey, Freire, Giroux, McLaren, and Shor, the theory stresses the importance of viewing students as co-creators of the knowledge by being able to integrate the subject matter into previous knowledge and, consequently, taking an active role in the classroom instructional practices. The CP views that when students are not able to create knowledge under such circumstances, that is, integrating their experience into new knowledge, they remain disconnected and simply adapt to the world. CP aims to transform the long lived teacher-learner relationship in order to remove the rooted elements of an authoritative influence in schools as well as the community. Therefore, CP believes on teaching practices that provide students with the chance to reconstruct their knowledge and become subjects of their own learning. The theory emphasises classroom practices that create a dialogue amongst learners and between learners and the teacher such that every student equally participates in the construction of knowledge.

Using a critical perspective, the implementation of competence-based geography curriculum in Tanzania's context would mean teachers actively engaging students in the classroom activities, the practice, named as *learner-centred teaching*. Active students' engagement occurs when teachers and students co-construct meaning of geographical concepts and topics in a freely and cooperative environment, the

practice which, empowers students with classroom autonomy. More importantly, practicing competence-based curriculum in Tanzania's context requires teachers to tailor their lessons to the students' settings such that students use their diverse experiences to build understanding of geographical topics. The ultimate goal of LCT is to enhance competencies amongst learners that include creativity, critical, logical, and independent thinking, as well as an acquisition of problem solving skills.

This chapter is organised into six sections: first, the origin of critical perspective stance; second, the critical perspective approach: Basic premises; third, the need for development of learner-autonomy; the fourth, the complexities and contradictions in the implementation of LCT; the fifth section is about positioning of CP to the thesis and the last section presents the chapter summary.

Origin of critical perspective stance

The thesis uses the critical thoughts originated from the Frankfurt School of critical theory, which had its beginning before World War II in the German Institute for Social Research (McLaren, 1994). According to Horkheimer (1982), Critical theory is composed of multiple disciplines mainly from humanities and social sciences. Horkheimer considers critical theory as an advancement of the Hegelian-Marxism thinking about the world. He further explains the importance of the theory over other theories stating that critical theory is holistic and complete by itself. Horkheimer's appreciation of the theory is based on its application across subjects, its critical and reflective orientation, as well as its ability not only to assess the strengths and weaknesses of the system in place, in this case classroom practice, but also its ability to propose ways to improve such system. With its origin from The Frankfurt School of Thought, critical theorists are said to be the first people to question issues across subjects from different standpoint. This could mean that in order for the knowledge to be complete and self-sufficient, it should be rich and comprehensive enough to argument a phenomenon. This is also supported by Guess (1981) who argues that the knowledge created from multiple disciplines is sufficient and justifiable than that constructed from discrete thought. This could also mean than it is possible to address all issues about an aspect when such aspect has been comprehensively discussed from different thinking orientations.

It is why critical theorists also differentiate critical theory from other theories explaining that a critical theory does not only suggest the strengths and limitations of a phenomenon, it also proposes prospects for improvement of such phenomenon (Horkheimer, 1982). Since then, different theories including the critical perspective approach (CP) have emerged to argue on specific issues of interests. The major concern of theories with critical orientation has been to empower groups of people for better and meaningful life (McLaren, 1994). This is equally the same with CP stances which position classroom processes such that students need to be empowered and assume instructional responsibilities for their own learning. The theory establishes a linear and fluid student-teacher relationship where they all become learners and instructors at the same time. CP stances thus call for transformation of the power relationship from the teacher-centred to student-centred in instructional approaches (Apple, 1999; Auerbach, 1999; Pennycook, 1999).

Therefore, the critical perspective approach is an advancement of the Freirean theory of education known as critical pedagogy. In this theory, Freire proposes teaching approaches which empower learners with freedom to construct knowledge. The aim of CP is to enhance critical and emancipatory thoughts in the learners (Freire, 1970). Freire opposes the teacher-centred approach referring to it banking model of education. According to Freire, the practice of banking model occurs when a teacher dominates classroom processes by mainly imparting knowledge of the subjects to students who are assumed to be *tabula-rasa* i.e. lacking prior knowledge and experience that they could share to make meaning of concepts under discussion. Alternatively, Freire proposes an LCT approach by the name “Problem-Posing Pedagogy”. Problem posing pedagogy according to Freire actively engages students in the learning process. The pedagogy places the learner at the centre of the classroom practices by promoting the learner to explore and share his/her varied prior knowledge and experience consequently creating new understanding of the concepts (Freire, 1970).

The use of banking model in teaching and learning according to Freire would mean creating classroom environment where teachers deposit knowledge to students’

empty minds that are commonly known as depositories. In this instructional atmosphere, students are made to be passive listeners to their teachers. According to Freire when learners are not actively engaged in the teaching and learning they become not only coward and inferior to their own teachers, but also to the people and society they live with. Freire explains further that student' cowardliness and inferiority complex is developed due to lack of creativity, confidence, critical and independent thinking as well as problem posing skills (Freire, 1970). Instead, Freire argues that when students are provided with enough chances and greater freedom to use their prior knowledge and experiences to build conception of what is taught they are enhanced in creativity, critical thought, independent thinking, as well as problem posing skills. He emphasizes the influence of problem posing pedagogy on students' learning that;

In problem-posing education, people develop their power to perceive critically the way they exist in the world with which and in which they find themselves; they come to see the world not as a static reality, but as a reality in process, in transformation(Freire, p. 83).

Therefore, problem-posing education is education for freedom and emphasises that teachers must see themselves in a partnership with their students. As part of this relationship, teachers must see themselves as teacher-student, ready to accept that their students possess knowledge and experience they can share with the teacher. Such an approach to education emphasises learning for freedom or living rather than learning to earn (McLaren, 1994; Shor, 1987; Wink, 1997). Thus, Freire emphasises the need for LCT suggesting that; "teaching does not mean transferring knowledge but creating opportunities for producing and constructing it" (1971, p. 21). In LCT environment, Freire's observation could mean that students should be actively involved in the creation of knowledge of the topics based on their diverse experiences they bring to school. According to Kafumu (2010), teachers as facilitators, among other things, should: promote peer communication; discovery, problem-solving, and active learning; and reduce students' disruptive behaviours. The LCT requires teachers to design activity-based classroom processes which motivate students to learn. Therefore, an example of classroom practice that adheres to CP instructional beliefs would be featured by a kind of fluid relationship between a teacher and students. In many instances, students would be actively involved in

different classroom activities and that students at different intervals under the teacher's facilitation will be seen sharing what they know about topics under discussion. CP, therefore, focuses on learners and their involvement in the learning process (Mustakova-Possardt, 2003).

For proponents of CP in education, they desire a radical, hopeful, and action-based pedagogy (Shor, 1987; Simon, 1992; Kanpol, 1994). McLaren (1994) argues about CP in teaching and learning focusing on the importance of diverse prior knowledge and experience that students bring in the classroom. According to McLaren, promotion of critical and independent thought in students should result from the integration of students' prior knowledge and experiences that they bring with them to school. This could mean that LCT should focus on learners and their engagement in the construction of knowledge using their prior knowledge as a basis for an effective teacher's pedagogical reasoning and decision making.

Therefore, in this study, the application of CP as the theoretical framework was underpinned by the quest of critiquing the implementation of LCT geography curriculum. The focus was to understand the strengths, challenges, and prospects of LCT practices in Tanzania from the perceptions and experiences of geography teachers. CP has thus been the lens used to see how teachers' instructional practices reflect LCT beliefs.

Critical perspective approach: Basic premises

Among the many foundational principles of CP (McLaren & Giroux, 1986), this study is guided by the following basic premises:

- (a) That, no education is politically neutral- this is an assumption that like other socio-economic practices, also, educational practice is influenced by the country's politics (McLaren, 1989; Shor, 1992). Therefore, teaching geography critically should take place within the contexts of political influence-teachers should promote students to connect the influence of the political environment within and outside the school in their understanding of geographical phenomena and the influence of mankind on nature;

- (b) That, education should be critical and empowering-CP focus on the development of critical thoughts and that classroom processes should enhance students with critical and independent thinking to enable them to critically understand the world they live in (Eliana, 2000; Freire, 1970; Vandrick, 1975);
- (c) That, education should use a dialogic and dialectic approach to decision-making-unlike in teacher-centred teaching; students in LCT environment should be engaged in a meaningful and free communication that creates and recreates multiple understandings (Freire, 1970; Wink, 1998). Agnew and Lodge (2000, p. 13) see that when students are engaged in a meaningful dialogue, they participate in the construction of knowledge. They further explain that during classroom practice, the teacher and student interchangeably learn from one another in a democratic and respectful way. This could mean that student-teacher relationship is built on assumption that in LCT, learners are teachers and teachers are learners (Mansell, 2009, p. 40);
- (d) That, education should be transformative- teachers' teaching practices should enable learners to link classroom knowledge with everyday life outside the school, that is, being able to use the knowledge gained in school to critique the existing dominant and oppressive socio-economic, and cultural institutional structures for better living (Dewey, 1916; Eliana, 2000; Freire, 1970; Shor, 1992);
- (e) Curriculum and curriculum materials-CP is founded on the belief that development of instructional materials should consider the involvement of key stake holders and that they should reflect the context in which classroom practice takes place (Bartolome, 1996; Dewey, 1916; Giroux, 1997; Shor, 1992). This means that teachers' involvement in decision-making about curriculum and classroom processes is critical and necessary for them to integrate learners' needs, interests, and prior knowledge in their pedagogical decision-making and practices;
- (f) That, education should generate "conscientisation"- according to Freire (1973), when applied in classroom context, CP develops awareness amongst learners about socio-economic, cultural, and political issues and that nothing will change unless individuals understand things needing to. Teaching should thus raise students' awareness of the social, political, educational, and any

inequality in their contexts, and therefore help them realise that by knowing and questioning, they can influence and enhance change (Freire, 1970 & 1973; Eliana, 2000; Pennycook, 1999; Wink, 1997);

- (g) CP and Praxis-the belief that educational processes should aim at bridging the gap between theory and practice, that is, using the knowledge learned in class into real life situations i.e. what Freire (1970) refers to as the authentic union of action and reflection; and
- (h) CP and teacher and student roles-teachers are problem posers while students are problem solvers (Aliakbari & Faraji; 2011; Dewey, 1963; Eliana, 2000; McLaren, 1994). This means implementing the LCT approach, CP requires teachers to challenge aspects of teacher-centred practices that maintain their authority and power in the instructional process. Instead, students should be actively involved and given freedom to share their thoughts and experiences about the topics.

From the viewpoints of CP, the premises of CP imply the following:

- (a) That, LCT needs to focus on indoctrination of “reflective and critical thoughts” amongst students;
- (b) That, teachers should influence students’ construction of knowledge through problem posing pedagogy and meaningful dialoguing amongst students and between the teacher and students;
- (c) That, classrooms should become centres of democracy where students, under the teachers’ facilitation, freely use their diverse prior knowledge and experience to make meaning of the instructional topics;
- (d) That, classroom processes should enhance students’ application of the knowledge beyond the school perimeters-learning to live and not for earning a living; and
- (e) That, classroom processes should cultivate, and enhance students’ problem-solving skills, and ability to question the dominant socio-economic, cultural, and political systems (Dewey, 1916; Freire, 1993; McLaren, 1974; Nyerere, 1967).

In the teaching of geography, it implies that teachers should use inquiry-based approaches drawing on practical activities, and field work where, through geographic inquiry, students are given opportunities to collect and share information based on a

range of viewpoints about people-environment relationships, then synthesise the information constructing their own understandings. CP seeks to transform classroom environment from teacher-centred to LCT. The theory promotes relationship between a teacher and students and amongst students by actively participating in free dialogue through an open discussion of the topics (Freire, 1987). Through dialogue, a teacher and students work together to construct meaning of the concepts based on their real life experiences (Shor & Freire, 1987b).

Developing learner-autonomy

Against the practice of banking education (Freire, 1970), one of the beliefs of CP is that knowledge is not a commodity or something held by someone (a teacher) to be deposited to a learner who does not possess it. Instead, CP sees teaching and learning as a social process where both a teacher and student learn from one another. CP challenges the long lived an authoritative relationship between a teacher and students through enhancement of learners' ownership of classroom instructional practices (Eliana, 2000; Gieve, 1997). According to Gieve, learners will actively participate in classroom activities when the teacher tailors the lesson on the learners' needs and interests and provides them with enough chances to use their prior knowledge and experience to build conception of the topics. Teaching in this way, learners are enhanced with classroom autonomy (Gibbs, 1979). Therefore, CP is concerned with enhancing learner-autonomy in the classroom practices.

With its origin from Greek philosophers, learner autonomy occurs in a learning environment where the learner is freely and independently determines his/her learning under the teacher's facilitation (Wall, 1998). This means that the learner becomes a defining feature of teaching and learning and that all classroom practices are directed to him/her. This understanding of learner-autonomy is also supported by Gibbs (1979) who argues that learner autonomy is achieved when classroom practice are free from teacher domination. In this situation, learners are actively involved to share their understanding of the topics in the process of knowledge construction. Holec (1981) characterises learner autonomy to occur when learners take responsibility of their learning where the teacher act as a resource person who facilitate the learning process.

This means that practicing learner autonomy requires learners to freely and independently determine the instructional goals and objectives as well as actively participate in the designing of classroom activities and teaching and learning materials (Winch, 1999). Winch described the need for development of learner autonomy as a means towards enhancement of critical and reflective thinking amongst students that subsequently help to transform the society they live in. This view of learner autonomy reflects the liberatory function of education in the efforts of socio-economic, political and cultural emancipation (Marshall, 1996). As defined by critical pedagogues, liberatory or emancipatory education is one focused not only to improve learners' life but also transform the dominant socio-economic structures that use education as a tool for exploitation. In a classroom context, Marshall's view of learner autonomy would mean students being active and free to share their thoughts and experiences about the topics. In other words, learners' autonomy in a classroom is when students are free from their teachers' authority. Teachers' authority is that which results in the classroom domination where students remain passive objects waiting for the knowledge to be imparted from their teachers (Marshall, 1996). Therefore, against teacher's classroom domination, LCT seeks to empower learners, that is, learners taking charge of their own learning. This teaching approach is believed to build different competencies amongst learners thus being able to live independently across the globe.

Rungwaraphong (2012) conducted a study that sought to understand the state of the promotion of learner autonomy in Thailand, from the conception and experiences of language lecturers at the Thai university. Based mainly on qualitative orientation with minimal quantification, it was found that lecturers rarely engaged their learners in their classroom practices. Though lecturers demonstrated deeper understanding of many ways to influence learner autonomy; they in practice, did not to actively involve learners in their instructional practices. Instead, teaching and learning was predominantly controlled by lecturers. Lecturers' practice according to Rungwaraphong suggested that theoretical understanding of enhancement of learner autonomy could not necessarily lead to actual practice of the respective approach in the classroom environment. According to the findings, it could also mean that implementation of any new instructional approach would require among others, lecturers' readiness and motivation as well as in-service training of the new

approach. Other factors according to Rungwaraphong would include the society culture and its educational system, students' learning characteristics, and the school environment (Rungwaraphong, 2012).

Rungwaraphong's study relates to this thesis. Examining how university lecturers influence students' learning through learner-centred based approaches; the study emphasised the need for students to actively engage in the instructional processes by taking responsibility for their learning. In order to promote learners' autonomy, Rungwaraphong suggested the need for lecturers to create classroom environments and plan their lessons in ways that suit students' needs, interests, and experiences. Like this study, among the major challenges facing Thailand university lecturers in the promotion of learners' autonomy include the lecturers' understanding of the teaching approach, that is, the learners' autonomy, university environment, and the cultural influence of Thai society in the instruction practices (Rungwaraphong, 2012).

This means that promoting learners' autonomy requires classroom practices to integrate the socio-economic, political, and cultural issues from the students' lives, through an instructional approach that:

“argues that school practices need to be informed by a public philosophy that addresses how to construct ideological and institutional conditions in which the lived experience of empowerment for the vast majority of students becomes the defining feature of schooling” (Giroux, 2000, p. 2).

The major belief of CP is that education is not free from political system. It is always influenced by politics of the day and that educational planning should consider among others, the political environment that it ought to operate. It is for this reason teachers need to engage students in the learning aspects that are relevant and useful beyond their school boundaries (Dewey, 1916; Freire, 1970; Pennycook, 1999; Wink, 1997).

Complexities and contradictions in the implementation of LCT

It has been claimed that there are problems and contradictions associated with conceptualising learner-centred teaching. The complexities and contradictions arise from the diverse use of the term 'learner-centred teaching' (Msonde, 2011), and the

lack of agreement about the defined nature of the concept. The contradiction is further complicated when other terms are used as alternatives. Educationists including critical theorists, educational researchers, teacher educators, and teachers labels LCT as ‘participatory teaching and learning (Msonde, 2011; Phillips, 1997)’, ‘critical education (Freire, 1972)’, ‘emancipatory pedagogy (Freire, 1970)’, ‘liberatory pedagogy (Freire, 1970; Dewey, 1966)’, ‘learning-centred teaching (Phillips, 1995; Richardson, 2003)’, ‘culturally responsive pedagogy (Gay, 2000; Nyerere, 1967)’, ‘constructivist teaching (Phillips, 1995; Richardson, 2003)’, ‘competence-based teaching (GoURT, 2005)’, and ‘place-based teaching (GoURT, 2005; Nyerere, 1967)’ to mention a few. However, the usage has seldom been consistent, causing some confusion among theoreticians, curriculum and educational policy planners, researchers, teacher educators, and teachers (Msonde, 2011). The following sections present LCT complexities which adversely affect its effective implementation, particularly, in Tanzania’s teaching and learning context.

LCT and the teaching and learning methods

Some educationists conceptualise LCT based on the teaching and learning methods used. These scholars (Msonde, 2011), perceive LCT as the practice that seeks students’ involvement using what they call ‘*participatory teaching and learning methods*’. They identify participatory methods to include mainly; group discussion, question and answers, demonstration, and field visits. For them, according to Msonde (2011), learning occurs when students merely participate in the teaching and learning process. This means that this group of educationists does not assess students’ participation in terms of their ability to construct knowledge from their diverse contexts and experiences. Understanding of LCT in terms of mere students’ participation in the classroom seemed to affect geography teachers’ conception and practice of LCT. As detailed in the findings chapter, some teachers equally understood LCT by the methods of teaching and learning. This understanding of LCT consequently affected teachers’ teaching practices. Teachers perceived LCT occurs when students participate in the teaching and learning and not students’ critical reflection of the topics using their diverse experiences thus leading to the development of new understanding of the respective topics. Teachers’

conceptualization of LCT seemed to contradict with the ideas of education critical theorists such as Freire and Dewey.

According to Freire (1971), active students' participation depends on the relationships that exist between the teacher and students. Freire denotes that students are placed in a better position for a meaningful learning where teachers provide them enough chances to discuss the subject matter using their diverse prior knowledge and living contexts. Freire's interest is to see students are actively engaged in the learning process by having them taking charge of the teaching and learning. As opposed to the banking approach to teaching where teachers dominate the classroom practice, Freire calls for the change in the teacher-students' relationship by actively engaging students in the construction of knowledge about the world they live (Freire, 1971). Freire's proposition of how teaching and learning ought to take place is also supported by Dewey (1966) who argues that in order to develop creative, critical, and independent thinking as well as problem solving capacities amongst learners, teachers need to connect the subject matter to the students' prior knowledge and their real life situations. This means that both Freire and Dewey's ideas of classroom instruction relate to the 2005 Tanzania's LCT curriculum policy which emphasizes the development of students' learning competencies including critical and creative thinking skills, problem solving skills, literacy, and communicative competence. In short, based on critical theorists, LCT places an emphasis on students' learning and that a student is positioned at the centre of all classroom processes. The major focus of LCT is to develop students' abilities and capacities to perform activities and to quickly adapt to the rapidly changing society.

Teachers and students' culture

Another contradiction of LCT in Tanzania is embedded within teachers and students' culture. In Tanzania for example, historically, elders were believed and respected to be the source of knowledge and wisdom (Siwale and Sefu, 1977). They preserved cultural heritage, norms, values, and knowledge of their respective tribes. The elders transmitted this cultural heritage, norms, values, and knowledge to the youth based on emerging needs. This traditional system of education (Siwale & Sefu, 1977) aimed at inculcating in the children, the values of hospitality, bravery, the dignity of

labour, respect for elders, and the communalism as opposed to individualism. This education according to Siwale and Sefu was learned by both sexes through sex education, where, emphasis was on the responsibilities of manhood and womanhood. According to Siwale and Sefu, (1977), teaching and learning during the pre-colonial period were also practised through mass media such as tales, legends, whereby children learned history, geography, natural sciences, astronomy, and many other subjects. Based on the teachers and learners' characteristics in one hand and the methods of teaching on the other, it could be suggested that the tradition education was teacher-centred, where teachers possessed the knowledge, values, norms, and societal beliefs transmitted to learners who did not possess them.

Traditional education, therefore, developed authoritative power and autonomous behaviours amongst teachers and lead to inferiority complexes among students. Children were expected to continually respect their elders as source of knowledge and wisdom, which according to Mushi (2005), this elder-child relationship adversely affected the teaching and learning practices. Mushi observes that the historical relationship between elders and children has developed an inferiority complex and cowardly behaviour amongst students in the classrooms today. This could mean that the current teacher-student relationship in Tanzania denotes the perpetuation of the long-lived culturally teaching orientation that did not provide opportunities for children to make sense of the topics using their life experiences. Children were nurtured to accept everything taught by their parents/elders. Likewise, the implementation of LCT in Tanzania's secondary schools' geography classrooms was constrained by the historically inherited teacher-student relationship where teachers believed to acquire knowledge and authority to transmit to their students who do not possess it. On the other hand, students presented a cultural continuation of respect and an inferiority complex to their teachers. Many times when students were invited to share their conceptions and understanding of different geographic concepts, they demonstrated lack of enthusiasm and readiness to conceptualize and contribute their understandings of the topics under discussion. Against cultural complexity that exists in the implementation of LCT, critical theorists argue for students' autonomy in the classroom. Freire (1971) explains student autonomy occurs when a student is actively involved and provided with opportunities to construct meaning of the topics based on his/her prior knowledge and experience.

Mayer (1997) also states that learners would likely construct knowledge in the instructional environment that involves them in the classroom process. However, Freire argues that students would not automatically construct knowledge by their merely involvement in the lesson, instead, it would be determined by the kind of classroom relationship that exist between them and their teacher (Freire,1971). According to Freire, it could mean that the teacher-student relationship during classroom instruction influences students' level of engagement in the creation of knowledge. Freire feels that students will be actively involved in the construction of knowledge if teachers would be ready to position themselves as learners learning from their students and vis-à-vis. In other words, the LCT geography curriculum will be effectively implemented when there is knowledge sharing between the teacher and student and that respect is embedded within the two and not within a single group.

Thus, the cultural contradiction and complexity regarding teacher-student relationship could imply the need for the Tanzania's competence-based curriculum to address the complexity amongst education stake holders including curriculum and policy planners, teachers, students, parents, and the general community. The stake holders need to clearly understand what it means by LCT competence-based curriculum and the implied cultural transformation in the classroom context with respect to teacher-student relationships.

Teaching and learning resources

Resources constraint is one of the complexities that seemed to adversely affect the implementation of LCT in Tanzania. According to the research findings, teachers taught in large classes of up to 100 students. Those classes had limited instructional resources including text and reference books, computer assisted facilities, and those resources made from the school surroundings. Teachers felt it difficult to actively involve students in a meaningful construction of knowledge given the resource constrained classroom contexts. Teachers' experiences are supported by critical theorists and educationists who argue that the potential role of teaching and learning resources are needed for effective LCT practices. Tabulawa (1998) recommends the need for adequate supply of instructional resources to influence learning-centred teaching. According to Tabulawa, meaningful construction of knowledge occurs

when students actively interact with resources. Tabulawa argues that when instructional resources are well organized and utilized, they promote students' creativity, critical thinking, problem solving skills, and active participation in the classroom activities (Tabulawa, 1998). Tabulawa's argumentation regarding the role of resources in LCT echoes Incekara's (2010) ideas suggesting that learning resources such as maps, geographical models, and other emerging technologies are used as communication media through which teachers and students communicate different geographical phenomena, their spatial distribution and relationships among them and human activities. While teachers, Tabulawa, and Incekara's perceptions and understanding of teaching and learning resources as the basics for effective LCT practices, other scholars argue that LCT can as well be effectively implemented in large and resources-constrained classrooms.

In their pedagogy of autonomy for difficult circumstances, Kuchah and Smith's (2011) major proposition is centred on engaging learners in an under-resourced secondary school setting. For Kuchah and Smith (2011), teachers would effectively implement LCT approaches using students as resources. According to Kuchah and Smith, students possess a rich mass of experience and knowledge that has the potential to facilitate learning in under-resourced classroom environments. They propose teachers to actively involve students in every stage of pedagogical decision-making. Based on Kuchah and Smith's proposition, students could be involved in designing instructional resources, classroom activities, and evaluation artefacts. They believe that teachers will motivate students' involvement when they tailor the topics to the students' everyday experiences. They encourage teachers to use large classes and resources constraints as opportunities to actively involve students in promoting learners' autonomy. Consequently, the argumentation regarding the role of instructional resources seemed to complicate geography teachers' understanding and practice of LCT in the Tanzania's education delivery context. For example, critical and constructivist theorists such as Freire (1971) and Phillips, (1997) suggest the need to place the learner at the centre of all classroom practices i.e. actively engagement of students in the construction of knowledge.

Interestingly, Tabulawa (2003) seems not only to contradict his own appreciation on the usefulness of LCT approaches in promoting learners' learning, but also presents

counter arguments regarding the need for enhancing learners' autonomy using LCT approaches as augmented by critical theorists such as Freire and Phillips. According to Tabulawa (2013), LCT approaches are westernised and conditionally imposed in developing economies' educational contexts without fair consideration of cultural, technological, and socio-economic, and political grounds. Tabulawa sees that western countries and institutions use their political and economic prosperity to sustain their colonial influence in Africa. Tabulawa views that western countries and international institutions continue their political and economic influence in Africa through provision of financial aids and professional support in different socio-economic and cultural projects. These donor funded projects (DFPs) according to Tabulawa include: educational development projects such as curriculum innovations, instructional approaches, and promotion of medium of instruction through language learning support programmes; orphans and people living in vulnerable environments; health services; and infrastructure development grants support. Tabulawa suggests that many of these projects including LCT approaches are not effectively implemented since they are enforced without significant consideration of the contexts of their implementation. Tabulawa's critique is also reflected in the teachers' teaching practices.

Sigimba for example, presented an anxiety in the implementation of LCT approaches suggesting that the approaches were enforced in Tanzania whose educational context does not support their implementation. Sigimba further shared that LCT approaches would not be effectively practiced in an environment with limited instructional resources including teacher shortage, over-crowded classrooms, text and reference books, computer-assisted facilities, furniture, and infrastructures. All these seemed to complicate Sigimba's understanding of LCT and its implementation in geography classrooms.

Language complexity

The significance of the language of instruction on the educational practice during the pre-colonial period has been well presented in chapter one. The indigenous languages through oral traditions (Heugh, 2006) have been significant media for the preservation and expansion of history, literature, and knowledge systems, as well as

for their transmission from one generation to the next for a thousand years. However, with the colonisation of the African continent (Bunyi, 1999), the Europeans brought contradictory processes affecting language policy and management. Bamgbose (1994) among others shares that the Europeans attempted to imprint the European concept of the nation-state with a single, national language onto each African country. According to Bunyi (1999), this strategy effectively rendered indigenous languages politically invisible and fostered assimilation into the colonial language and power structures for the elite. This means that the language education policy during colonial period set in place a pattern that prioritised the use of the colonial languages as the language education target and under-emphasized local languages. The colonial language policy according to Heugh (2006) has been recognised by educationists as detrimental to educational, social, and economic development. It also means that colonial education was not African-oriented. It meant to prepare a few Africans to serve the colonial masters and their countries as Dei (1994) reiterates:

Only few scholars today would deny that colonial education in Africa was Euro-centric and ignored the achievements and contributions of the indigenous populations and their ancestries. Colonial education for the most part did not cultivate the African student's self-esteem and pride. Education in Africa today is still struggling to rid itself of this colonial legacy (p. 9).

Dei (1994) suggests the importance of reform and innovation in African education system based on African cultural foundation. He argues that unless the curriculum and medium of instruction are based on the learners' culture, the colonial influence on African education would be inevitable. Dei explains about the importance of learners' mother tongue in the construction of knowledge to have positive influence on their active involvement in the classroom processes. He explains further that the medium of instruction has the role to influence or limit teacher-student classroom interaction thus consequently affecting the nature of classroom instructional practice. Dei's argument about the role of language on learners' learning is supported by critical pedagogues including Freire. Freire (1971) states that the medium of instruction may influence or limit the classroom dialogue between teacher and students as well as students themselves. He thus emphasises the use of students' own language in order to promote their participation in the instructional practice.

Despite all the assertions regarding the need to align the curriculum and the medium of instruction on the African cultural heritage, the western world still perpetuates their influence not only on the curriculum design but also the instructional approaches including the medium of instruction. The colonial influence on African education systems seems to despise numerous appreciations of the role of African languages on the quality of education. For example, the 1951 UNESCO meeting state:

It is axiomatic that the best medium for teaching a child is his mother tongue. Psychologically, it is the system of meaningful signs that in his mind works automatically for expression and understanding. Sociologically, it is a means of identification among members of the community to which he belongs. Educationally, he learns more quickly through it than through an unfamiliar linguistic medium (UNESCO, 1951, p. 11).

The UNESCO observation regarding the role of the medium of instruction reflects geography teachers' experiences in their classroom practices in Tanzania. As presented and discussed in the findings, analysis, and discussion chapters of this thesis, it was experienced the language to impede positive classroom interaction between the teacher and students. Both teachers and students demonstrated a lack of English competence thus hindering effective communication of geographical ideas and concepts. This means that effective implementation of LCT in Tanzania, among other factors, is adversely affected by the medium of instruction. Therefore, it could be suggested that in order to effectively implement LCT in Tanzania, there is a need for debate on language policy and subsequent decision about the appropriate medium of instruction. The focus is to use the language that is familiar to both teachers and students.

Positioning of critical perspective theory to the study

The application of CP theory in understanding how geography teachers perceive and experience implementation of LCT was underpinned by several factors.

First, that the application of CP theory to this study was appropriate due to its ability to assess teachers' understanding of LCT and to identify not only the strengths and challenges faced by teachers in the implementation of LCT but also to suggest

promising pedagogical decisions and practices to enhance effective LCT practices. According to McLaren (1994), the theory advocates teaching to be linked to the goals of educating students to understand why things are the way they are and how they got to be like that. This in LCT environment would mean that students should be involved in thoughtful and reflective activities which challenge them to think beyond the topics.

From its inception, CP emerged as a critique of the education system which promoted a hegemonic relationship between teachers and students consequently producing a generation unable to see and question the weaknesses of the government and the community rather than accepting them as common and acceptable practices (McLaren, 1974; Freire, 1993). The theory also advocates for provision of education that enhances students' ability to critique the government and analyse societal challenges in order to solve them, thus creating better living conditions. Using CP to assess teachers' perceptions and experience as they implement LCT was influenced by the belief that teachers can transform their classrooms through more liberal pedagogical practices that foster the habits and skills of critical citizenship and participatory democracy (Dewey, 1918; Freire, 1993).

Freire insists on the critical role of a teacher as a change agent for socio-economic, political, and cultural issues. According to Freire (1993), teacher's teaching practices should be focused on critiquing the socio-economic system through the use of dialogue instead of an authoritative teacher dominated classroom practices. As Giroux (1991) argues that "teachers need to see themselves as 'transformative intellectuals' rather than mere 'classroom technicians' employed to pass on a body of knowledge" (p. 299). The importance of students' involvement in the classroom practice is also emphasised by Pennycook (1994) who requires teaching and learning to link on what is happening outside the school. Pennycook wants the teacher to engage students on the curriculum that is based on their everyday life. He thus emphasises teachers to influence students' active involvement through a range of classroom activities that promote creativity, critical and independent thinking, as well as problem solving skills. This means that teaching needs to be directed to students' needs, interests, and every day experiences. They should be actively involved in activities which promote their thoughts and problem-solving skills.

Second, the integration of CP in this study was due to its holistic characteristic feature. CP is holistic in that it addresses all teachers' pedagogical practices from their conception of LCT, to decision-making during planning, practice, and assessment/evaluation of their classroom practices across all disciplines (Graves & Moore, 1972; McLaren, 1974). Assessment of LCT in geography classes required a theoretical framework grounded on a multidisciplinary approach within the single subject and across subject disciplines. It also required a kind of theoretical framework that demands students' construction of knowledge from the critical viewpoint (McLaren, 1974; Zygmantas, 2009).

Geography as a multidisciplinary social science subject which according to Cohen (1988, p. 248) examines how human being influence the environment and its resources, requires classroom practices to link with what learners already know and experience across disciplines consequently building new understandings. Teaching geography in this way facilitates students to generate solutions related to socio-economic and political problems that occur all over the world by getting them to comprehend the dimensions of relationships between people and their localities (Aydin, 2011).

Third, the application of CP was also underpinned by its beliefs in students' empowerment by involving them in self-reflection, critical thinking, and problem-solving for meaningful knowledge construction (Breuning, 2006/2011; Dewey, 1918; Kincheloe, 2004; Sweet, 1998; Zygmantas, 2009). CP requires learners to own the teaching and learning process hence shifting in teaching approach from teacher-centred to student-centred. The theory emphasises the need for teachers to give students' opportunities to bring their life experiences to the teaching, and participate actively in knowledge construction by integrating what they already know to the new subject matter (Breuning, 2011; Mansell, 2009; Zygmantas, 2009). Dewey (1918) and McLaren (2007) argue that consideration of students' prior knowledge and experience, and classroom interaction are important aspects of LCT. Hence, assessment of teachers' implementation of LCT required a theoretical framework that mirrors LCT beliefs. In such teaching environments, both a teacher and students share their understandings of the concepts in a way of creating new conception of the respective concepts. As stated herein, the teacher learns from his/her student and vis-à-vis. (Lalonde, 2011).

Fourth, the choice of CP as a theoretical framework to guide this thesis was also influenced by the fact of its rare application by researchers and educators in understanding LCT practices. Many of the studies on LCT demonstrate the use of theoretical approaches other than the CP (Kasanda & Lubben, 2005; Mtika, 2010; Preston, 2007) which Freire (1973) and Shor (1987) present it as a radical approach to education that seeks to transform oppressive structures in society using democratic and activist methods to teaching and learning. According to Shor (1996) and Sweet (1998), there is also limited literature that specifically demonstrates the way teachers attempt to apply CP in their teaching practices. This is despite the existence of a rich mass of literature that considers CP theory in varying dimensions (Breuning, 2009). Therefore, the decision to use CP theory, in an attempt to understand how geography teachers perceive and experience as they implement LCT was underpinned by several factors. The major factors included the need for, a theory which is critical in the sense of its ability to show the strengths, challenges, and emancipatory ways to improve the classroom practices. The researcher also thought about the need for a theory which is holistic in nature, and that is powerful enough to challenge the LCT based on the constructivist philosophy. More importantly, the decision to use CP as a theoretical framework to inform the study was to avoid theoretical replication on similar studies.

In short the researcher sought to employ a theory that not only promotes students' autonomy and critical thoughts but also one which embraces teaching practices that acknowledge the influence of the social and political elements existent in each and every day educational context. Figure 2.1 hereunder presents a summary of CP theoretical framework premises.

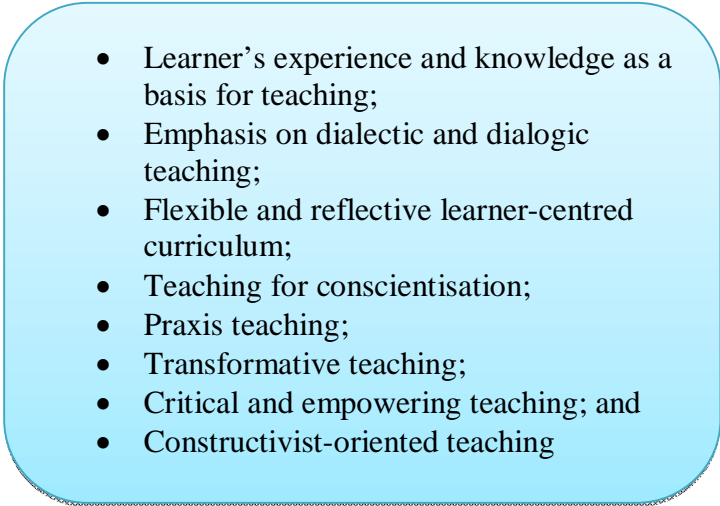
- 
- Learner's experience and knowledge as a basis for teaching;
 - Emphasis on dialectic and dialogic teaching;
 - Flexible and reflective learner-centred curriculum;
 - Teaching for conscientisation;
 - Praxis teaching;
 - Transformative teaching;
 - Critical and empowering teaching; and
 - Constructivist-oriented teaching

Figure 2.1 A summary of CP premises

Chapter summary

This chapter has presented a conceptual understanding of CP as a theoretical framework that informs the study. Based on its guiding premises, the theory suggests that teachers' instructional practices need to focus on students' needs, interests, and capacities, where, students' prior knowledge, and experience form the basis of classroom processes. The central idea is that, teachers need to engage students in classroom activities which promote critical perspectives. Against the Banking Pedagogical Model which accredits the teacher to have all the knowledge and the students are simply empty containers, passively waiting to be filled with knowledge (Freire, 1993); CP suggests that students as human and social beings possess knowledge and experience which support their conception of the world. This understanding of students' acquisition of prior knowledge and experience is also supported by McLaren (2003) when he presents that, "school knowledge is historically and socially rooted and interest bound", and "is never neutral but...rooted in the notion of power relations" (p. 196). This assumption suggests not only a shift in instructional approach from teacher-centred to student-centred, but also it presents the need to empower students with critical perspectives to be able to critically examine the topics taught, beyond the existing curriculum and educational system. The chapter has presented what LCT mean in Tanzania's context from a critical perspective approach. The chapter has discussed some significant complexities and contradictions which impede teachers' effective LCT practices. Objectively, this chapter has been a lens in the discussion of the thesis within chapters. Chapter three presents a review of literature that relate closely to LCT based on constructivist philosophy.

CHAPTER 3

LITERATURE REVIEW

Introduction

The literature reviewed in this chapter comes from a range of sources, all of which indicated some substantial features related to LCT based curriculum. Right from the outset, the literature review is built upon the relational instructional practice of LCT. It is then followed by the presentation of constructivism as a philosophy of knowledge construction and its implications for teachers' classroom practices. Aspects of the teacher's pedagogical reasoning and decision-making, collaborative teaching and learning, authentic assessment of classroom instruction, and teacher education precede the section on LCT geography education. Eventually, the literature review presents some critiques on the culturally responsive curriculum, where consequently, research gaps and research questions are identified. A summary of the review of literature is presented thereafter.

The relational instructional practice of LCT

The concept of LCT has been extensively used in the literature about teaching and learning practices. According to the many items of literature reviewed, LCT is defined as how knowledge is constructed and the focus and motives of classroom processes. For this reason, LCT is said to be one of the multiple labels of constructivist teaching philosophy (Din & Wheatley, 2007). Other similar instructional approaches that could be considered learner-centred according to Din and Wheatley (2007) include cooperative or participatory learning; active learning; learner-autonomy; student-centred; competence-based learning; place-based learning; and value-driven instructional approach. These different approaches considered learner-centred reflect those labels by the CP theorists as discussed in chapter two. To reiterate a few of the CP theorists' approaches which encourage LCT include the transformative pedagogy; problem-based pedagogy; critical education pedagogy; empowerment pedagogy; the emancipatory pedagogy; and the pedagogy of the oppressed (Dewey, 1916; Freire, 1970; Kincheloe, 2004) According to these CP theorists, the focus of instruction is to facilitate students to develop critical

reflection and perspectives about the socio-economic, cultural, and political aspects. They suggest that developing critical thoughts amongst students, teachers need to cultivate a fluid relationship with their students such that students democratically and critically use their prior knowledge and experiences to build new conceptions of the topics (Dewey, 1916; Freire, 1970; Kincheloe, 2004).

Therefore, the following are some definitions and interpretations of LCT as an instructional approach that focus on students' involvement, needs and interests. Mehdinezhad (2011) defines LCT as an approach to teaching geared to suffice learners' needs and interests and not teachers' needs. Mehdinezhad's definition of LCT implies that the teachers' teaching practices need to consider and integrate topics and learning experiences which suit students' interests and their level of understanding. It also implies that students in LCT should underpin teachers' pedagogical decision-making, that is, they should be the focus of instruction. McCombs and Whisler (1997) define LCT by placing emphasis on students' learning. They describe LCT as an instructional approach that focuses on individual learners, that is, using learners' prior knowledge, needs, as well as learners' living contexts to influence their engagement in the construction of knowledge (McCombs and Whisler, 1997). Based on McCombs's and Whisler's definition of LCT, it means that learners have different learning experiences and capacities. Learners' experiences and capacities should form the basis for teachers' decision-making and practices. Implied is that teachers need to identify individual learners' needs and they should support all learners based on their needs and instructional capacities. Thus, LCT should result in the students' active involvement in classroom practices (McCombs & Whisler, 1997).

As one of the many different interpretations of the constructivist theory of learning (Richardson, 2003), LCT is founded on the assumption that learners construct knowledge when they are enhanced to connect the topics with their prior knowledge and experiences. This means that learners' prior knowledge and experiences are the basis for LCT. Teachers should thus tailor their instruction to students' existing knowledge and experiences. Other scholars conceptualise LCT in terms of the *relationships* that exist between teachers and students. They see LCT as an instructional approach which redefines and transforms the teachers' role in their

teaching. For example, Cornelius-White, Jeffrey and Harbaugh (2009) define LCT as an instructional paradigm that requires learner's active involvement in the classroom practice. They explain further that teachers should play a facilitative role to ensure every learner takes responsibility for his/her own learning. This suggests that, in a learner-centred environment, teachers change their role from authoritative-teacher-directed to facilitative-student-directed, helping students to *learn*.

Schiller (2009) argues that LCT approach denotes a shift in the instructional orientation and philosophy from teacher-centred to student-centred approaches. According to Schiller, in a teacher-centred paradigm, teachers are the focus of teaching and learning, with the students following the directions of the teachers. On the contrary, in LCT environment, learners are no longer passive receivers of knowledge; instead, they are "*active participants* in learning and co-constructors of knowledge" (Meece, 2003, p.111). Meece's interpretation of LCT could mean that teachers in LCT environment are facilitators of classroom practices who guide and promote learners' involvement in the teaching and learning process. Meece (2011) suggests that active learning in LCT results from an active interaction between teachers and students. Active classroom interaction according to Freire (1970) and Weimer (2002) is enhanced by the teachers' use of discovery, inquiry, and problem-solving methods. This means that teachers in LCT emphasise learners' internal motivation and enhancement of multiple learning styles and approaches to influence learners' acquisition of creative and critical thinking as well as problem solving skills (Weimer, 2002). According to Weimer, the LCT curricula should emphasise and focus on learners' characteristics and how learning occurs and not curricula content in terms of knowledge to be gained. This understanding of LCT suggests the implications and emphasis for the teachers' teaching practices in that the central *focus of LCT is on learning* and not on the achievement of instructional content. Mushi (2004, p.35) argues:

Teachers need to employ participatory modes of teaching to enhance students' capacities as individuals and groups. To this end, students need to be engaged actively in educational needs analysis, formulation of learning objectives, course development, teaching and learning process, as well as in assessment of learning outcome, the processes, which are peripheral to traditional didactic approaches.

Different from other scholars, Mushi (2004) defines LCT based on its characteristics that govern the *instructional processes*. He lists the LCT characteristics as: (a) the need of learners' active involvement in the instructional process; (b) the need for instructional practice that focus on deep learning as opposed to surface learning; (c) learners taking charge of their own learning; (d) teacher and the learner learning from one another; (e) an existence of fluid relationship between the teacher and the learner; and (f) an emphasis on teachers' and learners' reflexive practice during instructional process (Mushi, 2004, p. 35). Similarly, Gibbs (1995) defined four core considerations in the implementation of LCT. These are (a) learner's active engagement as opposed to being passive recipient of knowledge from the teacher who posses it; (b) students' experiences of what is taught in relation to his/her context; (c) learning process and competence-based as opposed to content and; (d) major instructional decisions to be determined by the learner in liaison with the teacher. Based on Mushi and Gibbs characterisation of LCT, it is evident that the main *focus of LCT is to develop learning competencies and capabilities* amongst students. It also implies the kind of teacher-student power relationship in the classroom processes.

According to Freire (1970) and McLaren (2003), LCT is a teaching approach that requires a change of the long lived instructional cultures and methodologies that have characterised ways learners have been conditioned and expected to learn for years. Teachers' teaching approaches have for decades been that which the knowledge is transferred from the teacher and passively received by the students (Meece, 2003). Freire (1970) called this the banking model of education. By this model, teachers are knowledge depositories, who deposit their knowledge to the students. In contrast to the banking model of education, (Freire, 1970), proposed what he called a "dialogical teaching, through problem posing-pedagogy". Freire viewed that using a dialogical method; the students take a more active role in the learning process than the teacher. All teaching and learning are directed to the students and that teachers become problem posers and students problem solvers (Freire, 1970). This means that in LCT environment, the emphasis is on students' active sharing of experience and knowledge through a well-facilitated dialogue where each student has a stake in the learning process. Based on CP theory, the knowledge construction amongst individual students is fostered through indoctrination of critical and reflective

perspectives of geographical and socio-cultural phenomena (Freire, 1970; Pennycook, 1994).

Other scholars and institutions define LCT in terms of the instructional methods used. They distinguish the methods between *participatory and non-participatory*. Their understanding of LCT is underpinned mainly by the level of students' participation in the classroom processes and not their ability to make conceptions of the topics (TIE, 2005). According to TIE, students are expected to make conceptions of topics when they are actively involved in the teaching process. TIE (2005) outlines some of the participatory methods to include small group discussion, think-pair-share, debate, project-based activities, demonstration, simulation, fieldtrips, questions and answers, and the individualised-based assignments. Similarly, Sithole (2010) conducted a study to assess how teaching practices of Business Studies adheres to LCT instructional beliefs in Botswana's ordinary level's secondary schools. According to Sithole, business studies subjects aim to equip students with practical business skills which enable them to participate meaningfully in production in future. Sithole outlined the LCT methods prescribed in the syllabus to include: project work, educational visits, use of business resource personnel, simulation, group discussions, case studies, and the use of enterprises run and operated by students. This means that students' learning is determined by the level of their involvement in the instructional practices. The *students' involvement* in instructional practices thus becomes the defining feature of the LCT approach. According to McCombs and Whisler (1997), the findings from LCT research studies have indicated that when a learner-centred environment is present, all students - regardless of their diverse learning styles - are provided with strategies that create and support opportunities to learn. This could mean that LCT focuses on enabling learners to learn, that is, building conceptions of instructional topics. In order to influence students' learning, teachers' instructional practices need to be directed towards the development of students' autonomy and using students' prior knowledge and experiences as a basis for LCT.

According to Mehdinezhad (2011) LCT approaches include those which: build on learner's prior knowledge and experience as well as learner's learning styles to accomplish the major aim that is knowledge construction. Mehdinezhad explains

more about LCT approaches as those which focus on the needs, and interests of students. He further presents that LCT approaches provide learning experiences that promote learners' autonomy, choice, cooperation, meaningful interaction, and meta-cognitive development. Thus the role of the teacher in a LCT environment would be to facilitate student work in pairs, in groups, or individually as well as creating instructional environment and opportunities based on learners' living contexts, and using instructional techniques and approaches that promote learners' sense of reflective practices and critical thoughts resulting in the development of competences amongst students. Consequently, due to the variation in the conception and understanding of LCT, the LCT approach is practiced differently across the world. The variation in the conception of LCT has affected its implementation in terms of focus of classroom instruction as well as the purpose and objectives of classroom instruction. In practice, Msonde (2011), suggests that during the implementation of LCT some educators focus on the methods of teaching, others focus on the integration of students' existing knowledge and experience and the students' learning, while others consider aspects such as the teacher-students' relationships, students' activities, and the achievements of instructional objectives. For the critical pedagogues, the focus of LCT is to empower learners with critical thinking and problem-solving skills (Dewey, 1966). Whereas, in order to influence students' critical thoughts, teachers need to promote classroom democracy to enhance effective dialectic and dialogical sharing of knowledge and experience between the teacher and the students (Freire, 1970).

Reflecting on the conceptual meanings and pedagogical implications of LCT in the classroom practices, it seems fair to suggest that in order for students to become actively involved in the teaching and learning, a teacher needs to play a facilitative role to ensure all students are involved in the classroom processes through creative inquiry-based activities which promote students' critical and reflective thoughts. As opposed to a behaviourist way of learning where knowledge is transmitted from the teacher to the student, LCT based on constructivist learning beliefs advocates that students will construct knowledge of the topic when they are able to connect the respective topic with their prior knowledge and experiences i.e. when what is taught makes sense in students' minds (Hiebert & Wearne, 1993; Applefield, Huber &

Moallem 2001). The individually constructed representations interact with each other in the production of new knowledge and beliefs.

A further interpretation of LCT is one which considers students as co-constructors of learning (Mansell, 2009). According to Mansell, co-construction of learning would occur when learners are actively engaged in every stage in the teaching and learning process. Mansell feels that learners ought to construct knowledge when they are considered partners of the teaching and learning process. As partners of the teaching and learning process, would mean learners being actively involved in all instructional activities. Mansell outlines activities that learners should be involved to include curriculum design, lesson planning, preparation of instructional resources, teaching and learning process, and assessment of instructional practices and general curriculum implementation (Mansell, 2009). Mansell conception of LCT emphasises on the enhancement of learners' freedom and autonomy in that teaching and learning should be based on learners' choice of content, instructional approaches, and their active involvement in the teaching and learning process. This understanding of LCT which gives students freedom to select what to learn and how to learn is somewhat different from the LCT that underpinned this thesis. Based on this thesis LCT is defined as an instructional orientation that places the learner at the centre of the instruction while the emphasis being on learning using students' diverse experiences and activity-based and participatory pedagogies as opposed to teacher-centred instructional pedagogies (Dewey, 1966; Freire, 1970). Dewey proposes teacher's practice of facilitative role to promote active students' participation in the classroom process. However, Dewey caution that the need for learners to take responsibility for their learning is not meant to take teachers' expertise and their significant role in curriculum design, rather facilitate the learning process so that students construct knowledge themselves (Dewey, 1966). This could imply that a teacher's need to actively involve students in LCT is not meant to replace his/her role as an expert in a given subject, rather, his/her role in enhancing students' learning to remain critical. Teachers' pedagogical content knowledge is significant in augmenting and refining students' conception of geographical principles and ideas.

However, positioning oneself as an instructional facilitator in the LCT environment requires a change of mindset of cultural conditioning based on the teacher-centred

teaching practices. Teaching based on LCT beliefs challenges the long lived authoritative and dominant and subordinate cultural practices in the society and the school settings in particular (Brantmeier, Aragon & Folkestad, 2011). Therefore, teachers in LCT environments need to redefine and reposition their status-quo as the source of knowledge to individuals who are enthusiastic to learn from their students. Brantmeier *et al* proposes teachers to empower learners by practicing what they refer to as community of practice i.e. teacher and the learner learning from one another.

This means that teachers in an LCT environment need to empower students to take responsibility for their learning. From the CP standpoint, students' empowerment encompasses their active involvement and freedom to critically share their lived experiences in building an understanding of the topic. Teachers should design activities which promote students' participation and the development of critical thoughts and capacities for problem-solving amongst students (McLaren, 2003). In this case, teachers become facilitators of instruction, and co-constructors of knowledge and experience. Table 3.1 hereunder presents the major differences between LCT and teacher-centred teaching practices.

Table 3.1 The difference between Learner-centred and Teacher-centred teaching practices

Component	Learner-centred	Teacher-centred
Pedagogical reasoning and decision-making during planning process	<ul style="list-style-type: none"> Learners become the foci and are actively engaged in the planning process of classroom instruction. 	<ul style="list-style-type: none"> The teacher himself /herself plans the lesson (s) under the influence of teacher-dominated curricula materials including the subject syllabus.
Identification of instructional needs	<ul style="list-style-type: none"> Both a teacher and students negotiate instructional needs according to the topic, learner's context and background knowledge, resources availability, job-market, and the country's educational philosophy. 	<ul style="list-style-type: none"> Teachers use readymade instructional needs identified by curriculum developers and teachers during classroom process.
Motivation	<ul style="list-style-type: none"> Value driven and enhancement of learners' curiosity, creativity, and integration of their prior knowledge on the subject. 	<ul style="list-style-type: none"> By teacher-centred lesson objectives and provision of external rewards and punishment.
Teaching and learning	<ul style="list-style-type: none"> Live classroom instruction, mostly activity-based using well organised 	<ul style="list-style-type: none"> Passive and teacher-dominated classroom.

process	participatory approaches such as small group discussion, think-pair-share, project, and fieldtrips.	Students sit quietly listening and jotting down notes from the teacher's lecture. Classroom interaction is minimal.
Teacher and students' relationships	<ul style="list-style-type: none"> Fluid relationship such that both a teacher and the learner are teacher and learner at the same time whereas they democratically learn from one another. Teachers become facilitators, co-constructors and or partners of classroom processes. 	<ul style="list-style-type: none"> Authoritative kind of relationship where the teacher is not only the source of knowledge but also the master of classroom instruction.
Classroom atmosphere	<ul style="list-style-type: none"> Democratic, trusting, warm, informal, collaborative, and supportive 	<ul style="list-style-type: none"> Authoritative, tense, low trust, fear, and predominantly formal.
Evaluation of instruction	<ul style="list-style-type: none"> Mainly formative assessment where teachers and learners jointly assess their instruction and evaluation is interwoven in the instruction. Teachers use evaluation results to inform their classroom practices. Evaluation techniques that are designed to involve students in examining their own learning, focusing their attention on their learning needs and changing understanding rather than on a grade 	<ul style="list-style-type: none"> Classroom evaluation is done by teachers and experts and mostly at the end of instruction; Teachers use evaluation for grading, which subsequently are used to motivate students as well as to provide parents with information about their children's academic progress
Understanding	<ul style="list-style-type: none"> High possibility for deep and long term learning of geographical phenomena 	<ul style="list-style-type: none"> High possibility for surface learning and short term conception of geographical phenomena.

Source: Adapted from Msonde (2011, p.35)

As observed earlier, considering the existing differences between LCT and teacher-centred instructional approaches, the practice of an LCT geography curriculum would demand teachers making major instructional reform. However, both the research on the shift of instructional approach (Richardson, 1990) and the reform efforts in education suggest complexities and difficulties in their realisation. Tabulawa (1998) noted that, besides the popularity of LCT in the 21st century, in practice, the approach has significantly failed in many schools. According to Tabulawa, despite the remarkable efforts to shift instructional practices from teacher-centred to learner-centred yet classroom practices are predominantly teacher-centred.

He felt that schools' organisational and structural complexities as well as cultural influence on teacher-student relationships created conditions that sustained teacher-dominated classroom practices (Tabulawa, 1998). Tabulawa's study would suggest that effective implementation of LCT would not be realised unless schools' organisation and structures are redefined and transformed and all cultural values that promotes teacher's authoritative tendencies are also addressed.

The pedagogical transformation and studies across the world demonstrate different interpretations of LCT in theory and practice. Many stakeholders such as curriculum planners and teachers conceive LCT in terms of the methods of instruction (GoURT, 2005; Msonde, 2011). For them, implementation of LCT is defined in terms of teaching methods used and not how students are engaged in the knowledge construction process. As such, the teachers' teaching practices are limited to using particular instructional methods assuming that by doing so, learners would automatically engage in the knowledge construction processes.

For example, the GoURT (1997) grouped instructional methods as *participatory* and *non-participatory* methods. The GoURT outlined the participatory instructional methods to include: group discussion, debates, role plays, demonstrations, study visits, case studies, film shows, games, simulation, projects, discovery learning and brain storming. The GoURT also presented non-participatory methods to distinguish from participatory methods. The non-interactive instructional methods included: question and answers, storytelling, songs, lecture, chalkboard notes and talks (GoURT, 1997, p. 41). Therefore, the GoURT recommended the use of participatory methods focused towards LCT. The aim of using participatory methods was to influence students' participation in the knowledge construction.

According to Mushi (2004), the teaching methods that actively involve learners in the teaching and learning processes increase the chances of promoting LCT. He argues that the students are liable to become passive if the teaching employs methods that rarely involve learners. As observed before, although this line of thought demonstrates the LCT methodological approach, yet, it overlooks the role of the instructional methods in the students' construction of knowledge. Putting an emphasis on the instructional methods only, may limit the students' potential to develop critical perspectives and competencies during the learning process.

According to Msonde (2011), emphasising the use of particular methods, which call for a maximum learner's involvement is a *traditional way* of conceptualising LCT. He sees that instructional methods, strategies, and techniques have nothing to do with learner's engagement in the learning process, unless the methods focus on what the students are expected to develop in a particular instructional topic (p. 38).

Therefore, based on the discussion of LCT, it is logical to argue that LCT relates to constructivist instructional philosophy and CP. This is due to their emphasis on the focus of instruction and the importance of learners' autonomy in the instructional processes. The constructivist instructional philosophy and CP also focus on the need for students to engage in the knowledge construction through a meaningful dialoguing and problem-solving abilities (Freire, 1970; Pennycook, 1994; Yilmaz, 2008).

In summary, LCT could be conceptualised as an instructional approach that focuses on helping students to construct understanding of concepts and principles using their prior knowledge and experiences from their day to day life. Teaching strategies are tailored to students' lives and teachers encourage students to analyse, interpret, and predict information. Effective dialoguing and students' active participation in the classroom processes becomes the defining feature of LCT practices. This means that effective LCT should result in the students' knowledge construction. Students should be involved in activities which stimulate creativity, critical thinking, and problem-solving skills.

Therefore, the researcher makes a case that in order to promote students' participation in knowledge construction; much attention should be focused on how teachers understand LCT and its implications for classroom processes. Teachers' practices should not only be reflected by students' participation, they should also engage students in knowledge construction using their diverse experiences. Msonde (2011) noted that learners' active engagement in a lesson does not guarantee their learning i.e. knowledge construction. Thus, effective implementation of LCT will be determined by the teachers' understanding of the approach and their pedagogical motivation to engage students in the instructional practice (Mushi, 2004). Learning objectives will then be realised by active collaboration between the teacher and learners whereas learners are promoted to make sense of the topic using their prior

knowledge and varied instructional experiences (Von Glasersfeld, 1995). The next section presents a review of literature on constructivist theory to broaden an understanding of how knowledge construction might occur in LCT classroom environment.

Constructivism as a philosophy of knowledge construction

The concept of “constructivism” has been conceptualised in many different ways. Phillips (1995) defines constructivism as a theory of learning that focus on the construction of knowledge. Phillips believes that knowledge construction as both an individual and social process, that is, it involves individual’s own creation of knowledge as well as knowledge creation that occurs when individuals engage in dialogue about specific phenomena (Phillips, 1995). Richardson (2003, p.1623) provides a broad definition of constructivism stating that, “it is a theory of learning or meaning making, that individuals create their own understandings on the basis of an interaction between what they already know and believe and ideas and knowledge in which they come into contact”. Implied is that, as opposed to mechanical processes that do not involve mental functioning, knowledge construction is a mental process that occurs when one interacts with nature or one another in the struggle for understanding of different phenomena. This understanding of constructivism may thus be regarded as a shift in instructional approach from teacher-centred to student-centred. The belief that learners are empty headed passively waiting to receive readymade knowledge from teachers does no longer makes sense. Instead, it is believed that learners actively create knowledge using their prior knowledge and experience as they interact with the environment and/or instructional topic (Liu & Matthews, 2005; Richardson, 2003). This means that, as opposed to the teacher-centred teaching, in constructivist instruction, learners become the focus of all the teachers’ instruction, and thus LCT. This is also supported by Marincovich (2000) who provides significant difference between Problem Based Learning and teacher-centred teaching and the implications for teachers’ practices. Marincovich states that problem-based learning requires teachers to play a facilitative role promoting learners active engagement in the construction of knowledge rather than transferring the subject content to the learners using teacher dominated instructional approaches (Marincovich, 2000).

According to Marinovich, the concept of being learner-centred and process-oriented requires teachers' instructional practice to be directed to the learners i.e. learners being actively involved in the construction of knowledge. Marinovich thus connects student-centred teaching with constructivist theories that place the learner at the centre of classroom instruction. Therefore, "Constructivism" as observed by Marinovich (2000) is credited to be the father of student-centred teaching, which is the focus of this thesis.

Considering the different conceptions of constructivism as a knowledge construction philosophy, there are some explanations that in one way or another all subscribe to. Hence, these similar understandings of constructivism are considered a mild version of constructivist claims (Baker; McGaw & Peterson, 2007). The following are some of the basic explanations of constructivism, based on the analysis of Taber (2006, p. 139):

- (a) Knowledge is constructed by an individual learner as he/she encounters with nature and/or as one interact with the other in dialogue or group setting. Implied is that learning is a mental process occurring within an individual learner and not passively occurring from the teacher;
- (b) Learners possess rich prior knowledge and experience that is significant in the construction of new knowledge;
- (c) Whatever similar conception of ideas that may exist among learners; they still perceive the world differently. While some of their perceptions and understandings might be socially and culturally accepted, others may not (Baker; McGaw and Peterson, 2007);
- (d) In some cases, learner's prior knowledge and experience of the world may not be in agreement with scientific principles and some may result in persistence and difficulty to change;
- (e) Learners have different conceptual structures resulting in their differences in way/learning styles, abilities, as well as capacities to construct knowledge of concepts and principles of different phenomena
- (f) Instructional practice need to integrate learner's prior knowledge and experience in order for a meaningful learning to occur; and

- (g) The society and the environment have significant contribution in the individual's construction of knowledge. Meaning that the learner constructs knowledge of different phenomena as he interacts with the environment individually and in the social settings.

Phillips' (1997) classifies constructivism in two groups as "social constructivism" and "psychological constructivism". According to Phillips, the classification of constructivism is based on the nature and how knowledge is constructed. He explains that when an individual constructs meaning of concept by the use of individual's own meta-cognition, the process is referred to as psychological construction of knowledge. As opposed to individual's construction of knowledge, in some cases, conception of the world is realised when two or more individuals engage in dialogue or discussion. Phillips suggests that knowledge creation that occurs as individuals interact among themselves is said to be socially constructed thus social constructivism (Phillips, 1997; Richardson, 2003).

Based on the constructivists' claims about knowledge construction, it could be argued that learners construct knowledge when certain conditions are met. These conditions may include: learner's stable mind for cognition; learner's prior knowledge and experience; the social environment; and the subject matter. In this situation, knowledge construction occurs when students are involved in classroom processes and where the teacher provides enough opportunities for students to share their experiences connecting with the subject matter thus creating new understandings of the concepts, ideas and principles (Fosnot, 1996). Fosnot provides a brief summary of the constructivism beliefs:

...a constructivist view of learning suggests an approach to teaching that gives learners the opportunity for concrete, contextually meaningful experience which they can search for patterns, raise their own questions, and construct their own models, concepts, and strategies. (1996, p. ix)

Fosnot's overview of knowledge construction reflects the emphasis provided within the Tanzanian curriculum which stresses the need for students' involvement in the knowledge construction processes. The curriculum emphasises teachers' use of inquiry based methods geared at enhancing students' fundamental skills such as critical thinking, problem-solving, and communication (TIE, 2005). This follows the central aim of CP that emphasises teaching focusing on the "indoctrination of critical

thoughts” in the students’ minds (Freire, 1972; Giroux, 2002). Fosnot (1996), Freire (1972), and Giroux (2002) give an insistence on learners’ actively involvement in and taking charge for their own learning- actively participating in the knowledge construction processes through reflective thinking and integration of students’ diverse experiences in a well organised, activity based and democratic dialoguing.

The critical theorists emphasise the importance of students’ engagement and immersion in the critical thoughts-based classroom activities. They underscore the role of classroom democracy and effective and focused dialoguing amongst students in order for learners to be able to construct knowledge. hooks (1994, p. 21) writes:

When education is the practice of freedom, students are not the only ones who are asked to share, to confess. Engaged pedagogy does not seek simply to empower students. Any classroom that employs a holistic model of learning will also be a place where teachers grow, and are empowered by the process. That empowerment cannot happen if we refuse to be vulnerable while encouraging students to take risks.

This could mean that students are best involved in the knowledge construction process when they are fully empowered and take control of the teaching and learning process. The literature review informs that teachers as facilitators should be ready to encounter and intervene the possible risks that may arise in the implementation process of LCT practices. Teachers should cultivate and promote students’ self-reflection through individual and interactive activities. Thinking as a self and social process results from social practices.

According to critical pedagogues, in order for students to participate in the construction of knowledge, teachers need to create classroom environments and use instructional approaches that promote students’ involvement in classroom processes in a reflective, creative and critical manner. Critical theorists recommend teachers’ use of problem posing strategies and provision of both individual and group based activities with teachers’ minimal intervention (Dewey, 1966; Freire, 1972; McLaren, 2003). In other words, CP emphasises teachers’ change of pedagogical approach from teaching to learning where the teacher and students form what Mansell (2009) refer to it as a community of learners. Students are given more time to ask questions and answer them, to discuss problems posed by their peers and teachers and

participate in doing their assignments. Mansell writes about a community of learners stating:

...in an active learning environment, students help each other as meaning is co-constructed. The students are described as cognitive apprentices to the teachers and each other; expertise is distributed throughout the class (p.36).

According to Brown and Campione (1996), students in a collaborative teaching environment are learning the skills of “independent and collaborative research” (p.125). Despite Taber’s (2006) constructivist tenets, the American Psychological Association Board of Educational Affairs (APABEA) (1997); Applefield, Huber, and Moallem (2001); Doolittle and Hicks (2003); Goldin (1990); Hendry(1996); Henson (2003); McCombs and Whisler (1997); Von Glasersfeld (1995); and Weimer (2002) presented different, but similar constructivist teaching beliefs which are coined to include the following:

- (a) When the teacher creates learning environment that allows learners’ flexibility and freedom to interaction, there is great possibility for them to effectively participate in the construction of knowledge ;
- (b) Teachers use instructional topic as a catalyst to promote learners creative and critical thinking as well as to connect school curriculum with learners’ everyday life, that is, thinking beyond the school perimeters;
- (c) A shift in instructional approach from teacher-centred to learner-centred and from teacher’s classroom domination to a more facilitative and participatory role;
- (d) Learners taking charge for their own learning under the teachers’ facilitation to enable them understand their learning potentials as they struggle to construct knowledge;
- (e) Use of assessment approaches and techniques to influence learners’ active engagement in the construction of knowledge;
- (f) Learners’ prior knowledge and experiences as basis for effective teachers’ pedagogical reasoning and decision making and practices;
- (g) The influence of social interaction in learners’ involvement in knowledge construction process;
- (h) The need for learning-centred instructional activities that promote learners’ active engagement in the construction of knowledge;

- (i) Learners use their existing knowledge and life-based experiences to meaningfully interpret the concepts and principles of the subject matter – meaning that knowledge is not passively acquired, rather, it is the result of active meta-cognition in the mind of an individual learner; and
- (j) Knowing and the grasp of knowledge are biological and developmental processes as well as socio-cultural, and language-based interactional phenomena.

On the other hand, Henson (2003) categorises the constructivist beliefs into five major premises that: First, learners have different learning characteristics underpinned by their socio-economic backgrounds as well as their genetic variation which affect their meta-cognition and learning interests. Teachers need to use learners' differences to actively involve them in the classroom practice. Second, Teachers need to consider learners' individual learning differences such mental functioning, different learners' talents, needs, and learning styles. Third, the need for teachers to connect the topic to the learners' interests, prior knowledge and experience and to actively engage them in the classroom instructional practice. Fourth, effective and meaningful learning occurs where the learning environment allows learners' freedom and flexibility and where there is fluid relationship and respect between the teacher and the learner. Fifth, learning is viewed as an intrinsic and natural mental process that involves learners' motivation and autonomy in the struggle to interpret and understand the world.

Therefore, based on the reviewed literature about constructivist view of knowledge, learners are said to be the basis for knowledge construction (Doolittle & Hicks, 2003). The debate about constructivist view of knowledge has resulted in the existence of two groups of people with opposing beliefs. There are those who believe that learners' constructed knowledge represents the reality about the phenomenon i.e. cognitive constructivism. The second group believe that knowledge cannot in any case represent a reality of an object or phenomenon. This group of thought supports its position stating that knowledge construction occurs within a social setting (social constructivism) or within an individual based on individual's prior knowledge and experience of the topic (radical constructivism) (Liu & Matthews, 2005).

What assists to classify or identify these types of constructivist epistemology is, as Phillips (1995) state:

cognitive constructivists have been concerned with how the individual learner goes about the construction of knowledge in his or her own cognitive apparatus; for other constructivists [social and radical constructivists], however, the individual learner is of little interest, and what is the focus of concern is the construction of human knowledge in general. (p. 7)

Therefore, understanding the constructivist characteristics could mean that explaining knowledge as a commodity awaiting to be exchanged or transferred from one (teacher) who possesses it to the learner who does not have it is an outdated conception of what teaching and learning mean. Instead, knowledge construction should be conceived by the way learners are actively involved in the classroom instruction using a variety of activities and instructional resources (Msonde, 2011; Weimer, 2002) under the teacher's facilitation.

Jean-Jacque Rousseau (1712-1778) is often recognised as a founder of the student-centred educational movement (Darling, 1994) states that teachers should facilitate a lesson such that children should discover the world around them as opposed to having it presented to them through a textbook or a teacher as knowledge depositories. Masters and Holifield (1996) write that:

A teacher's responsibility is, in the first place, to plan lessons correlated to the child's desires and natural development and to let the senses develop in relation to their proper objects and, secondly, to encourage the learning of sciences as the almost natural outcome of the use of the senses (p. 560).

With regard to education of the children, Rousseau seems to suggest that children are different and likewise instruction needs to vary in order to suit the learning diversity across learners. According to Darling (1994), among Rousseau's many educational ideas, two key ideas that are more relevant to LCT are that students cannot be hurried into learning and that understanding does not occur as readily as most teachers would like or believe.

The Tanzanian government's LCT orientation guided by education for self-reliance philosophy is credited to the philosophy of Dewey, Freire, Piaget, and Vygotsky (Mushi, 2004). One addition that Dewey and Vygotsky make to the LCT paradigm

is the social aspect. Dewey and Vygostky believed that not only should the education of children involve interactions with other children but one purpose of education should be the positive impact on society as a whole (Dewey, 1938; Vygostky, 1978). Classroom interaction according to Dewey (1938) and Vygotsky (1978) is one of the important aspects for effective and meaningful classroom practice Dewey believed that the teacher should be a guide to the student's natural curious disposition. Dewey (1938) writes:

It is no longer a question of how the teacher is to instruct or how the pupil is to study. The problem is to find what conditions must be fulfilled in order that study and learning will naturally and necessarily take place, what conditions must be present so that pupils will make the responses which cannot help having learning as their consequences (p. 45).

In other words, Dewey advances the idea that the learning environment is a significant factor in LCT practices. This could also mean that students will only be able to construct knowledge when certain classroom instructional conditions are met. Dewey also observes teachers' knowledge base and decision-making as vital in influencing a positive learning environment for students to be able to construct knowledge (Shulman, 1987). This repetition of the argument that students need to take responsibility for their learning indicated a shift in the instructional theories from behaviourism to constructivism. The results of this cognitive revolution have led to the emergence of modern and learning-centred instructional methods and strategies which place the learner at the centre of teaching and learning (Anderson, Reder, & Simon, 1996). Those who subscribe to the constructivist paradigm believe that students are active learners who build understanding of the phenomena from their existing knowledge and experiences and as they come across new learning experiences (Driver & Oldham, 1986; Branco & Valsiner, 2004; Bentley & Ebert, 2007). Brooks and Brooks (1999) write the following:

In a constructivist classroom, the teacher searches for students' understandings of concepts, and then structures opportunities for students to refine or revise these understandings by posing contradictions, presenting new information, asking questions, encouraging research, and/or engaging students in inquiries designed to challenge current concepts (p. ix).

Goldin (1990) identifies what could be stated as practical implications of constructivism for teachers' practices. They include:

- (a) A view of knowledge as constructed by individuals and not as an existing body of knowledge or truth about a phenomenon;
- (b) An view of knowledge as constructed by an individual (learner) and not transmitted by the teacher;
- (c) A view of learning as occurring effectively through learners' active involvement in classroom-based activities and the use of participatory instructional methods;
- (d) Integrated and participatory formative classroom assessment of instructional practice as opposed to the long used paper-pencil testing of skills' acquisition;
- (e) Limited emphasis on direct and correct responses while creating learning-centred classroom environment to support learners with different learning styles, needs, and interests; and
- (f) Teachers' pedagogical reasoning and decision-making should focus on the deeper and broader reflection and understanding of the subject matter and building an understanding of instructional practice as a mental and constructive process from teachers' and students' own critical thoughts, reflective practice, and problem-solving experiences. (p. 31)

This means that teachers should be aware of not only how knowledge construction takes place within the student's mind, but also they should understand the kind of instructional conditions which encourage and promote student knowledge construction. Teachers need to create classroom environments that encourage democratic dialogue between a teacher and students and amongst students. Teachers should facilitate students with varied classroom activities ranging from individual based, pair work to small group activities that students will discuss and present under the close guidance of teachers. Teachers will be able to effectively implement LCT only if they strive to understand students' instructional needs, interests, and their diverse prior experiences which are significant in the knowledge construction processes.

The Australian report to the Department of Education, Employment and Workplace Relations (ADEEWR) (2008) about a study that examined the Teaching of

Geography in Years 3-10 presented the qualities for effective learning-centred teaching stating that:

Best practice in geography teaching should move students beyond a focus on the descriptive, that is, the ability to describe the features of our planet's surface and their spatial location, to include conceptual and creative questioning that combine the discrete inter disciplines of physical and human geography. By application of theoretical models and investigation of case studies students are able to explain why our world is like it is. By asking students to then consider what should be enables the application of their geographical knowledge, skills, understandings and values to address contemporary problems and consider solutions. (ADEEWR, 2008, p.44)

The ADEEWR report suggests that under constructivist learning, learners should be involved in the activities which promote higher order thinking. According to CP, students are likely to engage in critical reflective practices when they freely participate in a meaningful dialogue about the subject matter. Critical theorists propose students to engage in classroom activities which relate to their prior knowledge and experiences and those which promote students' curiosity and inquisitiveness (Dewey, 1966; Freire, 1970). Figure 3.1 hereunder demonstrates how knowledge construction occurs in a constructivist classroom environment.

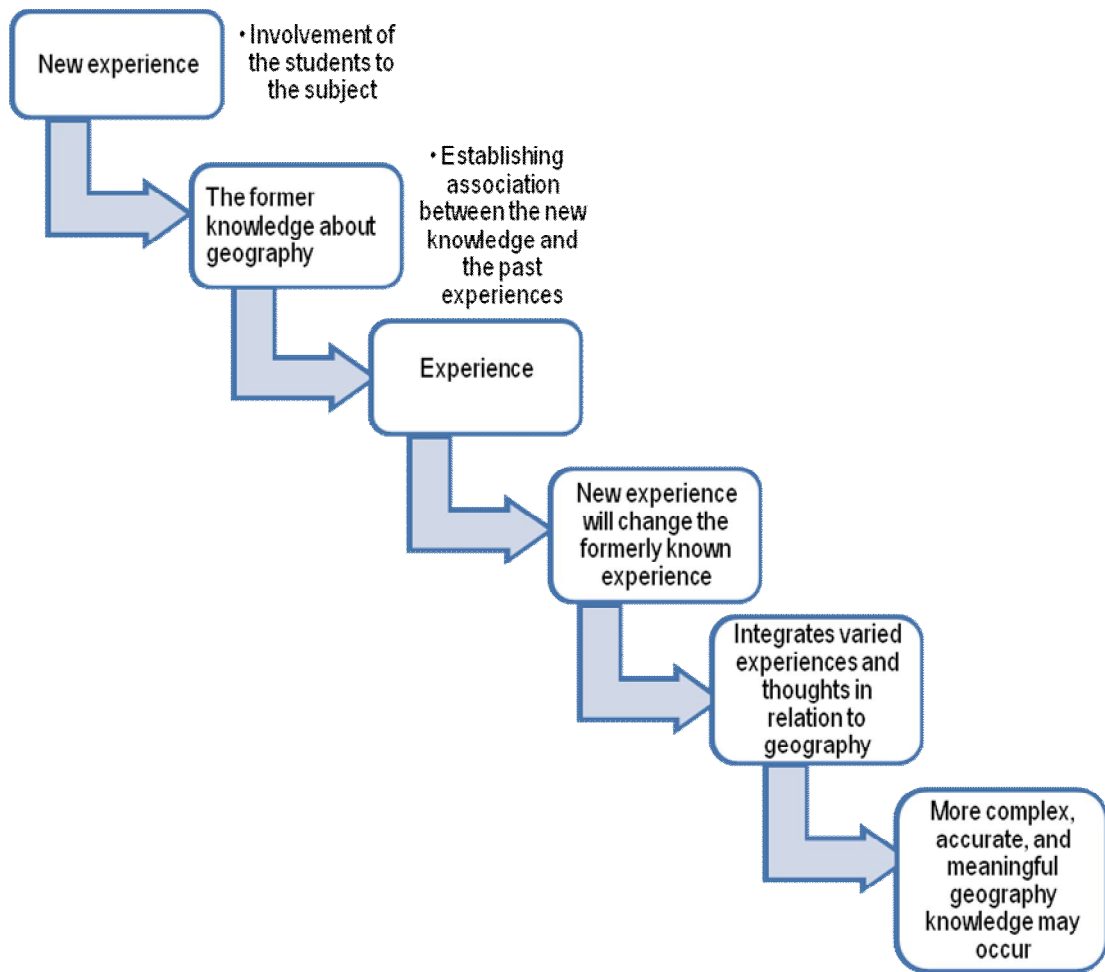


Figure 3.1. The constructivist learning process in geography

Source: Adapted from Sunal and Haas (2002, p. 24)

Criticism of constructivism as a philosophy of knowledge construction

The following are pertinent critiques of constructivism based on the review of literature:

- (a) Constructivism explains mainly about how learning ought to take place and not the way teaching influences learning (Phillips, 1995/1997; Von Glasersfeld, 1995);
- (b) Constructivism is controversial in itself. While it assumes that there is no true knowledge that exists, it also acknowledges the individual's existing knowledge and experience that he/she brings to the classroom. It is this

knowledge which supports students to construct new understandings of the subject (Rowlands, Graham, and Berry, 2001);

- (c) The role of students' prior knowledge and experience. In order to understand how the existing knowledge of the student can accommodate new ideas taught by the teacher, there is a need to investigate how the student conceive and interpret the topic taught in line with scientific principles/evidence-based knowledge about the respective topic. In the same way, in order to know group's conception of an idea or a problem would require consideration of what individuals in the group conceptualise and/or propose as strategies or ways to address the existing instructional topic. However, in either case, "consideration must be given to the content of what is being learnt, such as what concepts are involved and their relation to other concepts in the body of knowledge, or what inferences need to be made" (Rowlands, Graham, & Berry, 2001, p. 2). Likewise, though it is something common in geography for example, to use the knowledge of the previous concepts to learn the new geographical concepts, constructivists have increasingly failed to provide clear explanations regarding the process of integrating learners' understandings of the concepts based on their contextual and cultural knowledge and experiences;
- (d) Constructivism and knowledge transmission. As discussed herein, constructivism philosophy argues against a banking model of education where the teacher transmits readymade knowledge to the learner who does not possess it, instead, it requires teachers to support learners to take responsibility for their own learning i.e. understanding that knowledge construction occurs as a result of individual's mental cognition process about the topic/concept. Constructivism therefore challenges knowledge transmission metaphor that also is the main focus of this thesis (Jaworski, 1994). Nevertheless, constructivist beliefs seem not to apply in all topics and/or subjects. Effective facilitation of classroom instruction would require a fairly description of explanation of concepts and principles to promote learners' conception and connection of the concepts to their prior knowledge and experiences. In the teaching of geography for example, learners' conception and reflection of some concepts would require teachers to describe, define, and/or explain about the concepts as a way to promote

learners' thinking and reflective practice (Skemp, 1971). Therefore, it seems important that the idea that knowledge in LCT cannot be transmitted to constitute an important area for further research; and

- (e) Constructivist learning is time consuming and thus it compromises the timely completion of the syllabus (Phillips, 1995)

Terhart (2003) contends that constructivism does not present a new instructional theory different from the traditional teacher-centred instructional theories. Besides the role constructivism play in enhancing learning amongst learners, it does not denote a change or shift from the long lived teacher-centred teaching. A paradigm shift according to Fosnot (2001) requires a deeper level of modification. Fox (2001) observed that in its emphasis on learners' active participation, constructivism rarely appreciates the teacher-centred characteristics and methods such as memorisation, question and answers, demonstration, as well as passive perception of the instructional topic, which influence learners' construction of knowledge. On the contrary, other researchers (Biggs, 1998; Jin & Cortazzi, 1998) critique constructivism as a philosophy governing learners' construction of knowledge stating that it does not always guarantee learning the same as teacher-centred instructional approaches have not always meant the end of teachers' creativity in improving classroom practices.

Nevertheless, with all criticisms about constructivist instructional theory, one cannot underrate its influence and emphasis of instructional practices to be directed to students' interests and needs and those which promote students' critical thoughts and problem-solving skills. This means that the role of constructivist theory on students' learning cannot be dismissed by its limitations. The teachers' teaching practices should consider the limitations as opportunities in creating instructional environments that fosters students' active involvement in knowledge construction.

Therefore, the critical review of constructivism as a theory of learning demonstrates how it relates to LCT. That is, while constructivism establishes the psychological and philosophical justification of knowledge construction within individuals; LCT characterises teachers' pedagogical behaviours and instructional environment that support individuals' knowledge construction. Therefore, assessing how teachers perceived and experienced the implementation of the LCT approach, the researcher

sought their understanding of it and whether it was underpinned by constructivist learning beliefs in order to determine how it informed their practices. Thus, the first sub-research question asked “how do geography teachers in Tanzania understand LCT?” The researcher assumed that teachers’ understanding of LCT might have influence on their pedagogical decision-making and practices.

Teacher’s pedagogical reasoning and decision-making

The terms pedagogical reasoning and decision-making are two different, but closely related, concepts. The two concepts concern the teacher’s thinking, beliefs and classroom practices (Wilhelm & Li, 2008). Wilhelm and Li view that teachers’ thinking and beliefs influence their pedagogical practices. This means that the way teachers teach and interact with students depends on their pedagogical beliefs and considerations before, during, and after instruction. In their study about the relationship between teachers’ beliefs and practices in reading comprehension instruction, Richardson, Anders, Tidwell, and Lloyd (1991) observed that teachers’ attitudes and beliefs of reading comprehension influenced their teaching approaches and practices. Implied is, knowing teachers’ preference in terms of pedagogical reasoning and decision-making is significant in an understanding of their teaching practices. Richards (2001) asserts that the terms of pedagogical reasoning and decision-making underpin the classroom instructional practice. He states, “teaching is a dynamic process characterised by constant change. Teachers therefore have to make decisions that are appropriate to the specific dynamic of the lesson they are teaching. These kinds of decisions are called interactive decisions” (p. 10). Mercier (2012) described pedagogical reasoning as a set of components in which sub-components are nested. According to Mercier, these components represent the cognitive activities associated with (a) building an understanding of the students for which the learning activity is intended; (b) making a diagnosis of the student’ learning difficulties; and (c) planning appropriate instruction (p. 3). Building an understanding of the students according to Mercier involves comprehension processes, in which the information available is supplemented by pertinent domain knowledge possessed by the teacher. This could mean that effective teachers’ instructional practices are underpinned by their knowledge and reflective practices in the subject and instructional planning. According to CP theorists, teachers’ planning

needs to integrate the subject, methods, and resources within the broader understanding of the students' knowledge and experiences they bring to class (Dewey, 1966; Freire, 1970).

Mercier (2012) theorises teacher planning as a pedagogical reasoning within a cognitive perspective to provide insights regarding teachers' decision-making and their teaching. She outlines the concepts associated with cognitive functioning to include: comprehension, reasoning, planning, and problem-solving (p. 3). Mercier (2012) investigated the influence of a cognitive model on the teachers' instructional planning in the laboratory environment. The aim was to examine teachers' variation in pedagogical reasoning and decision-making in laboratory and actual environment. It was found that (a) there existed some similarities and minimal variation in how pedagogical reasoning and decision making unfolds experts in the laboratory and real contexts; and (b) the domain knowledge influenced only in some aspects of the pedagogical reasoning process (p.11). One of the study conclusions according to Mercier was that the pedagogical reasoning model formed an adequate depiction of teacher planning in real-life environments. She suggested that the model could be used in conjunction with the modern instructional models hinging on global and authentic tasks.

Starkey (2010) investigated how pedagogical reasoning and action influence learning in the cutting-edge technology. The study compared Shulman's 1987 model with instructional reality of the digitally able new teachers. Employing a multiple case study design, the study examined how beginning teachers made decisions regarding the use of computer-based technologies within their classroom instructional practices. The open-ended interviews and observation were used to explore and experience the beginning teachers' pedagogical reasoning and decision-making. It was found that Shulman's pedagogical reasoning and action model was still relevant for teachers' practices. However, the study identified one major critique of the model. According to Starkey, the model is teacher-centred in that, it assumes the knowledge is being passed from a teacher to their students. Thus the model seemed to limit the digitally able teachers' classroom innovations.

Starkey's study suggested the need for a broader and deeper interpretation of knowledge and classroom practices within the model that builds on the current

learning theories to support the reform practices in teaching. In other words, Starkey advanced the model to the “digital age” in a connectivity stance suggesting the adoption of a new framework for teachers which align with the contemporary theories of learning.

Based on the existing studies, it is logical to argue that there is a close relationship between the instructional contexts and the teachers’ pedagogical reasoning and decision-making processes. The studies also demonstrate that, teachers’ pedagogical reasoning and decision-making determined the quality of teachers’ classroom practices. Therefore, understanding how teachers’ pedagogical reasoning and decision-making reflect LCT beliefs were one of the foci of this study. As Anderson and Peck (2007) suggest that the “pervasive tension between thinking and doing characterises the work of teaching” (p.19). The researcher assumed that teachers’ pedagogical reasoning and decision-making processes during planning of their instructions might have influence on LCT. Wilhelm and Li (2008) points out that as teachers implement an instructional task, besides having a lesson plan, it is important for teachers to continuously reflect the classroom process. By so doing, the teacher is constantly and continuously making pedagogical decisions that are meant to improve the quality of his/her instructional practice. This in CP terms implies that teachers’ pedagogical reasoning and decision-making is not only a reflective process, but it is also holistic and formative in nature (McLaren, 2003). Teachers as reflective practitioners need to critically plan, implement, and evaluate their instruction and more importantly use the evaluation results to inform their practices.

Shulman’s (1987) model of teacher’s pedagogical reasoning and action thus also influenced this study. In addition to substantive and syntactic knowledge, Shulman (1987) provided the type of knowledge that teachers need for pedagogical decision-making and practices based on the diverse students’ instructional needs and backgrounds. Shulman’s knowledge base for teachers includes:

- (a) **Subject-matter or content knowledge:** This includes knowledge of the concepts and subject topics i.e. substantive knowledge and teacher’s knowledge of the principles and/or philosophical underpinnings of the respective concept, theory, topic, and/or subject i.e. syntactical knowledge;

- (b) General pedagogical knowledge:** This is knowledge regarding that explain theories of child development in relation to learning. It also seek to understand learners' socio-cultural influence on their learning as well as the implication for classroom organisation and management;
- (c) Pedagogical content knowledge:** This is knowledge about ways children interpret the subject matter and how the teacher represents the subject in a way that is understandable to learners. In the case of geography, pedagogical content knowledge distinguishes between the geographer's comprehension of the subject matter as opposed to the teacher who transform the subject matter to accommodate learners' instructional needs and interests based on their prior knowledge and life experiences;
- (d) Curricula knowledge:** This is knowledge about all aspects that form the curriculum. It includes teachers' knowledge of the topics, instructional resources, syllabus materials, as well as knowledge and awareness of how information relate within the topic and across the subject. Curriculum knowledge also includes teacher's ability to critique the subject content in terms of the strengths, challenges, and prospects to improve its relevance and adequacy for meaning learning to occur;
- (e) Knowledge of learners and learning:** This is knowledge of learners' strengths, challenges, needs, interests, and mental capability as well as understanding of different instructional theories of teaching and learning from classical to post modern theories to aid understanding of how learners interpret the world;
- (f) Contextual knowledge:** This is knowledge of factors affecting effective classroom instruction within and beyond the school–In geography; contextual knowledge may include the quality of geography curriculum, learners' and society perceptions regarding an LCT approach, and Tanzania's educational and socio-economic and cultural policies and initiatives. Generally, it is all about teachers' understanding of the influence of students' contexts – within and outside the school on teaching and learning of geography based on LCT beliefs; and
- (g) Educative knowledge:** This is knowledge about country's educational philosophy, policies, and the major educational objectives that are to be realised during classroom instruction and thus education system in general.

However, since the inception of Shulman's model, many changes have occurred in the instructional contexts particularly in developing economies such as Tanzania. The changes in the instructional contexts are partly due the development and the use of science and technology-information and communication technology. This development in the use of information and communication technology according to Starkey (2010) has resulted in a change of teachers' pedagogical reasoning and decision-making thus affecting their classroom practices. The focus has now shifted to students taking an active role in their learning.

Similarly, critical theorists and constructivist LCT theorists advocate teachers to engage students in the critical thinking and problem-solving activities. Thus, in order to effectively involve students in the instructional processes, teachers' pedagogical reasoning and decision-making need to align with LCT beliefs within the contexts of CP. Implementing LCT needs therefore to consider other pedagogical aspects which the Shulman's model either gave a cursory attention to or did not consider them at all. As presented herein, these aspects include students' culture-instructional contexts and the role of modern technology-industrial or both teachers' and students' ability to improvise instructional resources from the immediate environment-teaching and learning using locally available resources (TALULAR).

Therefore, the researcher makes a case that implementing effectively the LCT geography curriculum; teachers need to possess some qualities as important knowledge bases. Shulman (1987) demonstrates the need for teachers' acquisition of knowledge bases in both the subject matter content and the pedagogical component. Shulman coined the two aspects to form "pedagogical content knowledge". For Shulman, pedagogical content knowledge includes a range of teachers' qualities for effective instructional practices. Pedagogical content knowledge thus encompasses teachers' multiple understandings such as knowledge of instructional contexts, learners' learning styles, needs, and interests as well as teachers' comprehensive understanding of varied instructional approaches and methods and the concepts and principles of the subject of specialisation. Teachers' understanding of subject content knowledge is especially important to enhance realisation of instructional objectives i.e. construction of knowledge in the respective subject/instructional topic (Brant,

2006). Shulman (1987) emphasises the need for teachers to break down the subject and interpret it in a way that promote students' active involvement and connect to their prior knowledge and everyday life. This kind of subject comprehension encourages students' mental cognition and reflection which is critical for LCT. Shulman advocacy of teachers' understanding of the subject content knowledge would mean the need for and importance of teachers' academic and professional competency to adequately and effectively engage learners in the classroom instruction consequently resulting in the construction of knowledge. Shulman proposes:

The most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstration-in a word, the most useful ways of representing and formulating the subject that makes it comprehensible to others...Pedagogical content knowledge also includes an understanding of what makes the learning of specific topics easy or difficult: the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons. (Shulman, 1987, p.29)

Similarly, CP theory is founded on the beliefs of reflective teaching in the promotion of students' active participation in the classroom processes. The theory encourages both teachers and students to become involved in a reflective dialogue about specific instructional topics. Teachers need to consider students' instructional needs and present the topics in patterns that allow students' easy integration of their diverse experience subsequently creating new understandings (Dewey, 1963; Freire, 1972). Involving a reflective dialogue, geography teachers need to have a substantial substantive and syntactic knowledge of the subject. Tailoring classroom instruction practices into students' prior knowledge not only promotes students' mental cognition processes but the instructional practices like these enhance also students' ability to apply the acquired knowledge in real-life situations-understanding the society they live in, acquisition of critical thinking and problem-solving skills and participating effectively in the socio-economic, cultural and political platforms for the well-being of individuals and the entire nation (Dewey, 1963; Giroux, 1997; Nyerere, 1967). Geography teachers' acquisition of rich substantive, syntactic and pedagogical content knowledge is critical for effective implementation of LCT (Figure 3.2).

Based on the reviewed literature on the teachers' pedagogical reasoning and decision-making, it appears teachers' beliefs and understandings of the substantive and syntactic knowledge of the subject to influence their pedagogical decision-making processes. Having this in mind, the researcher considered it significant to assess teachers' views during the planning process of classroom instruction in order to determine how it aligned with LCT beliefs. Therefore, in order to collect information about what teachers considered during the planning process of their lessons, the researcher developed a further research question: "how does a teacher's pedagogical reasoning and decision-making during the planning process reflect LCT beliefs?" This formed the second sub-research question.

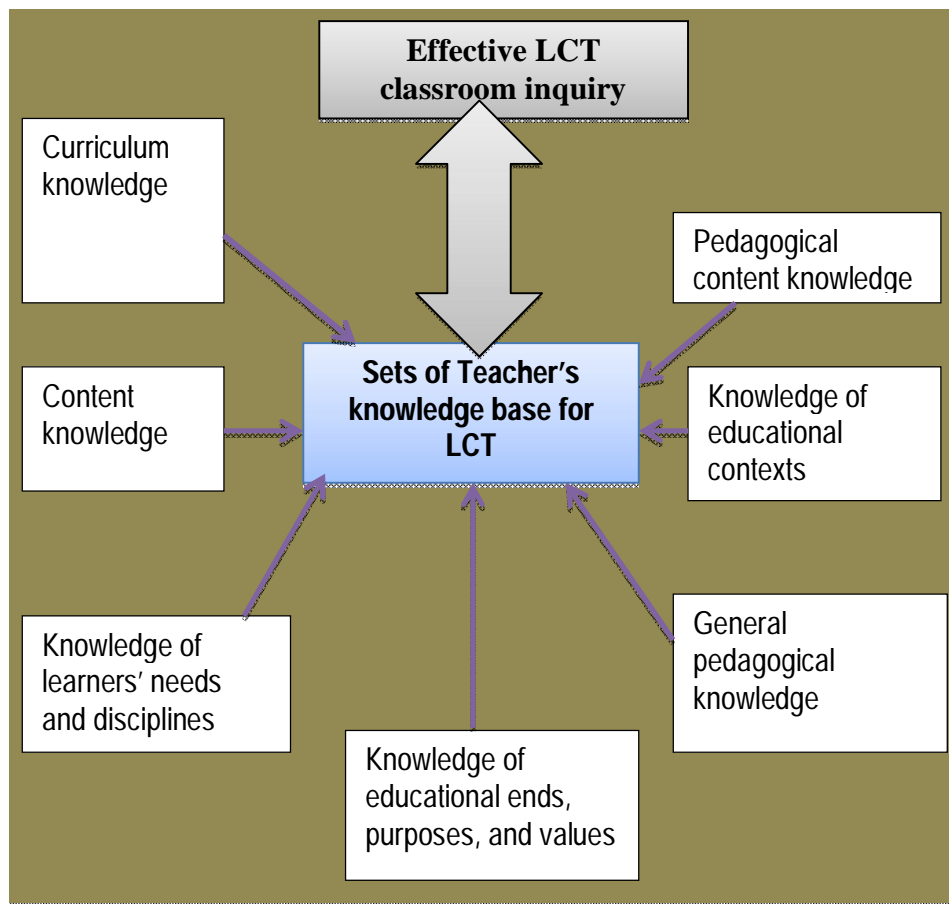


Figure 3.2. An advanced illustration of Shulman's main classification of teacher's knowledge base for effective LCT

Collaborative teaching and learning

Collaborative teaching and learning dominates the discussion throughout the thesis. This is due to its central position of influencing positively students' involvement in classroom practices (Fosnot, 1996). Different from the teacher-centred teaching approach where the teacher dominates classroom processes and students are placed in a passive and subjective position; LCT requires teachers use of participatory instructional approaches and problem based pedagogies in order for all students to participate effectively in the knowledge construction processes (Fosnot, 1996; Mansell, 2009; Mercer, 1995). Collaborative teaching approaches may include individualised classroom activities, group-based activities, students' pair work, field visits, and project-based activities. This means that geography teachers in Tanzania will implement LCT paradigm when they have a clear understanding of the different collaborative approaches to teaching and that they will be motivated enough to design and use relevant approaches in order to promote students' participation in classroom practices.

The purpose of LCT is thus to provide learners with chances where they learn and acquire multiple skills including listening, creative, critical thinking and reflection, and awareness, and acceptance of others' thinking perspectives (NT Department of Employment, Education and Training (NT-DEET) (2000).

Generally, in order for meaningful collaborative teaching to occur in the geography classroom, there is a need for the teacher and students to change roles from that of teacher-centred teaching to LCT. According to Ramsey and Fitzgibbons (2005), teachers' roles in LCT environment need to change from an instructor to a facilitator where the teacher does not transfer knowledge to students but rather he/she guides the student learning process. The teacher becomes a learner-learning from the students' diverse experience and assisting them to connect their experiences into different instructional topics consequently building new understanding of concepts, ideas and principles. Ramsey and Fitzgibbons (2005) critically present:

LCT requires us to move along a continuum beyond "doing something to students" (teaching) to "doing something with students" (teaching and learning) to "being with students" (learning). Even more challenging is moving

seamlessly back and forth along this continuum within single class periods, intuitively recognising what learners need from us in the moment. (p. 334)

This in other words requires teachers to practice what Dewey (1966) and McLaren (2003) refer to as teachers' reflective practices. The teacher in a collaborative teaching classroom is therefore supposed to be a facilitator and promoter of students' reflective and critical thinking- one who creatively and reflectively encourages students to use their prior knowledge in the creation of knowledge of different geographical phenomena. In this way, the teacher moves student knowledge to a wider and deeper understanding of the world (Ramsey & Fitzgibbons, 2005).

In the same way, students in LCT environment need to take responsibility for their own learning under the teachers' guidance. Students as knowledge constructors are expected to be involved in the meaningful classroom activities that relate to their real life and thus promote their effective engagement in the classroom processes. Teaching in this way, students become empowered and independent knowledge creators (Ramsey & Fitzgibbons, 2005). This means that geography teachers need to engage students in classroom activities that ask for students' active engagement and involvement in reflective practices whether in their writing or conversations. Students should be involved in the practical, interest focused and cultural related assignments (Archambault, 1966; McLaren, 1998; Ramsey & Fitzgibbons, 2005).

Collaborative teaching and learning therefore requires teacher and students to practice principles of what is called a community of learners (Mansell, 2009). Community of learners according to Mansell characterises instructional practice where each member of the class has an equal stake in the construction of knowledge. That is both a teacher and each student educate one another and learn from one another and individual ideas are respected. This kind of learning is enhanced through effective and meaningful dialoguing throughout classroom process. Teacher and students should therefore build trust and develop habits of learning from one another in a democratic classroom atmosphere. Mansell argues for the needs of participatory instructional practice that:

It is an acknowledgement that teaching and learning is a dialogue between participants and that the interaction between them can build shared intent which can bring better quality learning. It also assumes that both the learner and the teacher have responsibilities in the learning process. (2009, p. 24)

Mansell's conception of collaborative teaching and learning reflects CP theorists who recommend teaching and learning that is based on effective and meaningful dialoguing which promotes and instils students with critical and reflective thoughts-thinking, creating knowledge and using the knowledge beyond the school perimeters (Dewey, 1933; Freire, 1972; Nyerere, 1967). This is equally what is expected from geography teachers in Tanzania if the implementation of LCT geography curriculum should be a reality. The New Zealand curriculum has put explicitly the importance of collaborative teaching and learning and provides teachers with guidelines on teaching regarding the critical role of collaboration with learners:

Learning is inseparable from its social and cultural context...Teachers look for opportunities to involve students directly in decisions relating to their learning. This encourages them to see what they are doing as relevant and to take greater ownership of their learning...students learn as they engage in shared activities and conversations with other people...by cultivating the class as a learning community, everyone including the teacher is a learner; learning conversations and learning partnerships are encouraged. (NZ-MoE, 2007b, p. 34)

Therefore, in order to examine the implementation of the LCT geography curriculum in Tanzania, the researcher considered significant to assess how teachers' teaching practices were informed by LCT beliefs as indicated in the literature review. The quest to understand teachers' teaching practices led to the development of the third sub-research question asking: "how does a teacher's teaching practice reflect LCT beliefs?"

Authentic evaluation and assessment

Teachers' LCT practices presented the need for the discussion of an authentic assessment for effective LCT practices. Paris and Ayres (1994) explain the importance of assessment when they intone:

We believe that teachers cannot create challenging classrooms unless they understand-deeply and coherently-the psychological principles of learning and development that they must assess and foster in their students. Otherwise, teachers rely on manuals, textbooks, workbooks, and tests prescribed by others to define and structure their teaching. This is how teachers become managers of materials, classroom disciplinarians, and didactic direction-givers instead of reflective mentors in their classrooms. We hope that teachers take control of their instructional and assessment practices, through knowledge and reflection, in order to create exciting environments that promote children's self-regulated learning. (p. 32)

This means that authentic assessment needs to focus on the learning process and not the end results (product) of the process. It is believed that assessing the product of instruction not only neglects the integration of students' diverse meta cognitive needs, interests and prior knowledge but also the assessment process becomes divorced from the principles and practices of CP theoretical framework (Freire, 1972; Giroux, 2002; Maaka, 1999; Wiggins, 2006).

Despite the strong debate on the meaning and practical implications of the authentic assessment of teachers' classroom instructional practices (Archbald & Newman, 1988; Bergen, 1993; Frey & Schmitt, 2006; Gronlund, 2003; Maaka, 1999; Meyer, 1992; Newmann, Brandt & Wiggins, 1998), different scholars including Wiggins who is labelled the father of authentic assessment agrees that authentic assessment needs to be realistic and contextually based that promote teacher and students' self-regulation and reflective practices (Freire, 1972; Giroux, 2002; Maaka, 1999; Wiggins, 2006). Teachers' assessment of instructional practices should reflect the formative assessment-informing the students' choice of instructional strategies to be applied in given instructional contexts. The assessment should rely on a student's trust of a teacher-that a teacher is focused in having all students succeed; that a teacher is using formative assessment to inform and regulate instruction and not to sort-out students based on their performance; and that a teacher is openly seeking students' collaboration in assuming responsibility for their own learning (Heritage, 2010; Popham, 2008; Wiggins, 2006). Heritage presents the focus of formative assessment suggesting that it provides chances for teachers and students to continuously reflect and improve their instructional practices as reflected by evidence-based learning information. This means that assessment of classroom instruction practice need to be integrated within teacher's pedagogical decision-making and practice and that it should be featured by regular feedback from both the teacher and the learner.

In summary, students need to be involved in the authentic formative assessment of classroom instruction based on evidence collected from multiple students' classroom activities. These will not only promote teaching and learning among participants, it will also influence students' knowledge construction based on the integration of their diverse experience. As also suggested by the critical pedagogues, teachers'

assessment of classroom processes should trigger students' critical and reflective thoughts through effective involvement in the inquiry based classroom activities fitting their diverse instructional needs and interests beyond the classroom and school horizons. Therefore, based on the reviewed literature, it appears teachers' evaluation approaches of classroom instruction impact their pedagogical practices. What was not known was how geography teachers' evaluation of their classroom instruction in Tanzania was aligned with LCT beliefs informed by constructivist theory and CP theoretical framework.

Thus, in order to assess teachers' implementation of LCT approaches, the researcher also examined teachers' evaluation of classroom practices. The aim was to see how teachers' evaluation of classroom practices considered the involvement of learners. It was also focused to gather information of how teachers used evaluation results to inform their pedagogical reasoning and decision-making processes. In order to do this, the researcher developed a fourth sub-research question which asked: "how does a teacher's evaluation of classroom instructional practice place the learner at the centre of instruction?"

Teacher education

Teacher education has proven to be the fountain for teachers' best pedagogical practices at any level of schooling in Tanzania in particular and the world at large. Based on the existing rich research knowledge base on teacher education worldwide, it is evident that Tanzania's teacher education is shaking and therefore needs stabilisation (Bednarz, 2000; Brett, 1996; Gay, 2000; Meena, 2009; Mtitu, 2008). It is more significant and necessary to address the curriculum challenges facing Tanzania's teacher education especially at this time of implementation of a new pedagogical approach-LCT-than it was at any point in time in the history of an independent Tanzania. This is partly because of a drastic increase in socio-economic malpractices as a result of lack of observance and practices of the principles of good governance consequently leading to diminished provision of quality social services including education. It is presumed and believed that only the critical minds through better education will solve the socio-economic hurdles facing Tanzania today and in the future.

Consistent with the study findings; Meena in the study about curriculum innovation in Tanzanian teacher education (2009) identified six major teacher education curriculum challenges which impact adversely on teacher educators' pedagogical practices. They include the following:

- (a) Lack of recognition on the role of research on teachers' pedagogical decision-making and practice due to the lack of research culture in Tanzania's teachers' colleges and the continued top-down decision-making regarding curriculum innovation;
- (b) The dichotomy between the framework for a diploma in education programme (2006) and the competence-based curriculum-while the latter emphasises the pedagogical component, that is, LCT approaches; the former still puts emphasis on subjects knowledge-content based as opposed to a competence-based curriculum;
- (c) Lack of qualified curriculum developers-an aspect which needs two eyes to look for any curriculum innovation process;
- (d) The need to provide more responsibilities for curriculum change and innovation to teachers' college principals, teacher educators and teachers-all the key curriculum stakeholders such as the college principals and the teacher educators should be involved and supported with instructional resources, ongoing training on curriculum change, innovation and management. The teachers' college principals should become the leaders of curriculum innovations;
- (e) There is little attention to education for teacher educators-the situation that has accelerated teacher educators' lack of support for the curriculum (Cochran-Smith, 2003; Lewin & Stuart, 2003; Meena, 2009). In order to enhance effective implementation of the teacher education curriculum, the Tanzanian government should focus on and encourage the education and involvement of its teacher educators; and
- (f) The dichotomy between teacher education curriculum innovation and assessment and the teaching practice-teacher educators have continued to use the former quantitative teacher-centred assessment techniques at the expense of learner-centred assessment approaches which seek the active involvement of the learners.

According to Meena, the National Examination Council of Tanzania (NECTA) also influences the nature and practice of teacher educators' assessment of students' teachers. Meena states:

...the National Examination has made teacher educators and student teachers use past examination papers to guide the learning process: teaching what is tested rather than testing what is taught (Meena, 2009, p. 76).

Meena suggests consideration of assessment activities adopting assessment approaches based on LCT that are appropriate in assessing professional learning and professional competence (Lewin & Stuart 2003; Meena, 2009). With this in mind the focus should be to enable teacher educators to focus their attention on creating and using assessment strategies and conditions which encourage student learning. This could mean that student teachers need to get a practical orientation regarding LCT in order to build their theoretical and practical capacities consequently influencing positively the implementation of LCT.

With all these observations, it implies the urgent need to address teacher education curriculum challenges if the secondary school LCT curriculum should be implemented effectively. The argument being, the quality of LCT pedagogical practices depends on the quality of geography teachers. The teacher education curriculum is therefore the heart of the quality of teachers and their pedagogical decision-making and practices. As recommended in chapter eight, there is a need for a teacher education curriculum overhaul as there is for the secondary education curriculum paying attention to all pedagogical content aspects that impact adversely on the implementation of LCT thus building critical thoughts amongst students.

Geography education and LCT approaches.

The literature on geography education suggests an existence of different views regarding the notion of an LCT approach and its implementation. There are those who acknowledge the role of LCT in influencing geographical inquiry and knowledge construction among learners (Roberts, 2010). However, other scholars view that effective implementation of LCT is determined by the teachers' ability and motivation for the approach, and the student-teacher relationships (Feuerstein, 1990; Tabulawa, 1998). According to Feuerstein and Tabulawa, teachers who are

knowledgeable and motivated with LCT are likely to implement the approach effectively. Moreover, they suggest that when teachers are motivated with the approach, they will tailor their instructional topics and methods based on the students' interests, experiences, and living contexts. This could mean that the implementation of LCT requires teachers' teaching practices to be directed to students and they should actively participate in the classroom processes. Other geography teachers critique LCT based on their views on schooling and teachers' perceptions of their students (Tabulawa, 1998).

In a study which investigated geography teachers' experience of the classroom practice in Botswana (Tabulawa, 1998), teachers believed schooling as a preparation of learners for their life in the future. The study also found that teachers' understanding of schooling focused on the need to prepare children for better life. According to Tabulawa, educated individuals had many chances of employment opportunities than those who lacked education. Therefore, employment was seen as an avenue to improve one's living standard. In his study teachers like students viewed knowledge as something external, and a commodity possessed by the school, teachers, and textbooks where students as empty slates had to passively get it from these sources (Tabulawa, 1998). However, Roberts (2010) presents a critique on the conception of the nature of knowledge in relation to learning. Roberts sees that knowledge is not a commodity or something simply waiting to be collected or transferred "*out there*" in the field. Instead the knowledge created and represented is shaped and underpinned by geographers' insights and reflections about the world and their existing imagination of different geographical phenomena (Roberts, 2010, p. 6). Geographers interpret the world in different scientific and philosophical approaches, resulting in not only "*a diversity of geographical knowledge* (Castree, 2005, p. 25)" but also knowledge that is founded across thinking strands. Therefore, Roberts (2010) conception of LCT in geography seems to suggest that the creation of geography knowledge is subjective and thus debatable. The reason for its subjectivity is that any advancement of geographical knowledge is provisional and subject to critique and subsequent improvement.

With regard to learning, Roberts demonstrates that geographical knowledge cannot simply be "*delivered*" to students. She emphasises the need to actively involve

students in making sense of knowledge for themselves. Students' involvement may include building a connection between principles and practices of the subject matter with students' pre-existing knowledge and experiences (Barnes & Toddy, 1995). According to Barnes and Toddy, students' conception of geographical phenomena varies as each individual brings to the classroom different experiences, and different ways of thinking about the world. Therefore, students' engagement in knowledge construction would depend on the connections they make between what they know and the topic taught.

Tabulawa (2004) conducted another study to assess how geography students participate in the knowledge construction. One of the questions that guided the study sought to understand students' influence on teachers' classroom pedagogical practice. Interestingly, it was found that teachers' continued practice of teacher-centred teaching was to a large extent affected by the long lived students' expectations from their teachers. Students believed their teachers as knowledge bearers and responsible professionals to transmit the knowledge to them. Similarly, culture that is teacher-student power relation seemed to influence teachers' predominant use of teacher-centred teaching approaches. The findings showed that while teachers demonstrated an authoritative classroom practice using mainly non-participatory teaching methods such as lecture method and closed-ended questions with minimal students' involvement; students presented behaviours of passivity, coward, and highly-fear based respect to their teachers. Students rarely volunteered or were given chances to share their pre-existing knowledge and experiences about the subject matter.

The study suggested that teachers emphasised *right* answers at the expense of students' diverse prior knowledge and experience they bring in the classroom. Thus teachers' teaching methods and strategies seemed to suggest that they maintained teacher dominance in the class; hence lessons were described as teacher-centred. Based on the findings, teachers' predominance use of teacher-centred practice was not motivated by teachers themselves but rather it was influenced by students' classroom practice. Students demonstrated certain expectations of their teachers' pedagogical practices which consequently affected teachers' teaching practices. According to Tabulawa's (2004) study, students characterised their teachers as *good*

or *poor* depending on their substantive and syntactic knowledge, their pedagogical knowledge, and their ability to prepare good notes and present to the students. This then suggested that students had influence on the classroom reality called *teacher-centeredness*. Tabulawa's study proposed the need to address and challenge the assumptions that are featured in the teacher-centeredness approaches if the implementation of LCT should be a reality. Tabulawa outlined two major assumptions embedded within teacher-centred instructional practice. One of these assumptions is the cultural belief given to the teacher as an individual who exert power to the powerless learner thus influencing learning process. He presents the way learners are viewed as passive receivers of the readymade knowledge from their teachers to include the second assumption attached in the teacher-centred instructional approach. Tabulawa however presents a counter argument about the two assumptions stating that besides other instructional factors, both the teacher and the student influence the quality of classroom practice. Tabulawa explains further that the way people understand the concept of power when describing teacher-student relationship during classroom instruction has great influence on the assumptions they attach in the instructional approach, that is, teacher-centeredness approach. According to Tabulawa, people mistakenly conceive power as something or a commodity that is possessed by an individual, and thus one which can be exchanged and transferred from one person (the possessor) to the other (the dispossessed). Insteady, Tabulawa sees that a classroom practice is influenced by both the teacher and the student. Tabulawa's critique of the assumptions attached in the teacher-centred approach could mean that power is something shared between the teacher and the student who together influence the instructional practice (Tabulawa, 2004). Tabulawa emphasises this when he states that:

While one may not deny that there exists a power hierarchy in the classroom between teacher and students, one must, nevertheless, not be tempted to believe that total domination is possible. Oppression elicits resistance, and this may be manifest or latent. (Tabulawa, 2007, p. 56)

Instead, Tabulawa feels that classroom practice is a shared activity between the teacher and the learner. The conception of classroom process as a shared activity between the teacher and the learner made Tabulawa to believe on the possession of classroom authority by both the teacher and the learner. This could mean that addressing matters regarding classroom instructional practice one should consider

among others, the influence that both the teacher and the learner have on the classroom practice. It also means that students have the power to redirect classroom instruction in the way different from the teacher's instructional planning as reflected in the lesson objectives. Nash (1976) states:

A new class is not a clean slate passively waiting for the teacher to inscribe his will on it. It is an on-going social system with very definite expectations about appropriate teacher behaviour. If these are not confirmed the pupils will protest and the renegotiated patterns of behaviour may not prove to be just what the teacher intended. (p. 94)

It could be viewed that Tabulawa critiques Freire's view on the teacher-student power relationship when he challenges teachers' predominant use of the banking model of teaching (Freire, 1970/1971). According to Freire, the banking model accumulates the teaching authority to the teacher leaving the student a powerless-passive recipient of the knowledge from the teacher. Critically, Freire's presentation of teacher-student power relation does not seem to suggest teachers transferring power to students who do not possess it rather he suggests that students should be actively involved in the classroom processes. Freire presents this when he proposes teachers' use of dialogic and problem-posing pedagogies. Freire (1970/1971) asserts that the dialogic and problem-posing pedagogies provide learners with freedom and empower them to create a conception of the topics using their diverse experiences and prior knowledge. Unlike Tabulawa's observation on the teachers' conception of teacher-student power relationship, Freire acknowledges that both a teacher and a student possess knowledge power. He sees that when teachers predominantly use teacher-centred methods, students are forced to accept everything from their teachers. Thus, teacher-centred teaching according to Freire dispossesses learners' power. He proposes teachers to empower learners by enhancing them with classroom autonomy. Learners' autonomy according to Rungwaraphong (2012) is achieved when students are freely and actively involved in the classroom practices and that the topics are tailored to their existing experiences and understandings. Teachers' work is not to transfer knowledge to the learners who do not possess it rather to facilitate the classroom processes for meaningful learning.

Incekara (2010) conducted a qualitative study to investigate the quality of teaching geography in Turkey based on local and global perspectives. According to the study,

teachers suggested a lack of knowledge and practice of computer-aided facilities as well as limited integration of cutting edge technologies in their classroom instructional practice. Classroom instructional practices were mainly teacher-centred using non-participatory teaching methods such as lectures and demonstrations. The study however presented challenges that hindered realisation of quality teaching and learning of geography including poor school environment in terms of classrooms, library and laboratory buildings as well as limited instructional resources (Incekara, 2010). The need for stakeholders' involvement, motivation, and determination on the educational practice were major suggestions towards improving the teaching and learning of geography as well as geography education in the Asian countries.

Findings from Incekara's study could mean that effective LCT of geography needs to integrate not only the students' knowledge and experiences, but also modern technologies. These technologies may include computer-assisted facilities and those which can be tapped from the local environment. However, to achieve this, it requires the commitment of those involved in geography education to address the critical challenges faced by schools and teachers in the implementation of the new geography curriculum. The quality of the curriculum and a shortage of instructional resources and facilities is one of the major challenges for the effective implementation of LCT approach.

Kasanda and Lubben (2005) conducted a study that examined the influence of the school environment on learning of science subjects. Based on the study, they found that the everyday out-of-school contexts played a significant role in the knowledge construction among science students. In the study that compared student-centred approaches to teaching mathematics to teacher-centred approaches at the elementary and secondary grade levels (Preston, 2007) it was found that learner-centred instruction encouraged students' engagement, construction of knowledge and promoted academic achievement amongst students.

Another similar study which focused on developing LCT among secondary trainee teachers (Mtika, 2010) found that LCT provides opportunities to learners to use their diverse and extensive prior knowledge and experiences in the process of meaning making of the concepts and principles of the topic resulting in meaningful learning. Based on the review of these studies, it is evident that most of the studies were

concerned with seeking an understanding of how learning processes occur in LCT environment and their outcomes in the students' achievements.

In contrast, however, other researchers and educators had the view that it is not just the implementation of learner-centred approaches but rather how teachers perceive and experience the approaches that matters. According to Fosnot (1996) and Yilmaz (2008), teachers' perceptions and experiences regarding LCT have a significant influence on learners as they endeavour to construct knowledge from their existing experience and prior knowledge. Von Glasersfeld (1996) further critiqued that merely knowing how the minds construct knowledge does little to transform our ideas or teaching approaches and orientations. This poses a critique on the previous studies which seemed to neglect the tangible role of teachers' instructional decision-making processes on influencing knowledge construction among students. Tabulawa (1998) however, suggests also the need to challenge and transform teachers' mindsets on the nature of knowledge and how it is constructed in order to realise the implementation of LCT in the teaching and learning context such as Tanzania.

Tabulawa suggests the need to practically acknowledge the role of geography teachers in the implementation of LCT approaches. One way of appreciation of teachers' influence on the implementation of LCT approaches (Tabulawa, 1998), is to involve them in every stage of curriculum innovation. Tabulawa feels that active involvement of teachers in the curriculum innovation processes not only enhances a sense of curriculum ownership amongst teachers but also it motivates them to practically implement the respective curriculum. He thus recommends the need to investigate the existing realities of the teachers' involvement in the curriculum transformation processes for their successful realisation. According to Tabulawa, teachers attach personal conceptions and interpretations of classroom instructional practices of which they consequently influence their pedagogical decision-making and practice. This could mean that understanding how teachers perceive and implement the curriculum is important in determining the best pedagogical practices to be employed if implementation of LCT should be a reality.

This perceived importance of teacher thinking and knowledge guided the study whose *broad* objective was to assess the *implementation* of *LCT geography curriculum* from the *teachers' perceptions and experiences*. It was expected that

understanding teachers' perception and experiences regarding the implementation of LCT would result in the policy and curriculum implications as well as the need for further investigation around the same topic. The major assumption was that teachers have their own beliefs and pedagogical interpretations which influence their everyday classroom instructional practices. The meanings and assumptions teachers' have, have significant implications for their pedagogical decision-making and classroom practices (Tabulawa, 1998). As according to Brett (1996), the success of educational project largely depends on the teachers' acceptance of and motivation to the project. This could mean that effective implementation of this project would be determined by teachers' motivation and commitment to the programme (Brett, 1996). These thoughts are echoed by Schultz (2000) when he writes, "it is the teacher's imaginative pedagogy that develops the classroom experiences and realities". (p. 30).

Culturally responsive pedagogy

Scholars with interest on learner-centred education appreciate the role and need for classroom practice to connect with learners' culture through what they refer to it as cultural-based teaching (Gay, 2000; Kana'iaupuni, 2007). The assumption according to these scholars is that learners make meaningful interpretation of the topic when it reflects their day to day life. Gay (2000) explains cultural-based teaching based on whether teacher's pedagogical decision-making and practice makes sense to the learners' mind and life or not. According to Gay, teaching culturally would involve consideration and integration of learners' prior knowledge and experiences, their interests as well as their varied learning styles into the teacher's classroom instruction. In the same conception of what cultural-based teaching mean, Kana'iaupuni (2007) describes culturally responsive instructional practice as that which provides linkage of the subject content with learners' socio-economic orientation as well as their living styles in terms of the medium of instruction, code of conduct, and participation in production activities. Gay (2000) characterises cultural-based instructional practice to include the following:

- (a) Appreciation of learners' culture and thus integrating it in the school curriculum;
- (b) It provides connection between what is learnt in school with learner's society life;

- (c) It applies a range of teaching and learning methods, strategies, and techniques to meet diversity in learners' learning styles;
- (d) It enhances learners' cultural awareness thus being able to sustain and respect their cultural diversity; and
- (e) It seeks an application of variety of instructional resources to promote learners' active participation in the classroom (p. 29).

In order for geography teachers to practice culturally responsive teaching according to Gay; the curriculum requires among other traits to integrate teachers' and students' cultural knowledge and experiences. A culturally integrated curriculum will enhance teachers and students to design and apply culturally based instructional methods and strategies including the use of traditional songs relevant to instructional topics, settings, and integrate culturally based instructional activities. It also includes the use of students' language to communicate their prior knowledge and experiences. Teaching in this way does not only encourage students' effective involvement in the instructional processes, but also students engage effectively in the knowledge construction processes (Dewey, 1933; Kana'iaupuni, 2007; Nyerere, 1967).

Therefore, in order to increase students' involvement in the construction of knowledge, it is important for teachers to facilitate classroom instruction in a way of breaking the gap between what is taught in school and students' real life i.e. connecting learning with actual students' life in terms of diverse prior knowledge and experience, instructional needs and interests (Allen & Boykin, 1992). In other words, cultural-based teaching ought to enhance learners' involvement and adaptation to different socio-economic, as well as political and cultural environment (Heath, 1983; Ladson-Billings, 1994). It could thus mean that effective classroom instructional practice should connect the subject matter with what learners bring into the class in terms of their diverse prior knowledge and life experiences. To realise this, teachers need not only to understand students' cultural and socio-economic settings, but also they need to be motivated, determined, and understand the diverse students' learning needs and interests as well as provide students with necessary support and encouragement as they struggle to construct knowledge. This can be done through teachers' involvement in in-service professional training, actively involving students in every stage of instructional practice that is from planning to evaluation of classroom instruction and design students' friendly, relevant, inquiry

based, and doable classroom activities (Gay, 2000). Similarly, Shor (1992) emphasises the need for LCT stating that:

“It is a critical-democratic pedagogy for self and social change. It approaches individual growth as an active, cooperative, and social process, because the self and society create each other. The goals of this pedagogy are to relate personal growth to public life, to develop strong skills, academic knowledge, habits of inquiry, and critical curiosity about society, power, inequality, and change. The learning process is negotiated, requiring leadership by the teacher, and mutual teacher-student authority. In addition, the empowering class does not teach students to seek self-centred gain while ignoring public welfare.” (p. 15-16)

Therefore, the researcher’s argument is that in order for geography teachers to implement effectively the mandated LCT geography curriculum requires that the curriculum should be owned by the key stakeholders-teachers and students and responds to the critical socio-economic, as well as cherish good society’s cultural practices. According to Gay, consideration of learners’ culture during classroom practice is important as it promotes curiosity, critical thinking, participation, and cultural awareness among students. Therefore, learners’ cultural awareness is an important pedagogical aspect in Tanzania’s education system. Connecting classroom practices with students’ culture is meant to make the lessons alive and enhance students to challenge the socio-economic, political, and cultural ills while appreciating their good cultures consequently improving their lives.

The researcher therefore makes a strong case that neither the euro-centric, the afro-centric nor the euro-afro-centric, top-down or bottom-up geography curriculum will impact teachers’ critical pedagogical practices without integrating students’ culture. The researcher argues that effective teachers’ pedagogical practices should result from geography teachers’ incorporation of students’ culture and implementation of a rich culturally integrated geography curriculum. The topics should be designed in ways that connect with the learners’ prior knowledge, experiences, as well as learners’ living contexts (Gay, 2000). In the same way, teachers’ instructional practices should consider students’ prior experience and knowledge and tailor the teaching processes towards provoking students’ active sharing of their experiences through a well-organised activity based classroom activities centred on effective and meaningful dialoguing.

The gaps in the literature

Analysis of relevant literature on LCT indicates a paucity of research on the implementation of LCT in Tanzania since the 2005 curriculum reform. While many studies that investigated LCT across the world applied constructivist theory focusing on learners and their learning especially in science education and mathematics, few studies have been conducted to examine LCT from the perceptions and experiences of social science teachers. Therefore, this study reports the implementation of LCT from the perceptions and experiences of a group of secondary school geography teachers in the Tanzania's education delivery context. Thus, following the literature review, four research questions were developed to guide the study. They included: how do geography teachers in Tanzania understand LCT?; how does a teacher's pedagogical reasoning and decision-making during the planning process reflect LCT beliefs?; how does a teacher's teaching practice reflect LCT beliefs?; and how does a teacher's evaluation of classroom instructional practice place the learner at the centre of instruction?

Based on the review of literature the researcher presents a case that the *context* for the provision of education not only *differs* from country to country but even *within* a country. It is from this understanding that Sullivan (2009) made a case that: "students are assembled in classrooms of all kinds across the world, from lightless huts in the rainforest to the most fully-equipped, modern first world high schools" (p. 1). Sullivan added that the curricula might vary from one region to another and from country to country thus also affecting the quality of their implementation. Therefore, situating the study in *Tanzania* was important as it contributes to the knowledge base on LCT from the perspectives and experiences of a *developing* economy.

Chapter summary

Chapter two presented the theoretical framework that informs the study. This chapter has presented a review of literature based on some aspects which relate to the LCT approach. The reviewed literature presented, among other issues, the contested nature of LCT underpinned by constructivist learning and CP theoretical framework beliefs. The literature critically presented various approaches which teachers could use to support students' learning in different classroom contexts. Based on the reviewed

literature, teachers' beliefs and understandings of LCT present a significant impact on their pedagogical reasoning and decision-making practices. The literature reviewed presented a limited research regarding teachers' influence on the implementation of LCT approach particularly in social sciences. In particular, the paucity of research was seemingly in the developing economies, in this case, Tanzania. Therefore, the focus of this study was to assess the implementation of LCT from the perceptions and experiences of geography teachers in the Tanzanian secondary school teaching context.

From the current literature, LCT could be defined as the use of instructional approaches which focus on the students and their active involvement in the learning process. The central objective of LCT is to enhance students' critical thoughts and problem-solving skills. In a geography classroom, this is achieved by the teachers' creation of positive learning environments where students democratically make conceptions of geographical concepts and ideas based on their diverse socio-economic, cultural, and political experience. The literature reviewed suggests that LCT in geography is predominantly activity-based through the use of active participatory methods integrating with modern instructional technologies. The next chapter presents the research design and methodology.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

Introduction

This chapter delineates the study and justifies the epistemological perspectives and methodology used to collect findings from different sources of information hence forming the basis of this thesis. The chapter begins with a presentation of a self-developed model of classroom inquiry followed by an explanation and justification of the research design. Discussion for the qualitative study approach comes next. The researcher subsequently presents and justifies the multiple case study approach, rationale for the qualitative multiple case study and general and specific sample selection criteria used. Other methodological aspects presented in this chapter include: data collection methods and procedures- in-depth semi-structured interviews, classroom observation and teachers' portfolio reviews; data analysis, organisation and interpretation; ethical considerations; and limitations encountered during the conduct of research. The summary of research methodology and the data collection plan are presented thereafter.

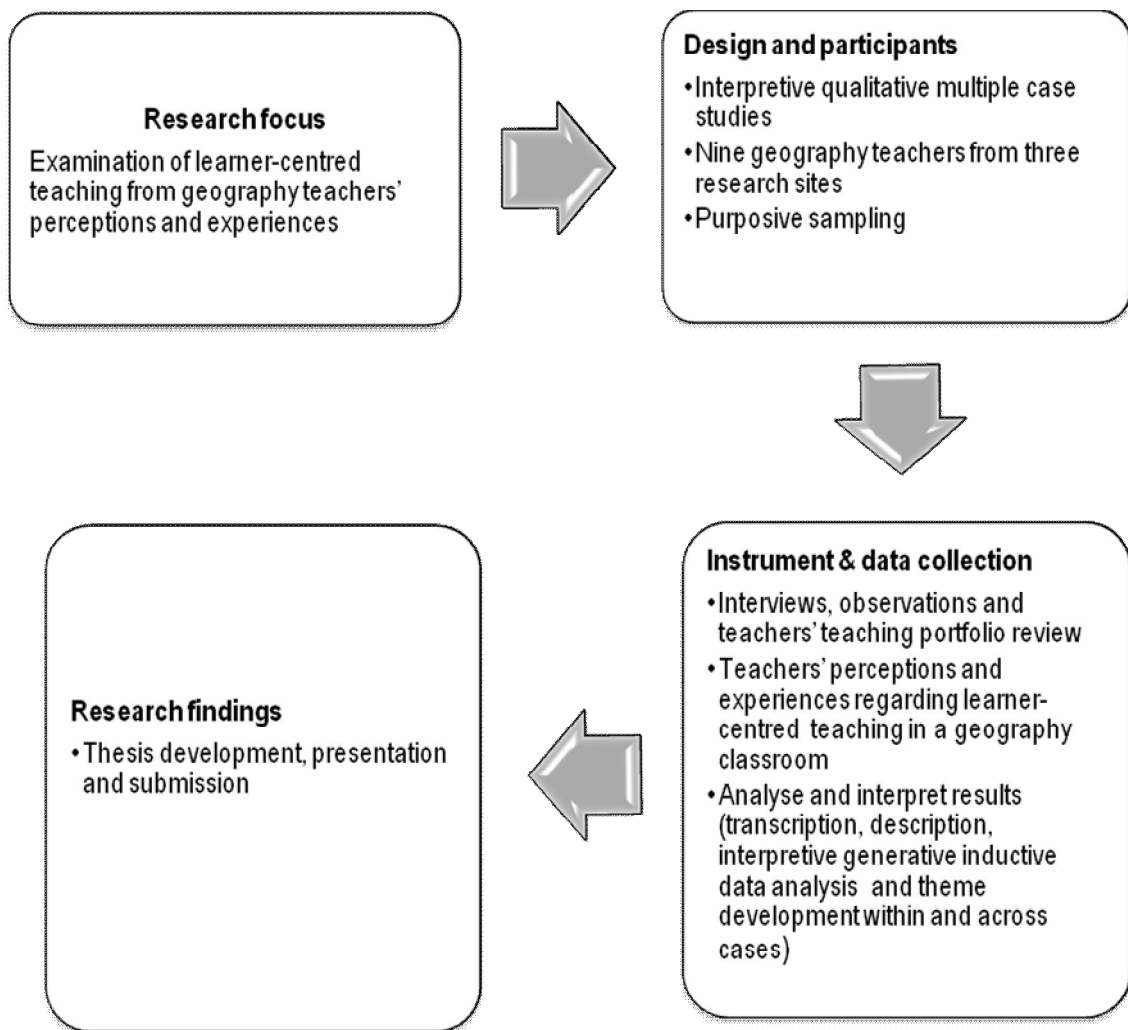


Figure 4.1 A self-developed research model

Research design: interpretive and constructivism.

Against the positivists' view of reality that there exists one and, objective truth that can be seen, known and measured; the study is constructed on the view that the world is a function of personal interactions and perceptions, which are subject to interpretation, rather than accurate measurement (Merriam, 1998). Based on Merriam's view of reality, the researcher applied an interpretivist and constructivist standpoint due to their close relationships and compatibility with the CP theoretical framework used to address and focus the research problem and its objectives. Freire (1971) and McLaren (2003) suggest that people reflect differently on what they see and experience. This individual way of looking at things according to Freire and

McLaren's view is the result of people's differences in life experiences and understandings of the world. When people are thus engaged in dialogue, they exchange their experiences and understandings-their subjective view of knowledge, possibly creating new understandings. Therefore, based on the beliefs of the subjective view of knowledge as guided by a CP theoretical framework, the thesis was developed using qualitative multiple case study method.

Qualitative approach

Qualitative research is interpretive in principle (Creswell, 2003). According to Creswell, qualitative researchers make interpretations of the data by developing descriptions of events and processes, analysing data for category and theme development, that ultimately lead to conclusions that are based on trustworthiness and credibility about theoretical and individual's meanings, stating the lessons learned and offering questions for further research. This means that researchers screen the raw data through personal lenses that are situated within specific socio-political and historical theoretical orientations (Creswell, 2003; Freire, 1971; McLaren, 2003). Those subjective interpretations, based on Creswell, facilitate qualitative researchers to perceive knowledge as individual and unique. This imposes on researchers a moral involvement with their participants in sharing their frame of reference, in order to clearly know and interpret the world.

Despite such individual interpretivism, qualitative researchers seek to understand the social world from the viewpoint of the individuals and groups who are part of the ongoing phenomenon, action, process or event being investigated. The aim of the research is to mainly focus on the participants' conception of phenomenon being studied. This according to CP is enhanced by posing problems and questions to those involved in the research in order to stimulate their thoughts and be able to share their experiences on the subject under discussion (Freire, 1971). Qualitative research is therefore exploratory, inductive and emphasizes processes rather than ends (Creswell, 2005; Mason, 2002). Patton (1990) argues that the qualitative approach provides the researcher with chances to deeply investigate interested variables resulting in collection of rich and detailed information from a small number of cases. Qualitative methodology provides an insight into how people make sense of their experiences, which cannot be easily provided by other research methods (Merriam,

1998). According to CP, people make sense of the world when they are actively engaged in dialogue and reflexive practices. The researcher thus created opportunities for the participants to share their feelings and experiences in an open and flexible environment. During interview sessions, the researcher used mostly open-ended semi-structured questions to elicit participants' perceptions and experiences regarding LCT in a geography classroom.

According to Crotty (1998), interpretivism combines with constructivism in seeking to promote socially-constructed knowledge claims. With this, individuals seek to understand the environment they live and involve in different socio-economic, cultural, and political activities. People usually build up subjective conceptions of their own life experiences (Creswell, 2005). These individual perspectives or perceptions based on experiences are directed towards certain objects and/or things. Normally individual perspectives are numerous and sometimes different which subsequently lead the researcher to look for a comprehensive opinions and feelings as opposed to understanding of participants' conceptions and experiences of their practices based on narrow and limited ideas and themes. More often, individual meanings are socially and historically constructed- they are formed through interaction with others and through historical and cultural norms that operate in individuals' lives (Dewey, 1915; Vygotsky, 1962; Von Glasersfeld, 1996).

Based on these interpretivist, constructivist and qualitative research grounds, the researcher began his research journey through undertaking an extensive and detailed literature review on aspects of critical pedagogy and LCT based on constructivist teaching beliefs. Through the literature review, the researcher was able to identify critical research gaps relevant to the Tanzanian educational delivery context especially in the decade of implementation of a new teaching approach, 'learner-centred' teaching. It was evident that little was researched regarding implementation of a learner-centred geography curriculum. In order to bridge the knowledge gaps and contribute new knowledge, the thesis examined implementation of LCT from the perceptions and experiences of geography teachers. In line with the thesis' aim of understanding implementation of LCT involving teachers from three research sites (schools), the research process was largely inductive. However, deductive foundations were also integrated in interpreting and constructing meanings

(Creswell, 2003); according to how case studies perceived and experienced LCT. The researcher sought to interpret data and construct meanings of LCT based on the perceptions and experiences of geography teachers who participated in the data collection process and in some cases students' reflections of classroom processes. The researcher's decision to use a qualitative method was underpinned by the nature of the research problem, which examined teachers' perceptions and experiences regarding implementation of LCT orientation.

Based on the research gaps advanced, the researcher formulated four key questions to guide the study. The questions formulated were: how do geography teachers understand LCT?; how does a teacher's pedagogical reasoning and decision-making during the planning process reflect LCT?; how does a teacher's teaching practice reflect LCT beliefs?; and how does a teacher's evaluation of classroom instructional practices place the learner at the centre of instruction?. All these questions were examined in light of constructivist LCT approaches as guided by lenses of the CP theoretical framework. According to the literature, it was evident that many of the studies on LCT were not only biased to science subjects, they were also situated in most developed countries. A few studies were conducted in developing economies. As discussed in the literature review, the previous studies also used constructivist theories to examine learners with respect to their learning and not how teachers' teaching practices influence learning. This study applied the CP as a theoretical framework in order to examine teachers' teaching practices based on LCT beliefs, that is, how teachers' teaching influence learning. The study also aimed to link LCT within the broader curriculum policies, cultural and educational contexts. The researcher believed that the teaching context could have influence on the teachers' pedagogical decision-making and practices consequently impacting in the same way the implementation of LCT. Thus, in order to achieve this purpose, the research design integrated the multiple case study approach as presented in the following section.

Multiple case study approach

The study employed a qualitative multiple case study approach to gather data. The researcher's choice to use this approach was aimed at learning and collecting in-depth information about LCT from the selected case studies' point of view. The

researcher spent time with selected case studies and their respective classes to gain a deep understanding of their perceptions and experiences of LCT from their own words, observations of their classroom practices and a detailed analysis of their teaching portfolios. Merriam (1998) summarised the choice of case study design as a way to gain understanding of the situation, where the process of inquiry rather than outcome of the research are of interest to the investigator. Similarly, gaining in-depth understanding of how teachers perceive and experience LCT in geography classes required the researcher to employ an inquiry approach which would enable him to interact with participants in their local practical settings. In order to achieve this, the researcher needed to fully understand the research problem, the participants, and more importantly the context with which the research ought to be undertaken. In this case, geography teachers formed the unit of the study and thus data gathering and analysis as presented in chapters five and six of this thesis. In her discussion regarding the aspects of case study, Merriam (1998) insisted that “the single most defining characteristic of case study research lies in delimiting the object of study: the case” (p. 27). The case according to Merriam is a unit, entity, or phenomenon with defined boundaries that the researcher can demarcate and therefore, can also determine what will not be studied. It may be a limit on the number of people to be involved in the study, a finite timeframe for observation, or the instance of some issue, concern, or hypothesis (Merriam, 1998).

Similarly, Bassey (1999) also observes case studies like Merriam does. Bassey suggests case studies to constitute an individual, household, department, an institution, community, and/or a country whereas the aim being to explain case study’s conception and practice of a phenomenon that is studied. According to Bassey, case studies may involve a single case or multiple cases (Bassey, 1999). The need for a qualitative case study methodology therefore is to provide a comprehensive analysis and explanation of one or more cases (Johnson & Christensen, 2004). Stake explain more about a case study research as a ‘bounded system’, to indicate a researcher’s target and limit as he/she struggles to understand issues featuring the topic under investigation. Therefore, the case study characterises the phenomena that are investigated (Stake, 1997, p. 406). Thus, Case study research is also reflected in this thesis.

Based on this study, the topic of LCT in Tanzania: nine geography teachers' perceptions and experiences could encompass a wide range of aspects and subtopics; however, ensuring a 'bounded system' was set in place, guided by the four research questions mentioned herein, only issues relating to the teachers' classroom practices were examined in light of the CP lenses and constructivist teaching beliefs. Applying this research approach allowed the researcher to focus on addressing the research problem and its objectives.

Rationale for qualitative case study

Undertaking a qualitative case study was advantageous in many ways. Patton (1990) reiterates that a qualitative case study approach permits the researcher to study selected issues in depth and in detail. According to Patton, the qualitative study approach can produce a wealth of detailed information from a small number of case studies within selected research sites. A qualitative case study approach provides an insight into how people make sense of their experiences, which cannot be easily provided by other research methods (Merriam, 1998). According to Bassey (1999), selection of cases is underpinned by their characteristics which include among others their effectiveness as well as their representativeness. Thus the case study approach was selected for the following reasons:

- (a) Firstly, although LCT is now a common educational topic at a global level, it is a new and contested teaching paradigm in Tanzania's education delivery context. The case study was a good choice to deal with the research problem at hand within a limited period of time-three months of fieldwork while collecting rich information from the small sample;
- (b) Secondly, case studies are believed to provide the researcher with much information about the respective matters under investigation resulting in clear and comprehensive understanding of case studies' experiences and conception of a particular phenomenon (Stake, 1997); and
- (c) Moreover, as stated earlier, the case study design allowed the researcher to gain an in-depth understanding from rich, detailed and in-depth information, retaining a holistic and meaningful account of real life events, consequently improving understanding of the complex social phenomenon of classroom

instructional practices based on LCT beliefs (Bassey, 1999; Johnson & Christensen, 2004; Merriam, 1998; Stake, 1997).

As an inductive investigation strategy (Merriam & Associates, 2002), a qualitative case study approach provided the researcher with an opportunity to experience and understand how geography teachers perceive and experience LCT from the actual instructional settings. Burns (2000) asserts that the case study approach is a method of discovery rather than confirmation. Likewise, the aim of this thesis was to discover a range of pedagogical aspects regarding geography teachers' perceptions and experiences in the implementation of LCT based on the constructivist teaching beliefs.

Sample selection

The selection criteria of research sites, case studies, and data sources was primarily informed by the study design and approach as well as the reviewed literature during preparation of the research proposal stage. The aim of the thesis was not to build a random sample, but rather to select cases that the researcher thought presented the range of characteristics of the phenomenon of researcher's interest, namely LCT (Merriam, 1998). Merriam states that the study settings and the sample cases are selected to permit inquiry into and build an understanding of the phenomenon. The thesis purposively selected the sample case studies in order to investigate their perceptions and experiences regarding LCT based on constructivist teaching principles.

The nine purposively selected geography teachers within two publicly and one privately owned secondary schools formed the case studies and research sites respectively. Cohen et al., (2000) define purposive sampling as sampling for a specific purpose and picking a group of participants who fit a profile. The decision to choose nine case studies, three from each research site also followed Miles' and Huberman's (1994) guideline. Miles and Huberman recommend about sample selection criteria as follows:

- (a) The need for theoretical/conceptual framework to fit in the sample selection method. The idea behind is to collect findings that reflect the research topic, questions, as well as the study's theoretical orientation;
- (b) The need to select a sample that is effective i.e. that is believed to provide rich and relevant information about the topic under study and the sample that is representative of the study population. The idea being to ensure trustworthiness and research integrity;
- (c) The need to select a sample that allows transferability of information collected across different but related settings;
- (d) The need for sample selection that is free from biases and one which provides justifiable description of what is experienced from the field;
- (e) The sample selection method needs to consider and adhere to ethical issues that might negatively influence the research process. This may include researcher-participant relationship, participant readiness and freedom to partake the study, consent and ascent of informants, as well as avoidance of any foreseen or unforeseen risk that may harm the informant; and
- (f) The need to consider possibility for sample management in terms of expected cooperation from the selected participants, medium of instruction and its management during data gathering process, associated research expenses as well as time management and informants' researcher's familiarity and adaptation to the research sites and general research context (Miles and Huberman, 1994)

Similarly, the researcher selected case studies based on Miles and Huberman (1994) sampling evaluation criteria. The aim was to get teachers who would provide relevant and rich information regarding the implementation of LCT from the perceptions and experiences of geography teachers. In order to achieve this, during sample selection, the researcher considered the resourcefulness of teachers, their trustworthiness based on their experience, ethical consideration, and the researcher's accessibility to the research sites and case studies and resources deemed important in the data collection. This is detailed in the following section and appendices 4 to 8.

Patton (1990) also recommends consideration of the sample size for a particular study based on time limitation, resources, and other factors that underpin the

respective research enterprise. The selection of nine case studies from three research sites was underpinned by the need to collect a rich mass of information from a few case studies. Moving from site to site, the researcher wanted to find out if there were any similar results or contrasting results regarding the implementation of LCT approaches from selected teachers across the three schools. The researcher also considered the time and financial resource constraints that he faced during the fieldwork. Nine cases in three research sites were manageable for the researcher thus leading to the effective and efficient collection of data sufficient for the thesis requirements.

Specific sample selection criteria

As presented in the preceding section, the selection criteria of research sites and participants were supported by Cohen et al., (2000); Merriam (1998); Miles and Huberman (1994); and Patton (1990). The specific sample selection criteria included the following:

- (a) School ownership and participants' flexibility: during the research proposal development stage, the researcher envisioned the collection of data only from public schools. The reason was, unlike private school teachers, most of the public secondary school teachers are employed under full-time permanent and pensionable contracts. This employment bond demands teachers to provide maximum commitment in their core functional responsibilities-teaching, guidance and counselling students. Moreover, the public schools form a basis for educational innovation, monitoring and evaluation in Tanzania. Thus the researcher believed that teachers' teaching practices in these schools were more directly influenced by the mandated LCT orientation than those in the private schools. Furthermore, the researcher envisioned involving the full-time case studies to ensure stable and regular participation during data collection process.

Different from what was previously planned, the data collection period affected the selection of research sites and thus the kind of sample that was to be included in the thesis. Data collection processes started when most schools were closed for the one-month school term holiday of June 1, 2011 through to August 28, 2011. However, after consultation with the Iringa municipal secondary schools' education officer (MEO), the researcher was informed about the continuation of

classroom instruction for examination classes, those expected to sit for the national examinations in October 2011. As it was difficult to get access to all case studies from all three public school research sites during this period, without distortion of the nature of the research and sample characteristics, the researcher resorted to involve two public schools and one private school. Another reason was that during the start of fieldwork, many private schools were still in full session as these schools normally have shorter holiday periods than the public ones. The selection depended on both school management permission and geography teachers' availability based on the selection criteria and their readiness to participate in the study.

- (b) School location: Research activity is time consuming and resource demanding. In order to avoid unnecessary expenses and wastage of limited time and financial resources, the researcher only selected schools which were easily accessible and those with at least three geography teachers to work with. Therefore, school location and availability of geography teachers became significant criteria during the selection of case studies.
- (c) Participants' characteristics: For the purpose of the thesis, the study involved certified geography teachers with a minimum of three years of teaching experience. The Tanzanian government certifies its teachers after a three year probation period. During this period, the Tanzanian government's school inspectorate department (TGSID) periodically assesses the teachers' professional practice and development. It also provides the necessary teacher training and guidance for informed learner-centred instructional practice. Teacher's certification is based on the belief that the respective teacher is experienced enough in both syntactic and substantive subject contents and that she/he is able to facilitate students' learning based on their different learning abilities and experiences (TGSID, 2009). Teachers teaching at the same class level and subject topics across research sites were purposively selected for the study. The researcher observed that the teaching approaches may vary according to specific subject topics and that working with teachers in the same subject topics was meant to ensure participants of similar characteristics and avoid unnecessary bias in the data collection process.

Data collection methods and procedures

The researcher applied three methods of data collection: classroom observation, semi-structured interviews and analysis of teachers' portfolios. The need for the use of these data collection methods was due to their sensitivity and influence for teachers' active participation in the research process. As reflected by the qualitative research, the methods allowed the researcher flexibility while working with research instruments. The researcher was well informed regarding the interview questions, observation protocol and the aspects needed to be considered during undertaking teachers' portfolio review. Consequently, the data collection process facilitated the development of broad interpretations of the emerging findings as recommended by Creswell (2003). Using an inductive-interpretive approach, the researcher was able to collect information regarding teachers' perceptions and experiences about LCT in geography classes. The focus was to understand implementation of LCT from the perceptions and experiences of the actors involved, that is, teachers, rather than describing it from the outside (Goethals, Sorenson, & MacGregor, 2004).

The researcher believed that collecting the data from teachers and a skilful use of a combination of different data collection methods would reduce the chance of bias. It also gave the researcher a more comprehensive understanding of the topic under study, in this case, geography teachers' perceptions and experiences in the implementation of LCT approaches.

(a) In-depth semi-structured interviews

The in-depth interview is a technique designed to draw out a vivid picture of the participant perspective on the research topic. When undertaking an in-depth interview session (Mack, et al., 2005), the interviewees are placed at the centre of the interview process providing information to the researcher considered the learner learning from the interviewees as experienced professionals of the topic under investigation. The researcher's role is not to influence or direct interviewees' reaction to the questions but rather to probe the interviewees in order to make the question clear or to seek more information about the question and/or direct the interviewees' responses to the research objectives. Researcher's aim is to take note any experience of the participant about the topic that is under investigation. The use

of in-depth semi-structured interview methods assumes that a dialogue may emerge between the researcher and the interviewee (Bailey, 2007). According to Flick (2006), the dialogue is facilitated by a subjective theory, which views interviewees as having a broad knowledge about the research problem. Mack et al, (2005) suggest that in-depth interviews involve researcher's physical meeting and freely conversations with the interviewee. They also propose that the aim of ensuring safety during the interview process suggest that it is necessary to have two interviewers. In these situations, however, care must be taken not to intimidate the participant.

As such, to assess teachers' perceptions and experiences with regard to implementation of LCT in Tanzanian secondary school geography classes, the researcher assumed that case studies had broad knowledge about classroom practices in general, and teaching and learning using LCT approaches in particular. The researcher used a non-formal interview approach to question participants with respect to the four main guiding research questions: how do geography teachers understand LCT; how does a teacher's pedagogical reasoning and decision-making during the planning process reflect LCT; how does a teacher's teaching practice reflect LCT beliefs; and how does a teacher's evaluation of classroom instructional practices place the learner at the centre of instruction. In order to collect rich, in-depth information about the topic under study, the researcher administered three interview sessions for every case study. Each interview session lasted approximately half an hour and predominantly involved open-ended questions. Information such as how teachers interpret, perceive and experience LCT was collected. Patton (1990) comments that interviews provide an opportunity to understand how teachers organise their work and the meaning they attach to it.

With the support of the school management and an interviewee, the researcher conducted interview sessions in rooms located at the research participant's respective school. The researcher employed informal communication strategies to ensure participants' flexibility, freedom and thorough understanding of the issues arising from the research topic. Though interview questions were prepared in English, participants were given freedom to communicate in either English or Swahili. It was observed that case studies moved from one language to another by either code-mixing or code-switching. The researcher used multiple probes such as: "can you tell

me more?"; "what do you mean?"; "mmmm"; "yes"; "go on"; "how do you address this?"; "how certain are you?"; "I see"; and "what next?". Probes not only enhanced participants' understanding of the research questions; but also were meant to guide them to provide information needed to address the research topic. The technique created a kind of communication environment where participants were free to share their feelings, thoughts and experiences about LCT practices. Moreover, probes gave interviewees opportunity to elaborate, clarify more about their experience and perceptions of LCT. In the interview process, the researcher took notes and audio-recorded interviewee's responses. The researcher transcribed the notes and audio-recordings which the researcher shared with respective respondents for further clarification and approval before being subjected to the major analysis process. Audio-recording during an interview session was important for two reasons: first, information from audio-recordings reminded the researcher what exactly was said by the participants. Second, the audio-tapes helped the researcher to correct some errors resulting from note taking and added necessary information skipped by the researcher during the interview sessions.

As opposed to focus groups' discussion that are intended to explore socio-cultural practices of people in an organisation; (Mack, Woodsong, MacQueen, Guest, and Namey, 2005), characterise in-depth interview as significant data collection instruments based on individuals' real life. According to Mack et al (2005), in-depth interviews enhance the researcher to gain an understanding of the research problem from natural settings. Mack et al explain further that in-depth interviews also provide chances for the researcher to gain insight into how individuals conceptualise and understand the world. In order to accomplish this, the researcher was aware of being attentive to the causal explanations case studies provided regarding what they experienced and believed regarding LCT in geography classes. The researcher actively probed the cases about the connections and relationships they saw in their pedagogical practices.

(b) Classroom observation

The study also used observation as one of the data collection methods. Observation can be in form of structured or unstructured depending on the approach, philosophical paradigm, and research questions that underpin the study (Pretzlik

1994). In positivistic research structured observation is a discrete activity the purpose of which is to record physical and verbal behaviour. Observation schedules are predetermined using taxonomies developed from known theory. In contrast, unstructured observation is used to understand and interpret cultural behaviour. It is based within the interpretivist/constructivist paradigm that acknowledges the importance of context and the co-construction of knowledge between the researcher and research participants-the researched (Pretzlik, 1994). Enon (1998) describes observation as a process that relies on the researcher seeing, hearing, testing and smelling things.

In qualitative research, observation is the process of gathering open-ended, first-hand information by observing activities in the research site (Creswell, 2005). Researchers in qualitative studies achieve data collection by either indirect observation or direct observation i.e. getting engaged in the participants' routine activities (Mack *et al.*, 2005). Observation usually consists of a detailed notation of behaviours, events and the context surrounding the events and behaviour (Best & Kahn, 2006). In this thesis, the researcher used an unstructured observations schedule which guided the collection of information regarding teachers' teaching and evaluation of their classroom practices (Appendix 13). Using the unstructured observation schedules, the researcher observed and noted all the teacher's practices and also recorded students' reflections which he thought were important to be included in the thesis.

Observation of teachers' classroom practice was employed as an alternative data collection method to compliment findings collected using interviews and review of teachers' teaching portfolios. The aim was to experience teachers' teaching practice from their natural settings. It was expected that using observation would necessitate collecting a rich mass of data which would otherwise not be collected by interviews or portfolio review. Observation according to Thorp (2001) enables the researcher to truly see, hear and know exactly how teachers practice and experience LCT from the actual study settings. Observation permits the collection of more detailed, holistic and context-related information which would otherwise not be collected using interviews or teachers' portfolios (Cohen, Manion, & Morrison, 2000). During classroom observation, the researcher assessed the extent to which instructional strategies and activities reflected the learner-centred instructional decision-making

processes (Starkey, 2010). According to Starkey's "digital age" version of teachers' pedagogical and reasoning action, among other teacher's characteristics, LCT approach mandates teacher's use of multiple learner-centred instructional strategies and activities catering the needs across students with different learning experiences and/or abilities.

More specifically, during classroom observation, the researcher was interested in gaining understanding of:

- (a) How teachers make connections between students' prior experiences and the subject matter;
- (b) How teachers help students link the subject matter with other related disciplines;
- (c) How teachers involve students in the lesson as determined by the range of students' activities; group or individualised, usage of teaching and learning resources such as: both teacher and student developed instructional models or materials, for example: maps, diagrams, concept maps and assessment of the types of questions asked for both teachers and students; and
- (d) How teachers evaluate their classroom instructional practices- how the evaluation process reflects LCT beliefs and how teachers use evaluation results to inform their instructional decision-making processes.

During observation, the researcher was guided by an observation schedule (Appendix 13). Using the observation schedule, the researcher noted all teachers' instructional practices and some students' activities and reflection at every stage of instruction: introduction, presentation, practice, reflection, and after class mini-interview meant to reflect classroom processes. The researcher also audio-recorded teachers' and students' practices and reflections which helped to support the findings noted in the researcher's field notebook. Sited at the rear side of the classroom, the researcher was able to see the teacher and the students and audio-record classroom processes. The researcher noted the time the teacher used to facilitate the topic in every stage and also the time given to students for discussion, individual assignments, and students' reflections about questions and concepts. Students' audio recording included their reflections through questions and answers and clarifications of concepts. After every observation and the semi-interview sessions the researcher transcribed the observation notes aided by recordings for each case study and

students who volunteered to reflect about the topic. The audio-recordings helped to check if what was noted represented what actually case studies and students did during the classroom processes. The data from the audio-tapes also assisted in clarifying and adding new information to what had been noted.

After each transcription, the researcher returned the transcripts to the case studies and students who checked the transcripts again for accuracy, editing, and inserting any additional comments. At this stage, the researcher replaced the case studies' names with pseudonyms to avoid identification of who provided the findings. This facilitated the researcher's effective data collection, and making sense of the collected data during data transcription and initial data analysis. The researcher administered three classroom observations for every case study across the research sites. At the end of each observation session, there followed a short interview session (between five-ten minutes) to clarify some classroom instructional processes. Administration of three interview sessions from each participant teacher necessitated collection of rich information in terms of breadth and depth. The information collected also reflected the observed teachers' teaching practices and the research context where the research took place. The information collected consequently offered a basis for analysis and a thick description within and across case studies.

Data collected through observation were simultaneously analysed together with those collected through interviews. The aim was to see if what the participants perceived and experienced reflected what they actually did. In brief, observation was used to get a real picture of LCT practices from the participants' socio-economic, cultural, as well as political environments (Mack et al., 2005). Likewise, classroom observation data were used to compare and contrast with those collected from interviews and teachers' teaching portfolio reviews. Findings from classroom observation informed the findings from other instruments by presenting the actual teachers' beliefs and experiences regarding LCT approaches.

(c) Teacher's teaching portfolio review

The researcher also considered the teachers' portfolio as important data source to assess the LCT. According to Hoepfl (1997), analysis of documents could be invaluable to qualitative researchers. Portfolios are important records of teacher's

teaching practice. They are used as assessment tools of teacher's teaching practice resulting in collection of evidence-based information about the quality of teacher's pedagogical decision making process. Portfolios include but not limited to the following; lesson plans, students' assessment information, schemes of work, official records, newspaper accounts, diaries, and reports (Hoepfl, 1997). Hoepfl (1994) (cited in Hoepfl, 1997), used newspaper reports, university policy documents, and department self-evaluation information, to supplement data gained through interviews in order to inform her study about the closure of technology teacher education programmes. This research included teachers' portfolio reviews as another data source. As part of teachers' professional practice, the school inspectorate department in Tanzania (SID), among other teachers' professional practices, requires every teacher to have a continuous instructional portfolio for every subject that the teacher is assigned to teach (SID, 2009). A teacher's portfolio according to Seldin, Peter and Associates (1993) is a record of teacher's pedagogical decision making and instructional practice at a given time frame. A teacher's portfolio includes: schemes of work, lesson plans, teacher and students' developed instructional resources, student demographics and classroom reflections. Other materials may include: student evaluation materials such as assignments, past examination and test papers. Edgerton, Hutchings, and Quinlan (1991) explain about teachers' portfolios stating that, portfolios provide evidence-based information of both what is taught and how it is taught. Portfolios suggest how teaching and learning varies according to context and learning environment. In other words, portfolios show the degree in which teachers' instructional decision-making processes are built upon connections of students' learning experience within the subject matter content and across disciplines (Shulman, 1987). Using the lenses of CP, the aim was to evaluate how the teacher's practices reflected the LCT beliefs. The focus was to assess the extent teacher's portfolio placed the learner at the centre of instruction. Freire (1970) suggests the need for teachers' practices to create opportunities for students to engage in reflective practices at every stage of the lesson. In order to do this, the researcher examined teacher's statement of teaching responsibilities, teacher's reflections in lesson planning and topics assessment, teaching methods used, documented teaching improvement strategies, student evaluation, teacher's teaching resources, and teacher's evaluation reports.

Therefore, based on the nature of instructional context and the purpose of the research, the researcher only reviewed the most relevant teacher's portfolio documents. These teachers' instructional records included, but were not limited to, the schemes of work, lesson plans, students' developed teaching and learning resources, and departmental teaching and learning progress files. The major questions addressed using portfolio reviews were how teachers' pedagogical decision-making during planning, implementation and evaluation of instructional practices were informed by learner-centred instructional beliefs. To evaluate portfolios, Seldin, Miller, and Seldin (2010) suggest creating a rubric which will help to focus on aspects of researcher's interest. They suggest considering pedagogical aspects including subject curriculum, instructional approaches and methods, the quality of instructional practice, as well as quality of instructional assessment and students' involvement in the assessment process. Similarly, the researcher prepared the rubric aligned with LCT beliefs to guide the review of teachers' portfolios which eventually formed a basis for data analysis and discussion.

The researcher thus requested the case studies regarding the need to access their portfolios in order to align the findings with those collected using interviews and classroom observations. The researcher reviewed teachers' instructional portfolios separately from classroom observation and interview schedules. During the first meeting with the respective participant, the researcher requested and appealed to the participant to allow him to access the participant's portfolios while at the researcher's place of residence. The reason was to make sure that the limited time that was available was used effectively and efficiently. During the day, the researcher participated in classroom observations and administration of interview schedules. The researcher also utilised daytime for rewriting and transcription of interviews and classroom observation data ready for their description and analysis stages. The researcher therefore decided to use night hours to review teachers' teaching portfolios. It took between five and eight hours to finish reviewing each teaching portfolio. After each review, the researcher gave back the portfolio to the respective participant where the researcher also provided the participant with a copy of review notes to see if the notes reflected what the participant meant to present in his or her teaching portfolio. The process of sharing the researcher's notes with participants was to ensure the findings reflected the actual teacher's instructional practices and

adherence to ethical protocols. Thus, depending on the agreed arrangement between the researcher and the participant, portfolio reviews were conducted at either the respective research sites or at a time and place that was convenient for the researcher. Throughout the fieldwork, ethical consideration regarding access to, or exposure of, portfolio documents was at the forefront of the researcher's planning and implementation of the research. Only the researcher had access to the documents and they were always kept in the researcher's secure locked cabinet after each review stage before returning to the participant.

Generally, data from the review of teachers' portfolios included: statements of teaching intentions based on students' instructional requirements and development of understanding of conceptual knowledge and skills; whether or not classroom activities were designed in collaboration with students (learning models, and sample pictures); how instructional decision-making related to students' needs and context in which the subject matter was being taught; how teacher's instructional planning was informed by feedback of students' progress (evaluation data); the kinds of evaluation artefacts or activities and how they influenced knowledge construction among learners (tests and examinations items, individual and group classroom activities, project works, and assignments).

Data analysis, organisation and interpretation

Data analysis was undertaken using a qualitative generative inductive analysis approach (Stake, 1995; Strauss & Corbin, 1998). Patton (1980) describes inductive data analysis as:

Inductive analysis means that the patterns, themes, and categories of analysis come from the data; they emerge out of the data rather than being imposed on them prior to data collection and analysis (p. 306).

Using this approach, the researcher immersed himself in the data descriptions trying to understand and interpret specific meaning segments that emerged from each case study description across research instruments. Data were not viewed as meaningful in themselves. They were treated according to the research objectives and questions as well as the researcher's interpretation of the data according to the guiding CP theoretical framework, subjective perspectives, and LCT beliefs. Against data

analysis based on objectivist philosophical orientation, data analysis process was greatly reflexive (Bruce, 2007; Harper, 2003; Mauthner, 2003). According to Mauthner (2003), reflexivity in data analysis involves moving forth and back in the data linking them with emerging themes subsequently resulting in refined direction and understanding. Data clarification and interpretation from both CP and constructivist views of knowledge thus entailed a critical self-reflexive analysis based on how teachers' perceptions and experiences regarding LCT reflected constructivist teaching beliefs as guided by the philosophy of education for self-reliance (Nyerere, 1967), the Tanzanian education and training policy (TETP) (GoURT, 1995), the Tanzanian government's mandated curriculum documents, and the 2025 Tanzanian development vision statements on education (GoURT, 2000) (Freire, 1971; McLaren, 2003 ; Willis, et al., 2007).

According to Freire (1971) and McLaren, (2003) thoughtful analysis and reflection means that the researcher is involved in liberatory knowledge production through self-reflexivity. Thus, data analysis attempted to further clarify and interpret the thick descriptions, quotes and phrases within and across case studies with regard to LCT practices. Applying lenses from the CP, the researcher was able to reflect teachers' perceptions and experiences beyond the research questions linking teachers' perceptions and experiences with the students' culture and instructional contexts

In line with the CP and constructivist teaching beliefs, the case study approach was initially used to produce thick descriptions that illustrate details of activities within and across cases; they also present the processes, outcomes and thus their relationships with the CP theoretical framework assumptions and the LCT beliefs. During the analysis process, the researcher from time to time, moved back and forth in the data making reflections about the meaning and implications that were attached to the respective data with regards to teachers' understanding of LCT, their pedagogical decision-making during planning for classroom instruction, their teaching practices, and evaluation of their pedagogical practices and how they used evaluation results to inform their teaching practices.

In order to accomplish this, the researcher adopted a procedure of asking questions about the data as recommended by Berkowitz (1997). Berkowitz recommends consideration of six questions in qualitative data analysis:

- (a) What similar themes develop in relation to research sub-topics? How the emerging themes reflect the major research questions?
- (b) Are there differences or lack of relationship among themes? If they are, what issues that might account for the differences?
- (c) How is informants' setting influence their conception and perception of their practices?
- (d) What significant experiences emerge from the informants' responses? How participants' experiences relate to the major research questions?
- (e) Do these themes suggest the need for additional findings? Is there need for revision of one or all major research questions?
- (f) Are the themes that develop related to the findings of relevant past studies? If they do not, how do these differences accounted for?

Guided by these questions, the process of meaning making on the findings continued until no new information was coming out i.e. when data saturation was reached. Thus simultaneous process of data collection and analysis enhanced the researcher to work with the data across thick descriptions, quotes, and the developing sub-categories and categories resulting in the development of themes. Themes are therefore discussed based on the relevant and related literature as also reflected by CP and LCT beliefs.

The researcher went forth and back to the findings with the aim of getting an actual meaning that the informants' attached to their instructional practice. According to Berkowitz (1997) the researcher's repetitive and reflective practice in the data analysis is significant as it enhances researcher's immersing in the data to get the real meaning of teachers' pedagogical experience and practice. Therefore, reflexive practice was at the heart of researcher's data analysis that resulted in better understanding of teachers' perceptions and experiences of LCT in geography classroom (Berkowitz, 1997).

The process of data generation and analysis meant that data were transcribed and organised progressively. Field notes from the interview schedules, observation sessions and teachers' portfolio review were typed and saved into electronic files that consequently were used as a basis for data organisation and categorisation for broader data analysis and theme development.

The researcher assumed the process of data analysis and interpretation suggested by Creswell (2003). It involves reading through all the data (transcriptions) one by one, jotting ideas as they come to mind to obtain a general sense of the information and reflecting on its underlying meaning, then recording general thoughts from each case study for comparison and triangulation between the instruments. For each case study and research site, the researcher outlined all key pedagogical aspects that were eventually condensed and summarised presenting major topics for a thorough discussion in chapter seven.

Data analysis was undertaken within case studies in the respective research sites. Analysis of the findings started with a contextual description of the research site and then followed by the presentation of general pedagogical aspects experienced across case studies in the respective research site. The analysis process proceeded with a thick description of what transpired in the field with respect to guiding research questions. Practical experiences from individual case studies were presented in the form of quotes and phrases to support the claims from the thick descriptions. Subsequently, data implications were presented in the form of categories arising within the respective case studies. The same procedure proceeded leading to the development of major themes that formed a basis for discussion in chapter seven. According to Graneheim and Lundman (2004) the development of themes follows the multiple meanings that underlie the categories where there is a thread of meaning that can occur in differing domains. Likewise, the researcher developed themes according to the meanings and interpretations he attached in the units of information as reflected within the parameters of the CP theoretical framework and LCT beliefs.

For comparison and triangulation purposes, findings from the interview sessions were analysed in light of individual cases, moving from one research site to another. The aim of data triangulation according to Denzin and Lincoln (1998) is to check and establish the validity of the data. In qualitative research, data validity is explained in terms of the trustworthiness of the findings i.e. as to whether the findings are true and certain. According to Denzin and Lincoln to achieve research validity in qualitative research, the findings need not only to reflect the reality but also they need to be supported by evidence-based information. Therefore, the researcher wanted to see if case studies had similar perceptions and experience regarding LCT. As explained

earlier, information from the interviews mainly constituted teachers' understanding of LCT and their perceptions and experiences regarding the implementation of LCT in Tanzania's secondary schools. Similarly, findings from classroom observation were analysed in the same way as in the case for interviews. The information collected from observation of classroom practices were also analysed based on individual cases and across cases in the research sites.

Equally, the researcher analysed teachers' teaching portfolios from all nine cases. Analysing portfolios based on individual cases and across cases provided an opportunity to compare and contrast teachers' pedagogical consideration and decision-making between case studies. More importantly, this kind of analysis not only presented the findings based on breadth and depth of information, multiple case analysis of data also provided the researcher an opportunity to identify major themes arising across case studies.

Eventually, the researcher pooled together the major pedagogical aspects developed across data collection methods - interviews, classroom observation and teachers' teaching portfolios. Depending on the similarity of the aspects across methods, the researcher condensed them forming the central themes or topics. The established core themes provided a basis for further literature review, a thick description, discussion, and finally recommendation for practice, educational policy issues, thesis underpinning theoretical framework-the CP and future research.

Ethical considerations

While researchers are cautioned to take into consideration all ethical issues that may ruin the quality of their research especially when conducting qualitative studies; Punch (1994) however, suggests that researchers should not be discouraged by ethical issues stating that:

Fieldwork is fun; it is easy; anyone can do it; it is salutary for young academics to flee the nest; and they should be able to take any moral or political dilemmas encountered in their stride (p. 83).

Punch explains numerous ethical issues that need to be considered especially in the conduct of scientific based research. According to Punch the informants need to be protected from any possible harm and/or infringement of their freedom as a resulting

of their participation in the study. Researchers need to protect informants' anonymity and privacy, as well as not deceiving them, and protect their informed consent. Punch provides examples of questions that researchers need to ask to determine compliance to ethical issues around their studies. These include but not limited to: does the research topic researchable? What is public and what is private? When can research be said to be "harming" people? Is there any law that support the researcher when he or she refuses to disclose information? (p. 89). Punch seems to put clearly the meaning of different concepts related to ethical issues including codes, consent, privacy, confidentiality, as well as trust and betrayal.

Right from the inception of the thesis plan, the researcher was aware of the need to consider some pertinent ethical issues regarding the institutions involved and the research participants and those people who were connected to the study in some way. The researcher's awareness of ethical issues is underpinned by his knowledge of the ethical implications of research activities that deal primarily with interaction between researchers and the people they study in relation to their environment (Creswell, 2003; Mack, et al., 2005; Orb, Eisenhauer, & Wynaden, 2000). The researcher thus went into the field with following caution in mind:

Whenever we conduct research on people, the well-being of research participants must be our top priority. The research question is always of secondary importance. This means that if a choice must be made between doing harm to a participant and doing harm to the research, it is the research that is sacrificed (Mack, et al., 2005, p. 11).

Accordingly, the researcher adhered to the principle by ensuring all ethical issues were considered with respect to the Victoria University of Wellington's Research and Human Ethics Policy and the Tanzanian Ministry of Regional Administration and Local Government Research Clearance Protocols in particular and the general ethical aspects guiding the conduct of research that involve human participation.

The researcher thus took on board important ethical procedures including:

- (a) Seeking research permission from Victoria University of Wellington Research Ethics Committee and the Tanzanian Government's ministry responsible for coordination and supervision of secondary schools- Ministry of Regional Administration and Local Government (TMRALG). The Victoria University of Wellington research permission was granted by the Faculty of

Education Research and Human Ethics Committee following the approval of the research ethics application. The researcher acquired the research permission from the director of the Iringa Municipal Council (DoIMC) (on behalf of TMRALG) which introduced him to the respective research sites (appendices 1, 2, &3);

- (b) Gaining participants' consent to partake in the study. Potential teachers were advised about the objectives of the research and the possible risks of the study. Cone and Foster (2006) explain that informed consent is a process, and it may include both informing prospective teachers of what their participation in the research will likely entail and obtaining their written or verbal agreement to participate. In order to obtain this, the researcher provided teachers with information sheets and consent forms translated into Swahili that described the objectives of the research and the implied consequences for their participation. Teachers were free to decide at any stage whether to participate in the study or not. Teachers who volunteered to participate in the study were asked to sign a consent form. Teachers were also informed about their decision to participate in the study to have no negative effect on their professional career (appendices 4, 5, 6, 8, &9);
- (c) The research also sought consent from students who were involved in the observation sessions. Students above 16 years were asked to consent to participate in the study by signing the informed consent form after they were explained about the research objectives. Consents of students under 16 years were sought from the students' parents or guardians through the respective school management (appendices 6, 7, 8, & 9);
- (d) Maintaining participants' confidentiality (Wiersma& Jurs, 2005). According to Wiersma, confidentiality refers to the researcher not disclosing the identity of the participants or indicating from whom the data were obtained. Confidentiality of the identity of the participants was taken into account throughout the study. The researcher identified participants with pseudonyms. The field note book, diaries, and audio-tape recorder were kept in the researcher's secure locked cabinet where only the researcher had access to it. The researcher planned to destroy all research instruments after three years from the completion of the study;

- (e) Member-checking with participants. The researcher shared the findings with each participant by giving back each participant copies of interview transcript, portfolio review and summaries of classroom observation. This allowed the participant to assess as to whether or not what was transcribed was what the participant meant to say or what actually transpired in the interview sessions, classroom observation and portfolio review, consequently ensuring research data trustworthiness. It was experienced that most of the participants noted errors which were corrected accordingly; and
- (f) The participants were also provided with contact information for all involved in the study, in this case; the principal researcher, and the primary and secondary supervisors. Participants were advised to freely contact the researchers whenever they wanted any clarification about an aspect of the study (appendices 4, 6, 7, 8, & 9)

Limitations of the study

Marshall and Rossman (1999) suggest that there is no research activity which is without limitations. They emphasise their assertion as, “there is no such thing as a perfectly designed study” (p. 42). Patton (1990) also presents, “There are no perfect research designs. There are always trade-offs” (p. 162). According to these scholars, study limitations may derive from the conceptual frameworks and the study’s designs used. Implied is that framing the study in specific research and theoretical orientations place limits on the research. This means that any study conclusion or generalisation need to consider the limitations encountered. More importantly, this qualitative case study design was confined in only nine geography teachers from three research sites. Thus, decisions must be made in order to determine the study’s usefulness for other settings. In undertaking the study, the researcher encountered the following limitations:

- (a) Research design limitation: as a qualitative case study, the study involved nine teachers from only three schools. Its findings may thus not be generalised to other teachers from other schools. However, according to Marshall and Rossman (1999), although qualitative studies are not generalizable in the statistical sense, their findings may be transferable.

Alternatively, similar studies may be conducted using quantitative designs thus increasing possibilities for generalisation;

- (b) Theoretical limitation: this study used the CP as a theoretical framework to examine teachers' perceptions and experiences in the implementation of LCT. The thesis has thus been developed based on the view points of the CP lenses. It is possible that using other theoretical traditions, the same study would be developed differently resulting to presentation of different understanding of LCT;
- (c) Case studies' different conception and understanding of LCT: Teachers' variation in understanding of LCT placed limits in making conclusions regarding the findings. Teachers' practiced the LCT based on their varied conception and understanding of LCT approach. This means that there is a need for a common understanding of LCT approach among teachers if the implementation of this approach should be a reality;
- (d) Research sample limitation: besides involving limited number of case studies, the study involved only geography teachers. The perceptions and experience of these teachers regarding the LCT may differ from other teachers in different subjects. Thus the findings of this study may not apply to other similar studies involving teachers from other subjects especially science. This also poses limitation for making plausible conclusions of the findings given the guiding research questions; and
- (e) English proficiency: from the preparation stage of the research proposal, the researcher anticipated the language to intervene the communication between participating teachers and students who were involved in the study. This was because English, as the second official language in Tanzania, is neither spoken by teachers nor students. Teachers mostly use English during classroom instruction. However, in order to ensure effective communication between the researcher and the participants, the researcher used both English and Swahili the latter of which is the national language and is spoken by the majority of Tanzanians including teachers and students. As stated herein, information sheets and consent forms were written in both English and Swahili to facilitate both teachers' and students' understanding of what the research was about. During interview sessions, the researcher and participants

used both languages by either code-switching or code-mixing between the two. This enhanced the participants' involvement and understanding of what was interviewed and discussed regarding their perceptions and experiences in the implementation of LCT.

Chapter summary

Despite the influence of qualitative case study research on researchers' bias (Mason, 2002), the researcher's sensitivity was aided by applications of more than one data collection instrument and adherence to pertinent ethical aspects necessitated to moderate such possible biases. Adherence to these data collection protocols also side-stepped the adverse effects of the unseen subjective interpretivist-constructivist thus ensuring the quality of the research findings. Using a case study approach, the research did not aim to collect generalisable findings across schools in the whole Iringa region in particular or Tanzania in general as for the case of quantitative case studies but rather the focus was to assess the implementation of LCT from the perceptions and experiences of secondary school geography teachers in the three research sites. It was assumed that teachers' practices might have significant influence on the LCT. Generalisation of findings however is made within and across case studies in order to present and explain the similarities and differences in teachers' perceptions and experiences regarding LCT. Comparison of this kind did not only enrich the researcher's understanding of what is meant by LCT from the perceptions and experience of geography teachers but also these perceptions and experiences from within and across case studies necessitated developing critical themes that the researcher did not initially anticipate, as discussed in chapter seven.

Overall, it could be argued that undertaking the research with well organised and balanced research methods and methodologies as presented in this chapter, allowed the study to present pertinent pedagogical aspects thus contributing to a wider debate regarding constructivist LCT practices in Tanzania's education delivery context in particular and the developing countries at large. The debate could also be advanced by later research activities possibly involving larger samples with different variables and theoretical orientations. Table 4.1 below presents the data collection schedule followed by the researcher during the field work. Thereafter, findings within case studies are presented under chapter five.

Table 4.1. Summary of data collection process

Research sites	Cases	Day 1	Day 2	Day 3	Day 4	Day 5
One	1.	Main Interview	Observ-Interv.1	Observ-Interv.2	Observ-Interv.3	Portfolio review
	2.	Main Interview	Observ-Interv.1	Observ-Interv.2	Observ-Interv.3	Portfolio review
	3.	Main Interview	Observ-Interv.1	Observ-Interv.2	Observ-Interv.3	Portfolio review
Two	4.	Main Interview	Observ-Interv.1	Observ-Interv.2	Observ-Interv.3	Portfolio review
	5.	Main Interview	Observ-Interv.1	Observ-Interv.2	Observ-Interv.3	Portfolio review
	6.	Main Interview	Observ-Interv.1	Observ-Interv.2	Observ-Interv.3	Portfolio review
Three	7.	Main Interview	Observ-Interv.1	Observ-Interv.2	Observ-Interv.3	Portfolio review
	8.	Main Interview	Observ-Interv.1	Observ-Interv.2	Observ-Interv.3	Portfolio review
	9.	Main Interview	Observ-Interv.1	Observ-Interv.2	Observ-Interv.3	Portfolio review

Clarification:

(a) Research sites represent schools investigated- schools 1, 2,& 3. Cases represent research participants-geography teachers.

(b) Observ-interv. - Means an observation followed by an interview to discuss the classroom processes.

CHAPTER 5

FINDINGS WITHIN CASE STUDIES

Introduction

This chapter presents the findings within case studies from all three research sites. The description of data within case studies is guided by the key question: what do geography teachers perceive and experience regarding the implementation of LCT in Tanzania's secondary schools? The main question was aided by four sub-questions which examined: teachers' understanding of learner-centred teaching (LCT); teachers' pedagogical reasoning and decision-making during the planning process; teachers' teaching practice; and teachers' evaluation of classroom instructional practices. The research sites include schools where the researcher collected data while case studies represent geography teachers who participated in the field-work. A contextual description of respective research sites is followed by a description of respective case studies.

Contextual description of research site one

Research site one is a publicly owned practicing secondary school. The school serves as a centre for student teachers' professional practices and is used as a model for non-practicing secondary schools. The school is located within the perimeter of the Teachers' College. This research site has a total enrolment of 827 students from form one to form four classes with approximately 206 students in each year of study spread into four streams of approximately 52 students each. Students range mostly between 13 and 17 years. It is a day school where students live either with their parents or guardians at home or find private accommodation closer to school. Students live within the municipal frontiers up to 23 kilometres away from the school. Student's recruitment is based on three main factors: the primary school national examination pass marks as determined by the Ministry of Education and Vocational Training; the school catchment area; and the school capacity, that is, classrooms and other relevant instructional facilities.

As a model school, the staffing and management of the school is centralised by the Ministry of Education and Vocational Training. Different from other schools, teachers are recruited amongst those with the best results in their national examinations for the Diploma in Education. Currently, with the increased enrolment of student teachers in Tanzania's universities, there is remarkable staffing of graduate teachers in the school especially in the science streams. In this research site, there were five geography teachers; however, only two teachers were assigned to teach geography while the other three were teaching other subjects such as biology, history/civics, and chemistry. In order to comply with the research protocols, the researcher had to request the involvement of another geography teacher from amongst those teaching other subjects.

Description of case study one (Marco)

Marco had a Diploma in Education specialising in geography and history. The teacher had four years of teaching experience of geography in secondary schools. He claimed that while at secondary school, he had never thought of becoming a teacher. He decided to enrol in teacher training after losing hope of what he previously targeted. According to the teacher, his dream was to become a renowned lawyer working as a private advocate. The dream could however not be realised as his form six (Advanced Level) national examination results did not meet the university entrance pass marks in the respective year. As a result, his parents advised him to apply for a Diploma in teaching which had direct government employment after graduation as compared to other training professions.

Teacher's understandings of LCT approach

Marco showed a diverse understanding of the LCT approach. The teacher had the view that LCT is a kind of teaching approach focused on engaging learners in the classroom and thus building the learning capacity amongst students. The teacher felt that in LCT environment, the work of the teacher is to facilitate students in the process of knowledge construction. According to the teacher, students make sense of what they learn by linking what they already know with what they ought to learn, that is, the subject matter.

Teacher's pedagogical reasoning and decision-making during the planning process vis-à-vis LCT

The researcher sought to understand how Marco's decision-making during instructional planning was informed by LCT beliefs. The review of Marco's teaching portfolio including items such as lesson plans, schemes of work and lesson notes demonstrated that his classroom decision-making followed a uniform pattern of instructional planning, presentation, and evaluation. The teacher's instructional portfolio identified aspects such as students' characteristics in terms of their number in classroom, sex and class level; instructional time and period for each instructional topic; the main and specific objectives of the respective instructional topic; instructional resources, and showed both teacher and students' activities during classroom instructional processes. Marco's teaching portfolio also suggested instructional techniques such as questions and answers, small group discussion and field projects.

The findings suggested Marco's pedagogical decision-making aligns with the subject syllabus requirements such as: the types of learning competencies to be enhanced to students, the use of the proposed teaching and learning resources, and utilisation of the assigned time and the proposed teaching and learning methods. For example; lesson objectives were stated as:

At the end of the lesson, students should understand the hydrological cycle; students should be able to list and explain the hydrological cycle components and they should also be able to explain the role of water bodies and vegetation in evaporation processes.

The lesson notes reflected the student subject syllabus and the textbook in that particular year i.e. Form Two Class. According to Marco, all instructional planning needed to consider what students ought to achieve by the end of each lesson. The teacher's teaching approaches were then to be directed towards achievement of classroom instructional objectives as guided by the subject syllabus and relevant curricula materials.

Teacher's teaching practice vis-à-vis LCT approach

The researcher assessed how Marco's teaching practices reflected LCT principles. During the interview, the teacher recommended the effective participation of students in the learning processes. According to the teacher, he involved students through the use of relevant teaching and learning facilities, cultivating learning curiosity and inquisitive minds using questions and answers, small group discussions, provision of individualised activities, and the use of field projects. Emphasising his application of LCT beliefs during the classroom instruction processes, the teacher noted:

I apply learner-centred teaching beliefs by involving learners in the teaching processes and using teaching and learning facilities such as models, maps, students' classroom demonstration and outdoor teaching where students are exposed in the actual physical environment.

Depending on the instructional topic and availability of funds, the teacher arranged for the outdoor study activities including field visits and geography practical activities. During lesson presentation, the teacher suggested using multiple instructional techniques such as: creating classroom readiness through problem posing questions on the subject matter, and providing student's individual assignments on the subject matter prior to presentation of the main subject topic. The teacher provided examples of questions he asked students such as: who can tell us anything about the hydrological cycle?; can anyone tell me anything about solar energy?; what is vegetation and why is vegetation important in the hydrological cycle? According to the teacher questions provoked students' thoughts and communication about their understanding of the respective subject matter.

The classroom observation focused on addressing the teaching methods used; students' involvement in the teaching and learning processes; teacher-student relationships; the teacher's ability to provoke students' reflection on the subject matter, use of teaching and learning resources; the teacher's ability to relate the subject matter across subject disciplines and students' learning diversities. One of the observed topics was about "Water management for economic development" while the 'hydrological cycle' formed the subtopic. The lesson was taught in form TWO, a class with 85 students. Marco presented the topic following the following procedures:

- (a) He introduced the lesson by outlining the instructional objectives including building student understanding on: the role of solar energy in the hydrological cycle; formation processes of different forms of precipitation; and measurement and recording of precipitation data;
- (b) He used mostly a question and answer method to explore the students' understanding of the hydrological cycle. Some of the questions asked included: what is hydrological cycle?; who can tell us the factors affecting the hydrological cycle?; what is solar energy?; can you explain the importance of solar energy in the hydrological cycle?; and what is precipitation and how is it formed?;
- (c) He invited students to respond to the questions based on who volunteered. The teacher appointed students amongst those who lifted their hands up to share their learning experience;
- (d) Students, who were given chances, reflected on the questions by sharing what they know regarding hydrological cycle and its related aspects;
- (e) The teacher critiqued students' reflections by directing them towards the pre-determined meanings of the subject topic components. He used a diagram showing the hydrological cycle and asked students to explain how each process takes place and relates to one another; and
- (f) He concluded the lesson by asking each student to describe measurement and recording procedures of rainfall based on the classroom discussion and student text books. This became the starting point for a home-based assignment.

From the review of Marco's teaching portfolio such as the geography syllabus, schemes of work, lesson plans, lesson notes and teacher's instructional models it was evident that the teacher's practices reflected the syllabus requirements—the teacher's pedagogical practices seemed to be more centralised and generalised in that planning and classroom processes reflected students' achievement in a collective group and not on an individual basis. For example, lesson objectives were stated as: by the end of the lesson students should be able to:

Construct meanings about geographical phenomena and concepts such as solar energy, evaporation, condensation, precipitation, and percolation without the use of lesson notes or instructional materials; explain the influence of each concept or

process in the particular geographical phenomenon such as hydrological cycle. Students to observe, measure, record, and interpret various geographical phenomena; establish geographical linkages between local, national, regional and global environments.

All these instructional objectives were also reflected in the subject syllabus.

Teacher's evaluation of classroom instructional practices vis-à-vis learner-LCT approach

The study examined the teacher's evaluation of classroom instruction processes in order to analyse if the evaluation incorporated students' learning artifacts, students' feedback and different LCT strategies reflected by students' instructional progress in the subject matter.

Responding to the question regarding the approaches the teacher used in the evaluation of classroom instruction practices, Marco demonstrated his assessment orientation based on the students' achievement of the instructional objectives. Marco added that he examined students' understanding of the subject matter, by providing individualised and group assignments, questions and answers and weekly and monthly tests. He explained further that he considered how student's feedback and reflections of the classroom instruction aligned with the subject content and its instructional objectives.

Marco explained that after the main classroom instruction he provided students with an assignment which was to be done either in groups or individually. He guided students as they were doing the assignment in either modality. The teacher reflected that during group discussion, he encouraged every student to participate by contributing his/her understanding of the subject matter based on his/her existing experience. The teacher perceived students' reflections and performance in the assignments informed his level of instructional effectiveness based on the instructional objectives and thus formed a basis for thinking about alternative instructional strategies.

Marco observed that he used question and answer method to seek students' explanations and reflections of specific instructional aspects at any stage of classroom instruction. The teacher's intention was to ensure all students grasped the

concepts and knowledge of the respective instructional topic and that they were comfortable in all aspects of the subject matter. Marco perceived that though it was very challenging to involve all students given the big number of students in the class, he would always go to class with a class roster. He reported to use the class roster to randomly appoint students to share what they understood regarding some instructional concepts. The teacher suggested that he asked students to volunteer responding to the questions by lifting their hands up where consequently he appointed them alternating across students' positions in the class. He added that he sometimes encouraged students by appointing them to give their reflections about different concepts regardless of whether they raised their hands or not. Marco accounted that random appointment of students across the class was meant to enhance effective evaluation of classroom instruction based on equal opportunity amongst students.

As stated earlier, the students' weekly and monthly tests and quizzes formed also the evaluation of classroom instructional artefacts. The teacher explained that the weekly, monthly tests, and quizzes composed of questions covering learning aspects within the topics already taught in that particular week or month. He reported that questions required students to make reflections of their learning thus examining the influence of his teaching practices on the students' knowledge construction processes and considering additional practices which ought to improve classroom instructional practices. The teacher observed that based on students' feedback, he could either repeat some of the topics or make appropriate instructional decisions to influence positively the lessons which followed. The idea according to the teacher was to ensure students understood the concepts and principles as per instructional objectives of the respective subject matter.

The findings from the classroom observation were evidenced by the teacher evaluation of the classroom instruction focusing on what the students achieved during that particular instructional period. Marco used diagrams representing geographical phenomena and asked students to explain how each phenomenon takes place and is related to one another. For example, the teacher drew a model of hydrological cycle and assigned letters such as a, b, c, d, and so on, to represent its components. He then asked students to identify the components and explain what

each component meant and its influence on the hydrological cycle. The volunteering students lifted their hands up and the teacher randomly chose students based on sex and their sitting position in class to share what they thought the letters represented. After each student's reflection, the teacher sought more clarification of students' responses from other class members.

As for classroom observation, the review of the teacher's teaching portfolio reported also Marco's reflection on the lesson achievement based on students' performance in the classroom tasks, individual assignments and weekly tests. For example; in the evaluation of the achievement of the previous classroom instruction, the lesson evaluation stated that "the lesson was understood by 95 percent of students". The teacher's account of his instructional achievement was that "students participated well in the lesson by asking and answering questions posed to them; students performed well the assignment given regarding the hydrological cycle". The lesson evaluation reported the need to begin with the new learning aspect on "the uses of water" in the following instructional period. According to the teacher, student's instructional feedback eventually provided a basis for evaluation of the teacher's teaching practices and planning for future classroom instruction.

Opportunities in the implementation of LCT approaches

Students' motivation to learn seemed to be an opportunity for effective LCT. During classroom observation, students demonstrated high learning motivation. They were very enthusiastic in building an understanding of the subject matter from their own diverse experience. They challenged the relevant concepts such as evaporation, condensation, precipitation, infiltration, percolation and run-off through questions and answers and provided examples from their localities. Students defined hydrological cycle as "one of renewable resources since it reforms when used"; "it is the complete circumference of water resulting from patterns of association of such processes as evaporation, condensation, precipitation, and percolation". Students also asked questions such as:

Why is it that the water vapour condenses while it appears to be closer to the sun?; how come evaporation takes place through vegetation?; what is the intensity of solar radiation needed to evaporate water from the springs, lakes, ocean or sea?; what and how do human activities influence the hydrological cycle?; and how does the climate affect hydrological cycle?.

The researcher considered students' motivation to learn as an instructional opportunity which a teacher could exploit to influence students' active involvement in the instructional processes.

Challenges in the implementation of the LCT approach

The mandated curriculum seemed to hinder the implementation of LCT approaches. The findings from the teacher's teaching portfolio showed that the curriculum provided what the teacher should teach (academic content knowledge), how the teacher should teach (pedagogical content knowledge) and the expected students' instructional objectives (instructional/learning outcomes). The syllabus stated not only the subject text and reference books but also the instructional materials to be employed. The curriculum instructional dominance was also reflected in the teacher's teaching practices. The teacher's pedagogical decision-making, teaching practices and evaluation of classroom instruction processes was evidenced by the teacher's adherence to the geography curriculum materials with limited integration of the subject matter across subject disciplines, school environment and students' learning diversities and cultural contexts.

The classroom observation was evidenced by the classroom overpopulation. About 80 students were collected in one small spaced class. Some students shared chairs and tables as the available furniture could not accommodate them. The class was not supplied with teaching and learning resources. This was seen as a challenge to the implementation of LCT. When responding to a question demanded his experience in the teaching practices using LCT approaches, Marco had the following teaching experience:

As a geography teacher, I face many challenges which affect the application of LCT approaches. Classroom overpopulation is the burning challenge. For example, I teach in classes ranging 65 to 100 students. It is very challenging to involve students in the teaching processes in larger classes like these. These classes have also no teaching and learning facilities, we do not have enough text and reference books, no computers, projectors and other teaching models. I sometimes need to buy teaching equipment using my own funds.

The researcher perceived the unfavourable instructional contexts experienced by the teacher posed critical challenges in the effective implementation of LCT.

Summary of Marco's descriptions

Marco viewed LCT as an approach of engaging students in the classroom instruction process with a focus of building instructional capacities amongst them. The teacher's pedagogical reasoning and decision-making was influenced by his desire to achieve syllabus instructional objectives. According to the teacher, students' level of involvement in classroom activities and their performance in the weekly and monthly tests formed important classroom instruction evaluation criteria.

Description of case study two (Agape)

Case study two involved a female teacher with three years of teaching experience at secondary school level. Agape had a Diploma in Education majoring in geography and biology. The teacher was allocated to teach biology. Agape has been teaching the subject in year 13 and 14, that is, form One and Two classes. Agape said she felt proud when she chatted with students about the school as part of the social life. She was content in the way students respected her:

You know when I enter the class; students stand up and greet me with a feeling of great respect. When I meet my students in any place be it on the way, in the market, or at the church they greet me and introduce me to their companions if any.

According to Agape, her instructional practices were motivated by the way students respected her. The teacher perceived students as part of her family. She felt also the way teachers respected each other at school. According to the teacher, when it came to departmental matters, each member of the department was much concerned on issues relating to the respective department. Agape noted:

In a biology department for example, we prepare together the quarterly action plans, the schemes of work, the teaching and learning materials such as instructional models and assessment materials, that is, weekly and monthly tests and quizzes and the terminal examinations. In other words, all activities related to the department are executed in a team.

Agape showed her satisfaction with the kind of teaching support she got from her colleagues which made her teaching practices enjoyable. She expressed her perceptions in teaching suggesting that teaching in both government and private

schools developed her communication and teaching skills to such an extent that she was able to identify her student learning disparities consequently supporting their learning adequately.

Teacher's understandings of LCT approach

Agape conceived LCT as a cooperative teaching technique whereby a teacher asks questions and students discuss the questions in groups under the guidance of the teacher. The teacher stressed her understandings of LCT noting that: "LCT requires empowering students in the teaching and learning process such as students being free to critique the teacher's reflection on the subject matter". The teacher further noted that: "Students' active involvement in the lesson demands the teacher to use participatory teaching methods such as questions and answers and group discussion". Agape had the view that under LCT, learners are given opportunities to reflect and share what they know regarding what is taught.

Teacher's pedagogical reasoning during the planning process vis-à-vis LCT approach

Agape described the factors that determined her instructional decision-making during planning for classroom instruction. The factors included: classroom capacity in terms of class size, instructional resources, and the number of students in the respective classes. Emphasising her perceptions and consideration during instructional planning the teacher noted: "I teach classes exceeding 100 students different from the normal classroom capacity of 45 students. This has implications in the preparation for classroom instruction and evaluation of classroom instruction as well". It appeared that the classroom size determined teacher's instructional decision-making in terms of the methods, instructional resources and other relevant facilities.

Findings from Agape's teaching portfolio suggested teacher's instructional decision-making and action were reflected by the subject syllabus requirements and the proposed subject textbooks. This was evidenced by the lesson planning which outlined the main and specific objectives of the subject topic as per the subject syllabus. Lesson plans outlined the expected learning competencies to be achieved by the learners; they proposed reference books for specific subject topics and

indicated teacher's evaluation strategies of the classroom instruction processes. The lesson notes also reflected the instructional objectives outlined in the lesson plans.

Teacher's teaching practice vis-à-vis LCT

Among the many aspects examined included evidence of the teacher's mastery of the subject topic, how the teacher tailored her instructional practices across subject disciplines and students' diverse experiences, teacher's instructional and assessment methods, level of students' classroom engagement, and the use of teaching and learning resources.

Agape presented multiple experiences when responding to questions which sought how she applied her understandings of LCT in the instructional processes. According to the teacher, her focus of classroom instruction was to empower students in the teaching and learning process. Using participatory teaching methods such as questions and answers and group discussion, she gave students freedom to critique the subject matter from multiple perspectives. The teacher gave students' opportunity to critique also her understanding of the instructional topic. According to the teacher students questioned her presentation as a way of seeking more clarification of different concepts and aspects of the subject matter. The teacher asserted that her work was to plan instructional topics in such a way that it provided students' with questions and both individual and group activities to be performed throughout the instructional period.

Agape provided her experience when she taught a topic on "natural resources and their socio-economic importance with particular reference to Tanzania". The teacher explained that a week before the classroom instruction, she assigned each student to think about natural resources and relevant products readily available in their localities and collect samples of the natural resources. The teacher asked students to bring samples of resources and products to the classroom instruction period that followed. During classroom instruction each student presented samples of natural resources and/or products made of different natural resources.

According to the teacher, students collected varied resources and products including varieties of minerals such as coal, iron, charcoal, and gold made materials. Students presented also natural resource-made tools such as bracelets, spoons, sports medals,

coins of Tanzania's shillings and pencils. According to the teacher, she facilitated the lesson through groups where each group discussed: the types of natural resources they had; the socio-economic importance of each type in terms of the products made from each resource; the type of products each group had; and identified their respective natural resources. The teacher reported to make group follow up provoking students' curiosity by posing different questions regarding resources and products that students had collected. After ten minutes of discussion, each group presented what they observed and discussed. The teacher suggested summarising the lesson using a question and answer technique. Among questions asked were: "what types of natural resources are found in Tanzania?; what are the uses of these resources?; and why are most of these natural resources not extracted?". The teacher wrote students' responses on the board when she thought they were correct.

Classroom observation findings were collected in two different instructional topics including: "Water Management for Economic Development and Exploitation of Forests' Resources". Findings from both observation sessions revealed the teacher's relative variation in terms of teacher's alignment of her teaching practices with LCT teaching beliefs. In one of the observation sessions, Agape followed the following instructional procedures:

- (a) introduced the lesson by telling students the topic they were going to discuss ;
- (b) outlined the aspects to be discussed which included: forms of precipitation and formation processes, solar energy, the role of water bodies and vegetation in the water cycle/hydrological cycle, and the measurement and recording of rainfall;
- (c) asked students different questions across all the aspects where some students responded to the questions;
- (d) volunteering students lifted their hands up before the teacher randomly appointed them to give their reflections regarding the questions; and
- (e) after clarifying students' responses, the teacher provided explanations on each aspect while students listened at the same time taking notes.

Despite few students volunteering to share their experiences, not all students who volunteered were given chances to respond to the questions posed. Agape used most of the instructional time to explain and clarify the concepts on the hydrological cycle. The teacher had no teaching resources other than geography textbook and lesson notes. The teacher concluded the lesson by asking students to draw a well-labelled diagram showing the hydrological cycle. This constituted a take home assignment which was to be marked during the following classroom instruction. During the mini-interview session, the teacher expressed her concern regarding students' engagement in classroom instruction. Teacher's concerns regarding students' classroom participation were based mainly on lack of instructional resources and students' classroom capacity. The teacher supported her use of lecture method noting that: "I teach in a class with 134 students. It is very difficult to involve students in a teaching process based on learner-centred teaching principles". The teacher added that, if she opted to apply LCT methods, she found using much time teaching just a small subject matter component. This eventually resulted in not completing the geography syllabus in time. Explaining the effect of a shortage of instructional materials in implementing LCT practices the teacher lamented: "it is very challenging for the teacher to practice learner-centred teaching in a teaching and learning environment where there are no books, internet services and teaching and learning models".

According to Agape, effectively implementing LCT requires a teacher to have as much interactive instructional resources as possible. The teacher mentioned the resources including computer aided facilities, text and reference books and instructional models. According to the teacher, these materials not only motivate student learning but also provoke students' reflection regarding the instructional topic. During the second classroom observation:

- (a) The teacher introduced the topic by asking questions regarding the types of forests students know, characteristics of different types of forests, varieties of animals dwelling in different types of forests;
- (b) She then emphasised the need for students to reflect on the importance of forest in the economic, social and cultural development of East Africa;

- (c) She used a narration approach in the most of classroom instructional time; and
- (d) Guided by teacher's lesson plan and lesson notes, the teacher described forest resources showing the forests' eco-system goods and services.

In this lesson, the teacher used mostly questions and answers to explore students' understandings of forests and their impact on socio-economic development. Most students who volunteered to share their experience seemed to have a deeper understanding regarding the topic of forests and their importance in the socio-economic and cultural development. Students made reflections based on the forest's products such as timber and related construction materials, medicine, variety of animals. They reflected on the role of forests in the development of the tourism sector in the country. After the instruction, the teacher presented a map of East Africa showing the distribution of forests in East Africa. She asked students to use the map to reflect further on the subject matter.

During the mini-interview sessions which followed the observation of classroom instructional processes Agape expressed her concern regarding English language incompetence among students. The teacher reported that it was difficult to implement LCT especially in lower classes. According to the teacher, many students in those classes presented with limited proficiency in the spoken and written language structures and phrases. The teacher emphasised her experience on this stating: "my students are not good at English. They fail to construct correct and meaningful sentences about what they know regarding certain geography concepts and conceptualisation of geographical ideas".

According to Agape students who volunteered to share their experience and understanding about some geographical concepts took a lot of time to present their conceptions. They struggled to articulate what they understood regarding the subject matter looking for appropriate vocabulary and sentence construction.

Besides the instructional challenges experienced, teacher's teaching practices suggested a divergence between her conception and experience of LCT and the

classroom practices. Teacher's teaching practices mostly reflected the teacher-centred as opposed to LCT approaches.

Teacher's evaluation of classroom instructional practices vis-à-vis LCT

The main question across research instruments was how the teacher evaluated her classroom instructional practices.

Findings from interview sessions demonstrated Agape's evaluation of classroom instructional practices based on student's contribution of ideas on the subject matter, usefulness of the teaching models and classroom instructional achievement reflected by the lesson objectives. According to the teacher, the foremost objective of classroom instructional practices was to ensure that students gained new knowledge as was specified in each instructional topic. Other evaluation of classroom instructional practices criteria according to the teacher depended on student achievement on individualised tests and assignments and students ability to use instructional models such as diagrams, maps, charts and figures to explain different concepts on the subject topic. The teacher further asserted that when students were able to explain subject concepts either by the support of instructional models/materials or using their own experience to interpret the concepts, she concluded that her classroom instructional practices were successful.

Classroom observation suggested teacher's evaluation of classroom instructional practices based on questions and answers. On some occasions during classroom instruction, the teacher used questions such as: "is it clear?; any questions so far?; any doubts?;who has not understood about...?"and so on. The teacher appointed some students who raised their hands up to explain their thoughts where each student either asked a question or sought some more clarifications on specific issues regarding instructional topics. Students who volunteered to ask questions or seek clarifications about specific topical issues used words such as "my question is how, what, why is/are...," The teacher then invited responses on students' questions from the members of the class. Similarly, those who volunteered were given opportunity to give their reflections and reactions on their fellow students' questions and

concerns. The teacher clarified students' reactions as a way of making clear students' questions and observation regarding the instructional topic.

Agape's instructional portfolio reported her evaluation of classroom instructional practices based on the subject syllabus. Teacher's evaluation of classroom instructional practices focused on examining students' level of understanding of instructional topics as per guided instructional objectives of the subject matter content. Lesson plans for example covered specific instructional aspects as indicated in the subject syllabus. The lesson plans identified instructional topics, general and specific objectives of instructional topics and proposed the instructional resources which in some cases included maps, diagrams and charts depending on the requirements of specific instructional topics. Lesson plans proposed also instructional methods to be used. Teacher's reflection of classroom instruction stated students' achievement of the instructional objectives by percentages. In some lesson plans, classroom evaluation stated that:

Before instruction

By the end of the topic student should be able to identify different uses of water without teacher's or students' notes. Student should also be able to explain water management strategies and techniques for sustainable water supply

After the instruction

The lesson was understood by approximately 85 percent of students in class. This is because, majority of students identified uses of water without referring to either teacher or student notes. Most students explained with confidence about water management strategies and techniques for sustainable water supply. Students participated effectively in the discussion about water uses and management. Next time, I will introduce new topic about....

Based on the teacher's instructional portfolio reviewed, it was evident that the teacher's decision-making processes regarding evaluation of classroom instructional practices were determined by students' achievement in the specific instructional topics as guided by the subject syllabus.

Opportunities in the implementation of LCT approach

Based on research findings, three significant instructional opportunities were identified: Agape's understanding of LCT practices, wealthy students' existing

knowledge about some instructional topics and possibilities for teacher's use of multiple vocabulary and alternative instructional methods and strategies.

Teacher's understandings of learner-centred instructional practices

The researcher considered the teacher's comprehension of the LCT as an opportunity towards implementation of learner-centred instructional practices. Teacher's perceptions and experience regarding LCT showed her diverse understandings of what constitute the teacher's tasks to support students' learning processes. However, teacher's understandings of LCT could not be realised in most of her instructional practices. Teacher's instructional practices were dominated by teacher-centred instructional approaches.

Role of students' knowledge base in the instructional practices

The researcher considered students' knowledge base as a significant attribute in the implementation of LCT. However, findings from classroom observation revealed teacher's limited consideration of what students already knew in supporting students' construction of knowledge. Teacher's failure to integrate students' prior knowledge in her classroom instruction implied her insufficient conceptions of prior knowledge and its role in the learner-centred classroom instruction practices.

Teacher's use of multiple vocabulary and alternative instructional methods and strategies

Findings from classroom observation and interview sessions showed the language to inhibit students' effective participation in the classroom instruction. As an alternative, the researcher considered teacher's use of multiple vocabulary and alternating instructional methods and strategies as influencing classroom instructional method and strategy for students' active engagement in the learning processes.

Challenges in the implementation of LCT approach

The field experience suggested challenges that the teacher faced regarding the implementation of LCT approaches. These challenges included: teacher's limited understanding of student mental cognition process, teacher's failure to utilise existing

instructional opportunities such as student's prior knowledge, subject vocabulary and instructional methods and strategies, language and class size.

Teacher's insufficient understanding of student's mental cognition processes

Based on the teacher's perceptions and experiences of LCT, findings demonstrated teacher's lack of enough understanding of student's mental cognition during LCT classroom processes. According to the teacher's practice, LCT was interpreted by student's mere involvement in the lesson using participatory instructional methods. This teacher's understanding was seen when she rarely provided students with classroom activities to provoke students' thinking through sharing their lived experiences. The teacher asked students mostly the closed questions which did not promote students' inquiry and critical thinking perspectives. Lack of students' active involvement in classroom instructional processes made students receptacles of teacher's knowledge inhibiting them to share their diverse learning experiences.

Language challenge

The majority of students were not capable of expressing themselves in English. Those who volunteered to either ask or answer questions used a lot of time to find proper structures and grammar to present their thoughts. In order to save time, the teacher suggested resorting to teacher-centred methods such as lecture and demonstrations methods. During classroom observation sessions, it was experienced that few students shared their thoughts and reflections about instructional topics. The teacher accounted students inactive participation to a lack of mastery of language communication skills. The teacher had sometimes to code-switch and code-mix between Swahili and English in order to influence students' involvement in the teaching and learning processes. It was evidenced that whenever the teacher opted for Swahili, many students showed enthusiasm to participate in the lesson through asking and responding to some questions.

Summary of Agape's descriptions

Teacher's understanding of LCT was underpinned by her perceptions of the need to involve students in the teaching practices. Teacher's pedagogical decision-making was influenced by factors such as: the syllabus guideline, class size, instructional

resources, and time. Though during interview schedule, the teacher presented mastery of LCT approaches; classroom observation suggested teacher's teaching practices characterised by teacher-centred methods. The teacher mentioned instructional challenges such as: students' limited English language proficiency, limited instructional resources, teaching in large classes, and the need to complete the syllabus in time. Agape's evaluation of classroom processes were determined by among other pedagogical factors, students' reflection on the questions, their performance on the tests, assignments, and ability to use geographical resources such as models and maps.

Description of case study three (Sigimba)

Sigimba is a long serving teacher with extensive teaching experience. He taught in primary school for 11 years before he started teaching in secondary schools. He had five years of teaching experience in the respective secondary school. His academic and teaching qualifications included possession of a training certificate in primary teacher education, Diploma in secondary education and Bachelor degree in teaching majoring in geography. The teacher reported to have attended a diverse, brief professional training which included: training for special needs education (SNE), early childhood education (ECE), inclusive education (IE), diagnostic teaching techniques (DTT) and teaching geography education for Environmental Management and Sustainability (EMS). The teacher perceived that the short term training programmes augmented his teaching practices especially in the syntactic knowledge. He asserted that the professional training aided his understanding of, and the decision-making processes regarding the classroom instruction practices.

The teacher noted: "my long and extensive teaching experience plus the varied professional training I have undergone have enlightened my conceptualisation of classroom instructional planning and thus my teaching practices". Sigimba expressed a feeling that his teaching experience and the extensive extra professional training empowered him academically and pedagogically. One of the most interesting stories from the teacher was his transformed mindset that for a long time he believed that a teacher was born and not made. His belief was supported by his experience as a student and as a teacher. He asserted that as a student he was able to identify the teacher who showed evidence of teaching competence in terms of mastery of subject

matter content and methods of teaching. According to this teacher, students nicknamed that teacher as '*Kipanga*' meaning a genius teacher. He explained that such a teacher could sometimes come into class without a book or lesson notes. She/he would just come with pieces of chalk and then write the instructional topic on the notes board and start discussing the topic stage by stage till the end of the instructional time.

Sigimba explained further that in the instructional practice such a teacher would give as many examples as possible to influence students' reflection on the subject matter and invite them to ask and respond with some questions before he concluded the subject. According to Sigimba, they enjoyed the way the teacher involved them in the classroom instructional practices to the extent of murmuring praising his proven teaching competence when the teacher left the class. Sigimba believed that teachers of that kind were born with those academic merits and teaching talents. However, with time, Sigimba realised that teaching competence was not influenced by natural talents alone but rather with a teacher's acquired substantive knowledge of the subject matter and the syntactic knowledge, that is, the pedagogical knowledge acquired from his/her passages in schooling, training and the professional practices. The teacher questioned: "If teachers are born, what are these schools for? What are these teachers' training colleges for?" Moreover, the teacher was asking himself "if teachers were born then why should there be universities and colleges deliberately established for training teachers?" The teacher perceived that his teaching improved over time as a result of not only the initial teacher training programmes he attended and became familiar with the teaching processes but also the kind of in-service professional trainings he underwent.

Teacher's understanding of LCT approach

According to Sigimba, LCT is a teaching approach which gives students learning authority. The teacher in LCT is a facilitator of classroom instructional processes. The teacher presented that the teaching approach requires students to engage in the teaching and learning process by following teacher's guidance. The teacher however perceived LCT as westernised and imposed instructional methodologies which transfers power from the teacher to the students. The teacher perceived implementing LCT in Tanzanian schools as challenging observing: "too much time is used to cover

just a small subject content, we also do not have enough teaching and learning resources to support learner-centred teaching, I don't know!"

Teacher's pedagogical reasoning during the planning process vis-à-vis LCT

The researcher wanted to know what Sigimba considered during planning for classroom instruction. The teacher explained his consideration to be directed by the subject curriculum requirements. When the researcher asked what the teacher considered during planning for classroom instruction, Sigimba responded:

I normally consider issues like the classroom instruction guidelines especially from the subject syllabus, instructional objectives, and the subject topics to be taught vis-à-vis teaching and learning materials available and the instructional activities to be provided during or after the classroom instruction.

According to Sigimba, the teaching processes needed to reflect the curriculum requirement and objectives in the respective year. The teaching processes needed also to be reflected in the planning for classroom instruction. Based on the teacher's teaching experience, the curriculum provides the expected learner's learning competencies to be developed from every subject topic. The curriculum suggests how each topic should be taught. In this case, the curriculum describes the subtopics within each main topic and proposes the organisation of the classroom instruction and the instructional methods and strategies to be employed. Findings from the teacher's portfolio were evidenced by lesson plans reflecting what was intended to be accomplished in the schemes of work. Lesson plans described the instructional topics, instructional objectives and both the teacher's and students' activities during classroom instructional processes. The lesson plans described the instructional methods and proposed the text and reference books for each instructional topic. The same was attested by the lesson notes which were prepared based on the instructional objectives provided by the syllabus and thus reflected in both schemes of work and the lesson plans.

According to the reviewed portfolio, teacher's evaluation of classroom instruction suggested the need to build student performance and learning competencies in the prescribed instructional objectives. For example, in the topic of "Human Population", the teacher's evaluation of classroom instruction stated that; by the end of the lesson

a student should be able to: “define population structure, describe the concepts of age and sex, birth and death rates and show the influence of each population aspect on the population structure”. The instructional objectives spelt out above were observed in all curriculum materials reviewed such as the syllabus, schemes of work, and the respective subject textbooks, that is, geography for secondary school Books 2 and 4 and the teacher’s lesson notes in the respective instructional topics.

Teacher’s teaching practice vis-à-vis LCT beliefs

Assessment of teacher’s instructional practices meant to consider how the teacher provided opportunities to students in order to reflect the subject matter from their own experience and construct their own understanding of the subject matter. One of the interview questions asked how the teacher identified student’s learning needs. According to Sigimba he identified students’ learning needs by inviting students to make reflection on the subject matter. The teacher provided examples of how he influenced students’ participation in the knowledge construction process when he taught the topic of population structure in a form four class. The teacher described the procedures he followed as:

- (a) He described his own family in terms of the number of family members, sex, death occurrence of family members and socio-economic activities undertaken by the teacher’s family;
- (b) He invited volunteering students to describe their families. Students were guided by the question; can anyone tell us about his/her family?;
- (c) Volunteering students were randomly appointed amongst those who lifted their hands up;
- (d) The teacher subsequently described the instructional topic regarding population structure focusing on age and sex; birth rate and death rate; and
- (e) As he explained the concepts and issues relating to population structure, he asked students to reflect on what they already knew about the topic from their family backgrounds.

The teacher shared that introducing the classroom instruction in that way provided opportunities for students to construct their own meaning and interpretation of the subject concepts and ideas based on their existing experience and understanding

about the subject matter content. The teacher stressed that he knew how to proceed with the classroom instructional processes after having clear understanding of the students' existing knowledge base on the respective instructional topic. Sigimba noted: "from here, I know where to direct my attention as I facilitate the instruction processes".

Sigimba's teaching practices were also assessed through the researcher's classroom observation. Classroom observation was undertaken in the form four class instructional topics regarding: Human population and agriculture in East Africa. The subtopics included: population structure and the factors influencing agricultural development in East Africa respectively. In the first topic, the teacher facilitated classroom instruction on the age and sex, birth and death rates. Whereas, aspects influencing agricultural development in East Africa constituted the ecological aspects such as: the physical and biological factors (land, climate and soil); human factors (labour, capital, technology and support services including infrastructural and institutions) and the economic situation which involved the (national and international pricing systems). Lesson presentation followed the following procedures:

- (a) introduced the topics by giving explanations about the instructional aspects before he asked students to think about the factors affecting each aspect of population structure and the factors affecting agricultural development in East Africa;
- (b) described the concepts of age and sex, birth and death rates in relation to population structure. He presented examples of how socio-economic and cultural issues such as life expectancy, educational level, economic status and dependency ratio affect aspects of population structure;
- (c) he invited students to share what they knew regarding population structure, age and sex, birth and death rates as important aspects in understanding human population;
- (d) he jotted on the chalkboard all the students' reflections and perceptions on population structure, age and sex, birth and death rates;
- (e) he explained further about the role and link of each aspect on the human population and its structure. For example, he explained how life expectancy,

educational level, economic status and dependency ratio affect the population structure and its aspects such as; age and sex; birth and death rates; and

- (f) he concluded the lesson by drawing a diagram showing Tanzania's population structure based on age and sex. He asked students to comment on the population structure giving an account of the factors influencing population structure in East Africa with particular reference to Tanzania's experience. He asked students to link the aspects of birth and death rate, age and sex with the factors of human population already studied. This formed a take home assignment which was to be done in groups of ten students each.

Sigimba provided examples of how life expectancy, economic status, educational level and dependency level affect the population structure. A question and answer method was also used more often. The Question and answer instructional method was experienced especially in the introduction of the lesson. The teacher asked questions such as: how is population dynamics distinguished from population structure?; how does education influence population size of a given community?; how does fertility rate affect population dynamics?; who can explain the influence of life expectancy and economic status on population structure?; and who can give an account for the factors influencing population structure in East Africa? These and other questions were answered on an individual basis depending on who volunteered. Accounting for his instructional methodologies used, the teacher was concerned with the number of students in the class which could not favour active participation of all students. The teacher put his experience of LCT in an emphatic disposition by saying: "It is a very challenging teaching approach especially in a class of too many students and lack of teaching and learning facilities". The teacher went further stating that: "Due to lack of enough geography teachers, we usually combine about four class streams in a single class of up to 180 students. It is very difficult to teach in this large class using learner-centred approach".

Unlike the first lesson, in the second lesson, Sigimba seemed to involve students actively in the classroom instruction regarding Agricultural Development in East Africa. In this class the teacher followed the following steps:

- (a) introduced the lesson by inviting students to conceptualise the following aspects: Agriculture and its influencing factors which included: land, climate

and soil; labour, capital, technology and support services including infrastructural and institutions and the national and international pricing systems;

- (b) he grouped students in ten groups of about eight students each. Each group appointed the chairperson and secretary. The chairperson guided the students in their discussion. The group secretary was responsible for taking a summary of students' reflections regarding the instructional topic under discussion;
- (c) he asked each group to discuss the factors influencing agricultural development in East Africa focusing on the importance of agriculture for socio-economic development in the respective countries and in East Africa in general.;
- (d) the teacher walked around the groups assisting students in their discussion;
- (e) the presenter from each group presented what they discussed before the class;
- (f) the teacher invited students to ask questions for each presentation;
- (g) at first, members of the respective group responded with questions elaborating more on what they meant in common regarding issues that were raised. Subsequently, volunteering students were given opportunity to critique the counter group presentation. This went across all discussion groups; and
- (h) presentations and reflections were followed by teacher's clarification of important aspects at some points of classroom instruction.

Based on Sigimba's facilitation of classroom instructional topic, the researcher observed the teacher supervising effectively students' discussion. Students seemed to participate effectively in the discussion of their respective groups. Students shared their thoughts about agriculture and its related activities. From the researcher's observational experience, students' reflections on the subject matter revealed their deep understanding of the subject matter. Students reflected their understanding of the subject matter from varied life experiences. For example, using experience from one of the student's home villages regarding agricultural development, the student shared her concern about how the physiological and biological factors influenced agricultural development observing that:

We are told, back at our home (Isimani Ward) in the past three decades the soil was very fertile. The natural fertility of the soil allowed our parents to grow maize and harvest in abundance without applying agrochemicals such as

fertilizers and pesticides. Unlike those days, nowadays, the same people suffer from persistent hunger due to the reason that they harvest very little despite application of fertilizers and other farm inputs.

The student further commented that: “in my opinion, something wrong might have occurred within the soil. Otherwise, we need to think about the influence of climatic changes experienced over the years on the soil fertility”. According to this student, the place was no longer productive for maize other than dry resistant crops such as sunflower and cassava.

Teacher’s evaluation of classroom instruction practices vis-à-vis LCT approach

The findings regarding teacher’s evaluation of teaching practices revealed that Sigimba’s evaluation of his instructional practices was determined by student performance in the instructional objectives. Based on the data collected from all three research instruments, it was clear that evaluation of teaching processes was reflected by the changes in student instructional behaviour. Findings from the interviews demonstrated teacher’s use of different evaluation criteria. Sigimba’s evaluation of classroom instructional practices was based on the students’ performance in the assignments provided (individual or group), students’ application of instructional models, and the extent of students’ involvement in the instructional processes. It was also found that the teacher’s evaluation of teaching practices was reflected by students’ ability to make conception of the subject matter across subject disciplines. According to the teacher, his achievement of classroom instruction was determined by his ability to promote student thinking and participation in the classroom. With respect to in-class activities, during classroom observation, it was observed that the nature of teaching approach seemed to affect the teacher’s evaluation of his instructional processes. It was evident that the more the teacher actively involved students in the instructional processes, the more he assessed his teaching practices.

For example, when students were involved in either individual or group based activities, the teacher walked around the students and sometimes clarified some aspects within the groups, individuals, and the whole class. The same was experienced at times when he applied other participatory instructional methods such as questions and answers and think-pair and share methods. Students’ reaction to the

questions and/or individual and group tasks made the teacher clarify more about the concepts he taught using examples and questioning students further across the topics. The change in the teacher's instructional approaches was seen to be influenced by the student feedback from either individualised or group classroom activities. This was different at times when the teacher dominated the classroom instruction processes. When he dominated the teaching, students were rarely given opportunities to share their existing learning experience. As a result the evaluation of teacher's instruction processes was done mainly during the conclusion of the instructional topic. The teacher ended the lesson by either summarising it through questions and answers method, or presenting diagrams, asking students to describe them or providing take home assignments which were to be done individually or in a group of a specified number of students. The teacher's evaluation of classroom instruction was to be based on the students' feedback in terms of achievement in activities provided, the responses from the questions asked, and/or their involvement in the classroom processes.

Opportunities in the implementation of LCT approach

The findings suggested three main instructional opportunities which if well-utilised could have influenced effective implementation of LCT approach. The instructional opportunities included teacher's academic and professional qualifications with extensive teaching experience; teacher's understanding of how best LCT could be implemented and the school instructional environment. The researcher considered Sigimba's academic and professional qualifications and experience as opportunities in the implementation of LCT. Likewise, the teacher's understanding of how to implement LCT was seen as an advantage of teacher's creativity in the instructional processes. Moreover, the findings showed that LCT could be implemented effectively if the teacher was creative enough to use both out-door and in-class instructional environments. The school environment provided the teacher an opportunity to design and make a variety of classroom instructional resources such as models, globes, maps and colours. The teacher could have used students to collect different natural and artificial materials which they (teacher and students) thought important and relevant in making instructional resources with respect to different instructional topics.

Challenges in the implementation of LCT approach

Results from all three research instruments suggested two major challenges including the language barrier and lack of teaching and learning resources.

Language

During classroom instruction, those students who volunteered to share their experience were struggling to find the appropriate way of expressing their thoughts regarding the subject matter. Some students did not volunteer to say what they knew about a particular concept. However, when the teacher asked those students to give their comments on certain concepts, they gave varied explanations about the respective concepts. This suggested that students felt shy to share their conception of the concepts despite their understanding of those concepts. This also implied that students were unable to present their ideas using English. Enhancing effective students' involvement, the teacher had sometimes to code-switch and code-mix between Swahili and English as he described the subject topic.

Sigimba stressed:

Many students feel ashamed to get involved in the discussion by sharing their thoughts and experiences regarding the subject matter. This is sometimes contributed to by language incompetence amongst students. Students have poor English language background from primary school.

Student's failure to express effectively in English increased teacher domination of classroom instructional processes which subsequently hindered the implementation of LCT.

Teaching resources and facilities

The findings demonstrated an acute shortage of classroom instructional resources and facilities such as text and reference books and instructional models. This problem was emphasised when Sigimba lamented: "the school has no library, no books, no laboratories and the classes are always overpopulated. We also don't have electricity. These are critical challenges in my school". It appeared that limited

instructional resources adversely affected the teacher's classroom instructional practices.

Summary of Sigimba's descriptions

Sigimba presented multiple understandings of LCT. He defined LCT based on the transfer of instructional authority from the teacher to the students. According to the teacher, LCT requires students taking charge of their learning under the teacher's facilitation. He reported that his pedagogical decision-making was underpinned by the need to adhere to the instructional objectives as guided by the subject syllabus and syllabus materials. His teaching was affected by such factors as classroom overpopulation, availability of and application of instructional resources, and classroom organisation and management. Other factors included the nature of instructional topics, time and English proficiency amongst students. Teacher's classroom evaluation was determined by students' achievement of classroom instructional objectives. The teacher used evaluation artefacts such as tests, individual and group-based assignments, and students' level of participation and reflection on classroom activities including reactions to oral questions. The teacher was pessimistic regarding the implementation of LCT suggesting that the method was imposed by western countries without consideration of Tanzania's real instructional contexts.

Research site one findings description summary

Despite teachers' contested nature of what it means by LCT; they all perceived LCT in terms of students' involvement in the classroom processes. Marco, Agape and Sigimba viewed the students' prior experience that they brought with them as constituting a significant catalyst in the knowledge construction process. Guided by the subject syllabus, all teachers demonstrated similar pedagogical decision-making during the planning process. Regarding teachers' teaching practices, cases studies experienced similar instructional contexts in terms of class sizes, limited instructional resources and students' lack of English proficiency. However, the difference in instructional practices depended on the individual teacher's creativity, choice of instructional methods and classroom organisation and management strategies. Teachers' evaluation of classroom instructional practices were underpinned by such

factors as; students' performance in the tests, individualised and group assignments and their level of involvement in classroom activities including answering and asking oral questions. The findings showed teachers involved students more in the evaluation process during the beginning and conclusion of the lessons. They used the evaluation results to improve their teaching practices. More often, teachers' teaching practices were characterised by teacher-centred instructional methods such as lecture and teacher controlled questions and answers methods. Teachers' account for the instructional methods used based on the existence of instructional challenges such as large classes, curriculum overload vis-à-vis instructional time, limited instructional resources and lack of English proficiency amongst students.

Contextual descriptions of research site two

Research site two is a publicly owned secondary school comprised of both ordinary level (OL) and advanced level (AL) students. It constitutes day, ordinary level students and a boarding option for advanced level students. The former attend school during the day while living with either parents or guardians. The latter, students are provided with boarding services including food and accommodation throughout the two year study period. While advanced students are enrolled from across all regions in the country, ordinary level students are enrolled from the Iringa Municipal frontiers. However, due to some unavoidable reasons which may include parental care, medical and financial implications, students from other public day secondary schools across the country may be transferred to this school following approval from the relevant educational officials. The school has a total of 19 teachers who specialise in geography. Out of these teachers, only seven teach in both ordinary and advanced level classes. Six teachers were allocated to teach other subjects, and the remaining six were on study leave.

Description of case study four (Amos)

Amos is a male teacher with four years of teaching experience. He holds a Bachelor of Arts degree with Education majoring in geography and history. According to the teacher, he was allocated to teach both subjects to both levels- OLs and ALs. He taught geography to ordinary level students and history in advanced level students. He had a total of 40 lessons of 40 minutes each week for both subjects. According to the teacher, he had 32 geography lessons a week for ordinary level and 8 history lessons a week for advanced level.

Teacher's understandings of LCT approach

Amos demonstrated a varied understanding of what is meant by LCT. Teacher's understanding of LCT focused on providing opportunities for students to participate actively in classroom activities and promoting students' confidence. Responding to the question which sought his understanding of LCT, Amos noted: "LCT is when most of the activities in my classroom are done by students and my role as a teacher

is to guide students to meet the learning objectives as outlined in the subject syllabus”.

Teacher’s pedagogical reasoning during the planning process vis-à-vis LCT

Findings showed the teacher’s planning process of classroom instruction to be underpinned by numerous factors. Factors that guided teacher’s decision-making ranged from an assessment of students’ needs, subject topic content, and instructional objectives. Other factors included availability of instructional resources, selection of appropriate instructional methods and strategies, consideration of students’ classroom activities, assessment tools and activities, and instructional time for each subject topic. Findings from the interview sessions revealed that during planning for classroom instruction, Amos considered mostly the lesson objectives, students’ classroom activities and available instructional resources. Findings suggested also teacher’s use of various instructional assessment tools and activities. They included individualised and group assignments, oral questions and answers, weekly and monthly tests, and field based projects. The teacher reflected on his instructional practices based on students’ achievement in the respective assessment activities. “I improve my planning and teaching according to the type of feedback I get from my students”. Amos asserted.

Teacher’s teaching practices vis-à-vis learner-centred teaching beliefs

Teacher’s teaching practices looked similar across the three observation sessions. Amos used similar instructional procedures and methodologies presenting slight differences from one topic to the other. The instructional topics observed included: the hydrological cycle, the importance of water, and water management strategies. In the first lesson, the class was active since lesson presentation was in the form of student groups, questions and answers, and the use of diagrams to show some processes in the Hydrological cycle. The later observation sessions were evidenced by the teacher dominating the classroom processes. In these classes, the teacher presented the instructional topics using mostly lecture and question and answer methods. Whenever the student struggled to conceptualise a particular concept, the

teacher interrupted the student by explaining the concept and then continued lecturing or asking some other questions.

However, it was observed that in all the three observation sessions, Amos began the topic by first asking students for some feedback regarding the previous topics. Amos clarified students' responses before he introduced the new instructional topics. According to the teacher, practices of the previous topic served two purposes namely: ensuring students were clear with the past topic in order to connect well with the new topic and creating a classroom atmosphere to support effective instruction of the new topic. The teacher argued that it was important to know how well students grasped the skills and knowledge of the just-completed topic in order to find appropriate pedagogical methodologies for the new instructional topic. The reason for this, according to the teacher, was the fact that topics in the syllabus were organised based on their similarities and relationships. More importantly, seeking students' level of knowledge acquisition of the previous subject topic and including their existing experiences in the new topic served the need to attract students' attention at the early stage of classroom instruction. The teacher suggested that it was useful to create classroom readiness for productive classroom instruction processes. He explained further that understanding students' knowledge of concepts and principles of the previous subject topic was significant in assessing some critical pedagogical approaches for the new topic.

According to the first lesson on "the hydrological cycle", Amos followed the following procedures:

- (a) He introduced the lesson by outlining the instructional objectives on the concept of hydrological cycle;
- (b) He outlined instructional aspects on the subject matter which included: processes involved in the hydrological cycle (evaporation, condensation, and precipitation), solar energy and its role in the hydrological cycle, role of water bodies and vegetation in the hydrological cycle, and measurements and recording of forms of precipitation;
- (c) He randomly formed ten discussion groups by asking students to count numbers from one to ten repeatedly. This automatically formed five groups with nine students each and five groups with eight students each;

- (d) He provided each group with one different question to discuss in ten minutes before each group presented to the whole class;
- (e) He moved from one group to another facilitating students in their discussion;
- (f) After group discussion, each group presented the discussion reports using the group representative;
- (g) The teacher provided volunteering students opportunities to challenge the report by asking questions, answering questions, and giving some clarification about issues discussed in the group report;
- (h) The teacher clarified and summarised reports from each group presentation;
- (i) The teacher hung on the front wall the diagram showing the hydrological cycle and asked students to observe and reflect about it;
- (j) He asked students different questions regarding the processes involved in the hydrological cycle. Questions included: what role does solar energy play in the hydrological cycle?; what might happen in the hydrological cycle if there were no vegetation?; and how do water bodies influence the hydrological cycle?;
- (k) The teacher appointed volunteering students to respond to the questions;
- (l) Based on the teacher's notes and subject syllabus, the teacher concluded the lesson by summarising students' ideas;
- (m) The teacher then wrote the notes on the blackboard and asked students to copy them for their references;

Following the classroom instruction procedures presented, it was evident that students were involved in the instruction processes in different ways. They shared their ideas and experiences through group discussion, presenting, asking, and answering questions about the hydrological cycle. Students were also involved in observing and conceptualising the diagram showing hydrological cycle processes. However, it was also important to note those students who did not volunteer to discuss, present, answer, and ask some questions. According to Amos, it was normal for some students to not take part in the lesson. The teacher commented that students who did not actively involve themselves in the lesson did not mean they did not understand the specific lesson. He reported that some of those silent students during classroom instruction were those who outperformed the actively participating students in any assignment, test or examination provided.

Findings from classroom observation were backed up by those collected through interview and teacher's teaching portfolio. For example, when asked how he applied LCT approaches, Amos stated: "I mostly take my students to sites for project activities. I sometimes also organise tour visits where my students get familiar with the physical environment". According to the teacher, both project activities and tour visits were important as they made students connect what they learn in the class with the reality from the practical viewpoint. He suggested that he normally used group discussion, questions and answers, and some geographical models. Amos accounted that these instructional methods necessitated students to participate effectively in the lesson. Portfolio findings revealed also that teacher's instructional practices were determined by the instructional objectives of the subject topics, the availability of teaching and learning resources, student performance, and more importantly the subject syllabus.

Classroom observations of the other two lessons were teacher-centred in instructional approaches. Lecture, questions and answers approaches dominated the teacher's teaching practices. In these lessons, Amos taught topics about: the importance of water and water management strategies. In both lessons, Amos followed the following procedures:

- (a) He began the lesson by asking students feedback on the previous lesson. He asked questions relating to the hydrological cycle such as: who can explain to us how the hydrological cycle takes place?; what is the role of solar energy in the hydrological cycle?; how can depletion of vegetation affect the hydrological cycle?; what is the role of human being in the sustainability of the hydrological cycle?; how do processes in the hydrological cycle relate to one another?; and what is the socio-economic importance of water?
- (b) The teacher asked students who wanted to respond to any question to raise their hands up before he could appoint them;
- (c) The teacher appointed volunteering students to reflect on the questions asked. He clarified more students' reflections;
- (d) The teacher presented the new lesson using mostly lecture method and some few questions to check students' understanding;
- (e) He read and explained his lessons notes to students; and

- (f) After completing explanations, the teacher wrote the notes on the blackboard where students had to copy them in their exercise books for reference.

It was observed that few students volunteered to ask and respond to questions. Many of them just kept quiet, listening attentively to the teacher and students as they clarified concepts and ideas about the topics. It was observed that those students who volunteered to answer or ask questions were struggling to structure their thoughts in correct phrases and sentences. It was apparent that students lacked English grammatical and structural knowledge and skills. Students made several grammatical and structural errors as they communicated their thoughts. It was observed that the teacher himself was not fluent in English. The teacher sometimes had to code-mix and code-switch between English and Swahili. According to Amos, code-mixing and code-switching necessitated students to easily understand the concepts and ideas of the subject topics. He further maintained that code-mixing and code-switching was especially important in the lower classes since students in those classes did not speak English fluently. Hence, he had to shift to Swahili which was spoken and understood by most of the students. According to the teacher, it was difficult for students to understand the concepts when taught in English. The teacher explained that when the same concepts were explained using the two languages, they were easily and well understood by the majority of students.

The teacher commended that, code-mixing and code-switching was also influenced by a lack of teaching resources. He had the opinion that if there were enough teaching resources they could have prompted students' curiosity and provoked them to communicate their thoughts regarding some conceptual issues in the respective topics.

Teacher's evaluation of classroom instructional practices vis-à-vis LCT approach

Findings demonstrated teacher's application of varied evaluation approaches. However, in all the evaluation approaches, it was shown that students' achievement in the instructional objectives formed the teacher's central evaluation focus. Amos evaluated his instructional practices based on how the students were able to do classroom activities, how students were able to reflect on the instructional topics

through questions and answers, performance in their individualised assignments, and their ability to write and demonstrate field reports. According to the teacher, weekly, monthly tests, and term examinations also formed evaluation artefacts. When asked how he evaluated his instruction practices, Amos noted: “I usually use assignments and tests to determine whether my students met the learning objectives or not. When objectives are not met, I alternatively work using other learner-centred teaching methods.”

Amos outlined the alternative teaching methods that he applied. These instructional methods included lecture, group discussion, questions and answers, demonstration, field trips, and the use of instructional models. He commented that using alternative instructional methods motivated students’ participation in the instructional practices thus attracting classroom attention needed for effective instructional practices. Responding how he assessed the achievement of classroom instruction, Amos said “I examine the ability of students to perform authentic tasks, to interact and answer questions correctly.” The teacher had the opinion that there were no alternative ways to examine his quality of classroom instruction other than considering the extent of students’ academic competence achieved within the taught subject topics. The teacher further argued that given the classroom tasks, students’ degree of participation in answering and asking questions, their demonstration of specific skills and knowledge about geography concepts and principles, he was able to gauge his instructional successfulness. According to the teacher, he consequently had to moderate his teaching practices based on the students’ academic progress.

Similarly, findings from the review of the teacher’s teaching portfolio suggested the teacher’s reliance on students’ instructional achievements in the respective instructional topics. For example, based on teacher’s evaluation of schemes of work and lesson plans, it was found that both schemes of work and lesson plans showed the types of learning competencies that were to be enhanced by students, the use of the proposed teaching and learning facilities and utilisation of the assigned time and the application of the proposed teaching and learning methods such as questions and answers, group discussion, simulation, and outdoor instructional activities. All these pedagogical approaches were directed to the students’ achievements in the subject.

Opportunities in the implementation of LCT approach

The study found that the teacher's educational qualifications, his teaching experience and understanding of LCT approaches meant he was well-qualified and able to implement LCT approaches. Other attributes included the teacher's positive attitude towards LCT and the school environmental context which provided opportunities for teacher and students to improvise some instructional resources such as colours, maps, and instructional models.

Challenges in the implementation of LCT approach

According to the findings, it was observed that the teacher's teaching practices were constrained by three main challenges including the students' incompetence in speaking English, overcrowded classes, and limited funding for field and project activities. During classroom observation, it was noted that when students were given opportunities to share their experiences regarding some aspects in the instructional topic, volunteering students struggled to present their thoughts. The teacher also revealed that most students especially in the lower classes had not mastered spoken English. As such, many of them felt shy to share their experiences in the instruction processes since they were unable to communicate in English. Amos further noted that even when he thought of engaging students in the instructional processes, he was challenged by lack of space due to overcrowded classrooms. According to the teacher, he always taught a class of more than 80 students. When asked about engaging students through alternative instructional approaches such as field visits; he observed that outdoor activities like field tours, projects and the invitation of guest speakers had some financial implications and the school management did not support those forms of study. Insisting on the type of challenges he faced, Amos lamented:

As a geography teacher, I face serious challenges that hold back my progress in the implementation of learner-centred teaching approaches. There aren't enough trips because of financial difficulties. My class is overcrowded; I teach classes of over 80 students. It is hard to let all learners share their lived experience in the construction of knowledge.

According to Amos, he sometimes had to organise funding himself and the students something which was not perceived positively by the school management and the

students' parents. The teacher argued that the classroom instructional context did not support effective implementation of LCT approaches.

Summary of Amos' descriptions

Amos presented an understanding of LCT based on learners doing most of the instructional activities under the teacher's guidance. According to Amos, teacher's pedagogical decision-making processes in all stages needed to reflect students' classroom activities based on the instructional objectives as guided by the syllabus. Amos' teaching practices considered therefore such factors as: the instructional contents; teaching methods and resources; classroom capacity; and students' classroom and outdoor activities. The teacher's teaching practices varied from topic to topic consequently affecting the level of students' involvement in the same way. Amos used teaching methods such as lecture, group discussion, individualised assignments and fieldtrips. His evaluation of classroom instruction was underpinned by students' level of involvement in the classroom activities and their performance in the evaluation artefacts such as individual and group assignments, tests, terminal examinations and the quality of students' project reports. The teacher perceived large classes, students' lack of English proficiency and limited financing for fieldtrips challenged his effective implementation of LCT approaches.

Description of case study five (Daniel)

Case study five was of a teacher with four years of teaching experienced who held a Bachelor of Arts degree in education majoring in geography and political science. Daniel was assigned to teach geography in ordinary level classes and general studies in the advanced level classes. He had 32 geography lessons and 4 general studies lessons a week. In total, the teacher had a weekly teaching load of 36 instructional periods of 40 minutes each. The teacher was greatly concerned with his weekly teaching load which he experienced to be too big to facilitate effective classroom instructional practices.

Teacher's understanding of LCT approach

Daniel's understanding of LCT was underpinned by students taking charge of their learning through group discussion, question and answers, and doing some

individualised and group classroom tasks. According to the teacher, his role as a teacher was to guide students as they performed classroom activities.

Following the question which sought to gain an understanding of LCT, Daniel asserted:

To me, learner-centred teaching is when my students have enough time to discuss, ask and answer questions. It is when I guide them to construct the knowledge of the subject matter and getting their own prepared learning notes. With this approach, my students find things they learn more real and practical.

Daniel's thoughts about LCT centred on observing students doing more classroom activities in the teaching and learning process than the teacher did. According to him, it is only when students are engaged in the classroom activities that they can integrate their own prior knowledge in building new understandings of the subject matter topic. He believed that students' prior knowledge about the topic was important in enhancing effective classroom discussion and in the performance of individual classroom tasks.

Based on the findings, it appeared that the teacher's understanding of LCT was multidimensional in that his understanding of LCT was reflected within the broader understanding of different variables about LCT approaches. Teacher's understandings of LCT raised issues such as knowledge construction processes in a learner-centred classroom, the instructional environment, the role of both the teacher and students in the teaching and learning process and the teaching and learning methods and strategies.

Teacher's pedagogical reasoning during planning process vis-à-vis LCT

Findings from all research instruments reported Daniel's planning of classroom instruction practices considered aspects such as: the topic of instruction and its instructional objectives; instructional resources available; teaching and learning methods and strategies; and the class sizes. The other instructional aspects considered included students' classroom activities and instructional assessment tools. These pedagogical decision-making factors corresponded to those outlined in the geography syllabus. Augmenting his consideration of these factors, Daniel said

teaching needed to comply with the subject syllabus requirements. According to the teacher, both internal (school) and external (national) assessment of instructional practices were underpinned by students' achievement based on the instructional objectives outlined in the subject syllabus. The teacher narrated that internal tests and term examinations, and the national examinations were developed across the topics in the subject syllabus. Students' performance in those assessment tools determined teacher's instructional effectiveness and thus the teacher modified his teaching accordingly.

When asked what his considerations during planning of classroom instruction were, the teacher said: "during planning for classroom teaching, among other aspects, I consider the students classroom tasks, teaching and learning resources and facilities, and the teaching and learning methods."

According to Daniel, the instructional topic, the class size, and the availability of instructional resources determined both the teaching and learning methods to be used and the type of students' classroom activities.

Findings from the teacher's portfolio review reported that all the schemes of work, lesson plans, action plans, and the teacher's reflection on the lesson achievement were based on students' achievement with regard to the subject syllabus requirements. For example, schemes of work stated what type of learning competencies needed to be enhanced to students, proposed the teaching and learning resources and instructional methods to be used, lesson planning reflected students' needs in a collective manner- lesson objectives were stated as: "at the end of the lesson, students should understand the concept of water, importance of water and water management strategies."

Teacher's action plans, bank of questions and students tasks were other aspects prepared based on the subject syllabus and expected instructional objectives of different subject's topics. Based on the findings, it could be argued logically that teacher's pedagogical decision-making during planning of classroom instruction depended on a range of instructional factors. Of most significance, is that, his instructional decision-making was strengthened by the mandated subject curriculum and syllabus requirements.

Teacher's teaching practice vis-à-vis LCT beliefs

Based on the findings from the interview sessions, classroom observation, and teacher's teaching portfolio review, it was attested that Daniel's teaching practices were flexible in nature. The teacher's teaching practices changed with time, space, and across classroom instructional topics. His teaching orientation was dynamic in approaches from teacher-centred to student-centred. This dynamism in teaching approaches was experienced within a single subject topic and between topics. In his teaching practices, Daniel was observed applying instructional approaches such as: group discussion, question and answer, lecture methods, and provision of students' individualised take home assignments.

Daniel was observed in three classroom instruction sessions. In these sessions, he taught topics on: the importance of water for socio-economic development, the hydrological cycle, and water management strategies. The first lesson on the importance of water was facilitated using mostly group discussion and question and answer instructional approaches. The teacher used lecture method and in some intervals question and answers to teach topics on hydrological cycle and water management strategies. In the first two topics –the importance of water and the hydrological cycle, the teacher concluded the lessons by summarising important issues. In the third topic on water management strategies, the teacher ended the topic by providing students with an individualised take home assignment. The assignment required students to find out the types of water management strategies employed in their localities.

In the first lesson for example, Daniel introduced the lesson following these procedures:

- (a) He outlined the instructional objectives which included building students' understanding of the importance of water resources for economic development;
- (b) He formed eight discussion groups of approximately ten students each;
- (c) He distributed each group with an activity for discussion. He asked group members to appoint group leaders including chairperson and secretary. While the group chairman managed the discussion ensuring equal and fair

participation amongst the group participants, the secretary was in charge of taking summaries from the group contributions. The group was also responsible for appointing group representative for presentation of the discussion report. The group activities ranged from conceptualising water resources to identifying water resources, the importance of water resources, challenges hindering the effective harnessing of water resources for economic development, and the country's future prospects of water resources;

- (d) He walked around the group seeming to facilitate group discussion as students discussed their assigned activities. Following the mini-interview designed to reflect on the classroom processes, the teacher accounted for his facilitation of group discussion aimed to clarify some students' reflections guiding them towards the instructional objectives;
- (e) After 15 minutes of group discussion, the teacher invited group representatives to present their reports before the class. Each group was provided with three minutes for presentation;
- (f) The teacher invited students to reflect on each presentation. Volunteering students were given opportunity to contribute their thoughts either by asking or answering questions;
- (g) The teacher gave some more clarification about students' reflection on the economic importance of water and its associated socio-cultural and political merits; and
- (h) The teacher summarised the lesson by accentuating the main ideas regarding the topic of water and its importance in socio-economic development.

Generally, the classroom atmosphere was good. There was enough classroom interaction between the teacher and students and among students themselves. Through group discussion and reflection from the group presentation, many students shared their experiences of water resources and their socio-economic, cultural and political importance from their localities. The teacher provided students freedom to ask and answer questions about water resources. He made clarification of students' reflection while strengthening their understanding of water resources from their localities. These interactive teaching approaches such as group discussion, questions and answers, and reflective practices made the class active and interesting. Unlike the first lesson, findings from the other two lessons demonstrated teacher's

classroom dominance. The lecture method prevailed in most of classroom instruction time. It was only at some intervals and especially during introduction of the lesson when questions and answers were used to arouse students' participation.

In the session on the hydrological cycle, Daniel began the lesson using questions and answers in order to explore students' prior understandings of the topic. He followed the following procedures:

- (a) He asked students questions about forms and processes of precipitation, relationships between water bodies, vegetation and hydrological cycle, and measurement and recording of precipitation data;
- (b) Daniel randomly appointed volunteering students to comment on what they understood about the processes in the hydrological cycle; and
- (c) Volunteering students described some hydrological cycle processes including evaporation, condensation, saturation, infiltration, percolation, and evapotranspiration.

It was observed that some students volunteered sharing their experiences regarding the hydrological cycle. Students' experience regarding the hydrological cycle was justified by the way they explained the concepts and showed the relationships between concepts and human activities. Students presented the relationships that exist between the concepts and human influence on the sustainability of the respective hydrological cycle processes. Sharing an understanding of the hydrological cycle, one student observed:

There must be an interdependent nature of these hydrological cycle processes that sustain the cycle. My opinion is that in any process such as: evaporation; transpiration; condensation; and precipitation, man is responsible for change of these processes hence affecting the hydrological cycle.

According to this student, human activities accelerated or inhibited the hydrological cycle processes and thus determined the nature of the hydrological cycle itself.

Though students tried their best to share their experiences regarding water cycle, most of the volunteering students were unable to make clear and correct communication of their thoughts. This suggested students' inability in the oral English language. It was also noted that when a student failed to find the relevant

terminology, the student had to code-switch and code-mix between English and Swahili in order to present his or her idea.

The teacher narrated the importance of each component in the hydrological cycle using his notes added up by a diagram drawn in the manila paper hanging on the front wall of the class. Students observed and drew the diagram as part of their lesson summaries.

Likewise, in the topic on water management strategies, the lesson seemed to be one directional- teacher-centred in practice.

- (a) Daniel introduced the lesson by outlining some water management strategies which included: introduction of water management regimes, agro-forests practices, water management agricultural techniques such as zero grazing, organic cultivation, and sedentary cultivation. He insisted to the students that those were issues students needed to understand in that instruction period. Students jotted down the instructional objectives as they listened to the teacher;
- (b) Guided by lesson notes, the teacher explained all the aspects regarding water management strategies;
- (c) At some intervals in the lesson, Daniel asked students some questions in order to assess their understanding on the subject matter;
- (d) The volunteering students shared their experiences about water management strategies followed in their localities. They mentioned strategies such as: the introduction of bylaws about land and water use, land use planning for settlement, agriculture including livestock keeping, and reserve areas. Other water management strategies included: afforestation, and avoidance of cultivation and grazing along river basin and water catchment areas, and introduction of water user fees;
- (e) Daniel narrated all aspects of water management strategies before he provided students with an individualised take home assignment. This assignment asked students to identify water management approaches adapted from their communities.

Classroom observation findings were supplemented by those collected through interviews and teacher's teaching portfolio review. When asked how the teacher perceived LCT, Daniel noted: "it is approach which takes a lot of time. With our teaching and learning environment, relying on learner-centred teaching methods makes very difficult completing the curriculum within time frame." The teacher had the view that the syllabus was too overloaded to be covered within the specified time. He experienced that he sometimes had to use extra time especially during night hours just to ensure students covered the main topics according to the national examinations set up. According to the teacher, using LCT required more time and depended on the availability of instructional resources which according to the teacher were very scarce. When asked how he applied learner-centred approaches in those instructional contexts, the teacher stated: "I provide my students with specific activities to work on by themselves either individually or in groups. I monitor each individual and groups to make sure the learning objectives are met".

According to the teacher, he was concerned with ensuring that all students grasped the instructional objectives as guided by the syllabus.

Teacher's evaluation of classroom instructional practices vis-à-vis LCT

According to Daniel, his efficiency and effectiveness in the classroom instruction was determined by students' performance in the respective subject topics in particular and general performance in the subject. The teacher's evaluation of classroom instruction involved assessment of students' involvement in discussion groups, the level of sharing their experiences about the subject topics, students' ability to ask reflective questions and answer questions logically, and students' performance in tests and individualised take home assignments. The teacher shared that his instructional practices were reflected in students' change of behaviour in their learning processes as proposed by the subject syllabus. He commented that it was necessary to ensure that the instructional objectives were met by students. According to Daniel, his evaluation thus needed to be tailored to that course.

When asked how he evaluated his classroom instructional practices, Daniel observed: "I use questions and answers; I provide assignments and tests with immediate

feedback”. The teacher reacted to the similar question which asked how he assessed the achievement of his classroom instruction that: “I assess my success in the teaching processes by examining students’ performance on tasks given and their ability to theorise and recall the formal tasks provided”.

The kind of teacher’s assessment of his classroom instruction practices implied that students’ involvement and performance in the subject topics formed the teacher’s underpinning assessment criteria. The teacher explained that before he could make classroom instructional decisions for the topic, he first identified student instructional needs. According to Daniel he diagnosed students’ instructional needs by administering questionnaires and interview checklists to students to find out the difficulty areas. He also assigned tests and checked students’ feedback regarding the subject matter.

Findings from the classroom observation supported those from the interview sessions. During presentation of instructional topics, it was observed that Daniel alternated between instructional approaches from lecture method to questions and answers, group discussion, and provision of some supervised classroom tasks. Daniel sometimes concluded the topic by assigning students with individualised take home assignments. According to the teacher, he used students’ feedback from these assignments to assess and shape his classroom instruction processes accordingly. The same evaluation approach was also attested by findings from the teacher’s teaching portfolio. Portfolio findings such as schemes of work and lesson plans presented different types of learning competencies that were facilitated to students. Classroom instructional objectives were stated in the lesson plans as follows: “At the end of the lesson, students should understand the concept of water, importance of water and water management strategies”.

This meant that the teacher’s instructional effectiveness was examined with respect to students’ conception of water, its importance and management strategies. This was also the reason why teachers’ reflection on the lesson achievement based on students’ performance on the classroom tasks, individual assignments, weekly tests and their overall involvement in the instructional processes.

Opportunities in the implementation of LCT approach

Based on the research findings, Daniel's extensive experience and mastery of both the concepts and principles, and the pedagogical aspects of the subject formed one among the instructional opportunities necessary for implementation of LCT approaches. According to interview schedules, the teacher presented a depth of understanding of the subject matter. He demonstrated how he linked examples of geographical phenomena across subject disciplines. According to the teacher providing students with case studies and examples across different subject disciplines facilitated students' better understanding of the subject and ability to associate and transfer knowledge from one subject to another. The teacher also showed his understanding of LCT and how he ought to facilitate it. He stated that different from the teacher-centred teaching, in LCT, the teacher needed to provide students with learning autonomy where students had to take charge of their learning under the teacher's facilitation.

Challenges in the implementation of LCT approach

Daniel's teaching practices were challenged by some factors including shortage of geography teachers, lack of teaching resources and facilities, students' inefficiency in spoken English, and classroom overpopulation. The teacher explained that due to shortage of geography teachers, he had a big weekly teaching load which affected his pedagogical decision-making processes and practices. He asserted that the big teaching load he had did not only affect his pedagogical decision-making and practices but also affected the planning for and preparation of instructional resources and outdoor activities. According to the teacher, he always taught large classes of up to 90 students. The teacher experienced that it was very difficult to engage every student in the instructional processes let alone the fact that the school had acute shortage of instructional resources and facilities. In his own words, Daniel lamented:

My class is too big to allow to follow-up with each student. There are also scarce teaching and learning resources and facilities such as textbooks, geography laboratory equipment as well as teaching and learning models. As such, I have sometimes to improvise the teaching and learning models from the surrounding environment. This is a very time consuming activity.

Daniel experienced such a classroom instructional environment as posing a big challenge in his pedagogical decision-making and instructional processes. According to the teacher he had to choose either implementing LCT while risking timely completion of the subject syllabus or otherwise, employing teacher-centred instructional approaches ensuring that the syllabus and its instructional objectives were addressed accordingly. The teacher observed that it was shame for a teacher whose students failed the national examinations just because the teacher did not finish the syllabus in time. He pointed that every teacher's target was to ensure he/she complete the syllabus in some months before students set for their examinations. Timely completion of the syllabus made teachers get enough time for revision especially in the difficult instructional topics.

Another critical instructional challenge was the observed students' lack of English proficiency especially spoken English. Students' inability was experienced when the teacher used a question and answer approach to provoke students' understanding of the hydrological cycle and its processes. Though many students volunteered to reflect on the processes, many of these students seemed to struggle presenting clear and correct communication of their thoughts. Students spent some minutes searching for the right expressions to share their ideas. It was also found that a student code-switched or code-mixed between English and Swahili in order to make clear what he/she wanted to say.

Summary of Daniel's descriptions

Daniel's understanding of LCT was reflected within the broader understanding of different variables about LCT approaches. The teacher's understanding of LCT raised issues such as students' knowledge construction, the instructional environment, the role of both the teacher and students in the teaching process and the instructional methods and strategies. Daniel's pedagogical decision-making during planning considered factors such as the instructional contents, instructional resources and facilities, classroom capacity and students' classroom activities. Other pedagogical issues included instructional methods and objectives as directed by the subject syllabus. The teacher's teaching practices changed from topic to topic and depended on the class level and size. His teaching orientation was therefore dynamic in approaches from teacher-centred to student-centred. He mostly applied

instructional approaches such as lecture methods, question and answers, and provision of individualised take home assignments. He sometimes used group discussion methods to influence students' involvement in the teaching practices. Regarding teacher's evaluation of classroom instructional practices, the teacher reported to focus on the students' achievement of instructional objectives as per syllabus guideline. He used evaluation tools such as assignments, tests, and term examinations. He also assessed classroom instruction based on the level of students' participation in the classroom activities. Daniel however was concerned with the acute shortage of teachers, teaching and learning resources including the computers and internet facilities, lack of text and reference books and inadequate infrastructure such classrooms.

Description of case study six (Frida)

Case study six included a female teacher with four years of teaching experience in both geography and history. Frida had a Bachelor of Arts degree in Education majoring in geography and history. According to the teacher, she was assigned to teach both geography and history in the ordinary level classes. She had a total of 48 classroom instructional periods weekly teaching load. She was assigned 32 geography periods and 16 history periods. According to the teacher, she liked applying LCT in the classroom instructional processes. The teacher commented that LCT involved the teaching methods that positioned the learner at the centre of classroom instruction. She reported that teaching ought to integrate learners' experiences by actively involving students in the teaching processes.

Teacher's understandings of LCT approach

Frida understood LCT as a teaching approach whose teaching and learning is directed to the student. The teacher believed that in learner-centred teaching, teacher's teaching practices needed to be directed towards achievement of the specific instructional objectives identified in the subject syllabus and thus the lesson plan.

In her own words, Frida presented her understanding of learner-centred teaching as:

Learner-centred teaching is teaching methods that place students at the centre of classroom instruction by involving learners in the teaching and learning processes. But with the nature of my classes and unavailability of learning resources I prefer using direct instruction because it saves time and I meet my curriculum objectives in time.

Frida's perception of LCT implied that understanding and implementation of LCT approach was determined by multiple factors. These factors according to the teacher may include: teacher's teaching load, teaching and learning resources and facilities, subject syllabus instructional time, classroom activities, instructional assessment tools, and consideration of class sizes. Based on the teacher's perception and experience, these factors seemed to be vital in the understanding and implementation of LCT approaches.

Teacher's pedagogical reasoning during the planning process vis-à-vis LCT

Based on the findings, it was noted that Frida's decision-making during planning for classroom instruction was determined mainly by the subject syllabus guidelines and the students' learning needs. Frida's instructional decision-making considered the pedagogical content knowledge aspects as outlined in the syllabus. These pedagogical content knowledge aspects included: the instructional topic and its objectives, instructional methods and resources, both teacher and students' classroom activities, and the instructional assessment methods.

According to Frida, she had to think about each topic of instruction in a diverse way. She reported that in each instructional topic, the syllabus outlined the expected students' learning competencies to be achieved. The learning competencies according to the teacher formed the instructional objectives of that particular topic. The teacher pointed out that given the class size, the instructional topic among other aspects determined the instructional resources and instructional methods and strategies. However, according to the teacher, the syllabus proposed the instructional methods, strategies and resources for each instructional topic. The teacher accounted that each instructional topic varied in terms of content and thus the type of teaching methods and resources supposedly to be applied. The teacher further commented that

it was the instructional topic and instructional methods and resources which eventually determined teacher's and students' classroom activities. When asked her consideration during planning for classroom instruction, the teacher very briefly asserted: "I consider teaching and learning resources as well as students' classroom tasks such as assignments and tests".

The teacher however, was concerned with teaching in large classes suggesting that it was hard to think about the classroom activities which would attract the active involvement of all students. Frida pointed out that due to larger classes she ended up designing large classroom tasks whose close follow up and management was not effective. According to the teacher, she had sometimes to think about individualised take home assignments which when implemented, took a long time to mark and get feedback to students.

Teacher's teaching practice vis-à-vis LCT beliefs

Findings regarding Frida's teaching practices suggested her mastery of geography concepts and principles than the pedagogical component of the subject. During classroom observations, the teacher facilitated three different topics including: Factors influencing agricultural development in East Africa, farming systems practiced in East Africa, and forestry in East Africa. Based on the findings from all research instruments, it was evident that the teacher had a good grounding of the subject knowledge. This was justified by the way she thought about and practiced teaching the subject by integrating knowledge from across disciplines taking examples from different communities.

Frida's teaching practices though dictated by teacher-centred approaches were associated by multiple examples from across disciplines and communities. She provided examples of agricultural development, farming systems, and forestry activities and their impact on socio-economic, cultural, and political development from Tanzania's context, East African and African regions, and at the global level. She linked these topics and other topics such as population, settlement and urbanisation, land use management, and industrialisation. This kind of teaching made students attentively jot down some ideas presumed significant. The teacher most preferred lecture method, questions and answers, and it was in one lesson where she

employed group discussion approach. However, when interviewed, the teacher suggested using multiple pedagogical approaches. Apart from the mentioned one, other teaching approaches included involving students in site visits, project activities, and take home assignments.

Facilitating the topic on the factors influencing agricultural development in East Africa, the teacher presented the topic under the following procedures:

- (a) Frida commenced the lesson by asking general questions regarding agriculture in East Africa. She asked questions such as: who can explain to us what agriculture is all about?; what kind of agricultural activities are you and your parents involved in?; how does your family benefit from agricultural activities?; which among the crops that you have mentioned constitute the cash crops?; and what benefit do we get from cash crops and livestock keeping?;
- (b) Volunteering students responded to some questions. Students' reflections from those questions suggested their diverse understanding of agricultural activities. In their reflections, students mentioned agricultural activities such as; peasant farming, livestock keeping, and growing some cash crops such as coffee, tea, rice, pyrethrum, and so on. According to students, they got food, money, and built houses from what they harvested;
- (c) Frida explained more students' responses. The teacher then informed the students that they were going to discuss the factors that influence agricultural development in East Africa. These factors constituted the following: ecological factors, human factors, and economic situation;
- (d) The teacher facilitated students to form three groups of 34 students each;
- (e) She let each group discuss one aspect amongst the three factors affecting agricultural development in East Africa;
- (f) The teacher walked around the groups assisting students as they discussed;
- (g) After 20 minutes of group discussion, one representative from each group presented what they discussed. Issues such as land, climate, labour, capital, technological, and support services, and the national and international markets for agricultural products constituted students' observations in their discussion;

- (h) Frida clarified students' presentations using the prepared notes and subject textbook. She provided some examples of agricultural activities conducted in East Africa and the world at large. She gave examples of how cash crops such as tobacco, coffee, tea, rice, sorghum, pyrethrum, cotton and sisal boosted the socio-economic development of the respective countries. The teacher explained also how land, climate, labour, capital, technology, and support services, and the national and international markets for agricultural products affected both positively and negatively the agricultural development in East Africa and thus affecting the economies of the respective countries; and
- (i) She concluded the lesson by instructing students to read more of the Geography Course Book for Secondary Schools, Book four pages. 85-90.

During discussion, the researcher experienced a lot of noises from students. This was thought to be accelerated by larger groups which stopped some students from concentrating on the discussion. It was apparent that some students did not participate effectively in the discussion. The noises made could not provide group atmosphere for listening and understanding between and amongst students.

In the second observation session, Frida taught the topic on the common farming systems in East Africa. She observed the following procedures:

- (a) She introduced the topic by telling students what they were going to discuss- the common farming systems practiced in East Africa. These farming systems included shifting, semi-shifting (semi-sedentary), sedentary cultivation (Arable farming systems), total nomadism, stationary/zero grazing animal husbandry, semi-nomadism, and transhumance (pastoral farming systems);
- (b) Using questions and answers, Frida asked students what they knew regarding each agricultural pattern or farming system. She asked students who wanted to volunteer to share what they knew about farming systems to raise their hands up so that she could appoint them;
- (c) Frida randomly invited those who raised their hands up to provide their experiences. About 40 students out of 65 reflected the different types of farming systems and mentioned the tribes involved in each farming system; and

- (d) The teacher further explained about the topic giving additional examples especially based on the reasons why those tribes differed in the agricultural activities and the reasons why they were involved in the specific farming system and not others.

Following this observation, when the teacher gave students opportunities to share their experiences, students engaged effectively in answering and asking questions. Students reflected the subject matter from diverse experiences. Students' reflections suggested their deeper exposure and understanding of the farming systems practiced in East Africa. A few students did not volunteer in answering or asking questions. These students did not respond to either the teacher or their peers' questions even when the teacher required them to share their thoughts. The teacher concluded the topic by clarifying students' responses using examples from across farming systems. It was evident that the teacher had a good grounding of the subject topic. The questions that she asked and the way she was justifying a particular farming system motivated students to get actively involved in the instructional process.

The last classroom observation was on the forestry topic. Frida began the topic by:

- (a) Asking students what they knew regarding forestry in general. She asked students to link the forestry activities with the economic development in the East African countries;
- (b) As she clarified students' reflections, Frida insisted that forestry in East Africa included all the activities related to the establishment in the case of human-planted forests, development and exploitation of forests. She also noted that the area covered by high forests in East Africa was very small. She gave an estimation of 4.2 percent of the total land surface of the East African region while over one third of the whole region being under miombo woodlands;
- (c) The teacher ended the lesson asking students to start reading and discussing about the fisheries industry as it was the next classroom instructional topic.

The classroom instruction was characterised by direct instruction and question and answers instruction approaches. The teacher dominated the talk while students were rarely involved in the instructional processes. Students were only invited to respond

to some questions that were posed by the teacher. The teacher narrated the subject content and asked students to write down the main issues aroused by the subject topic. She instructed students to think about the uses of forests in a diverse way. The teacher noted some of the uses of forests such as: for domestic purposes as fire wood, charcoal; construction materials such as poles, lumbering activities; wildlife dwellings and improvement of biodiversity; holding of recreation activities; and facilitating administration of some cultural myths.

Frida experienced that group discussion, questions and answers as well as field visits made her students more active in class. According to the teacher, field visits helped students learn by seeing hence building an everlasting memory. The teacher presented that due to overcrowding of classrooms and lack of enough teaching and learning resources, she employed mostly lecture method and questions and answers teaching approaches. She asserted that depending on the nature of the topic, she sometimes used group discussion method, if that was the case; she considered the group sizes which were always big. She was much concerned that employing LCT could lead to failure in completing the syllabus in time. According the teacher, it was necessary to complete the syllabus in order for the students to do well in their examinations that was the mission of each subject department and the school in general.

The teacher's portfolio review suggested schemes of work and lesson plans were prepared based on the subject syllabus requirement- what type of learning competencies ought to be enhanced to students, use of the proposed teaching and learning facilities and utilisation of the assigned time and the application of the proposed teaching and learning methods.

Teacher's evaluation of classroom instructional practices vis-à-vis LCT

Findings showed Frida's evaluation of classroom instruction was based on what went on amongst students. According to the teacher, students' academic progress informed how effective her instructional practices were. The teacher suggested that based on students' instructional progress, she was flexible in her pedagogical decision-making process in order to enhance effective instructional practices. Responding to interview

questions, the teacher seemed to prefer most of the question and answers techniques to individualised and group assignments to probe students' understanding of different concepts and principles of the subject. Her preference for question and answers method was also seen during classroom observation. As she lectured a particular topic, the teacher asked questions: understood, or any questions so far? Some students replied 'yes' others 'no', and then the teacher asked any student to clarify the respective concept. Students who needed some more clarification about a particular aspect raised their hands up and the teacher gave them chance to ask or say what they wanted to share. Thereafter, the teacher either explained the concept or asked another student to reflect on the question. Sometimes the teacher used diagrams to explain more about the concept or asked a different question to the same student in a way of letting him or her connect his/her thought with what he/she wanted to know more from the respective concepts. According to the teacher, students determined her instructional practices from time to time. The teacher experienced that it was much easier to administer question and answers during the classroom instruction than it was for group discussion and individualised assignments. She observed that when she opted for group discussion and individual assignment it took a lot of time to assess students' feedback. The teacher suggested using private time for marking students' assignments which she hardly managed. She also commented that management of group discussion in an overcrowded class was also a difficult task she faced. As such she would rather opt for question and answers method which was simple and provided timely instructional feedback. When asked how she evaluated her classroom instruction practices, Frida stated: "I provide assignments and test my students and search for feedback".

Frida added that she assessed the achievement of her classroom instruction based on students' ability to reflect on the subject concepts and principles, their performance on assignments, tests, midterm, terminal, and annual examinations. This implied that the teacher's instructional assessment was influenced by the students' academic progress in the subject. As from the interview and classroom observation, the teacher's teaching portfolio demonstrated also some evidences of teacher's evaluation of her classroom instructional practices. Findings from the teacher's portfolio review showed her evaluation of classroom instruction based on students' acquisition of instructional competencies from every instructional topic.

Teacher's teaching portfolio stated instructional competencies as, at the end of the lesson:

students should demonstrate understanding of the concept of agriculture, factors influencing the development of agriculture in East Africa, the farming systems in East Africa and be able to describe the types of forests found in East Africa and locate different types of forests in East Africa. The students should also be able to state the uses of forests based on practical examples from their localities.

It was evident that teacher's reflection on her classroom instruction and lesson achievement was based on students' performance across a range of classroom and outdoor activities as guided by the subject syllabus.

Opportunities in the implementation of LCT approach

The study considered the teacher's academic and professional qualification, her understanding of LCT, students' existing knowledge of instructional topics, and instructional context as important enablers for effective learner-centred instructional practices. The findings demonstrated the teacher's wealth in both comprehension of the subject's concepts and principles and the pedagogical aspects of the subject. Frida demonstrated also extensive teaching experience in secondary schooling. It was expected that utilisation of her instructional experience and knowledge of both the subject matter and its pedagogical component could have demonstrated effective implementation of LCT approaches. Contrary to this the teacher employed direct teaching approaches in most of her instructional practices.

Challenges in the implementation of LCT approach

As outlined above, Frida's teaching practices presented different issues which seemed to challenge her instructional practices. When asked whether she faced some challenging factors in her pedagogical decision-making processes and instructional practices the teacher stated: "The class size is too big, no modern teaching facilities such as audio-visual, internet connection, projectors as well as textbooks to facilitate effective students' classroom interaction in the teaching processes".

Based on the teacher's teaching experience and her professional practices, she experienced difficulties engaging students in the classroom instructional processes

where students were highly populated and there were no supporting instructional facilities and resources. The teacher reiterated that when she organised classroom group activities, she ended up having too large groups which were difficult to manage and provide adequate guidance and supervision. Teaching in large classes was also evidenced during classroom observations.

Summary of Frida's descriptions

Frida understood LCT as a teaching approach where students become the focus of teacher's teaching practices. The teacher's pedagogical decision-making was therefore determined by the students' instructional needs as per the syllabus guidelines. Teacher's teaching practices however, suggested more mastery of concepts and principles of geography than the subject pedagogical component. Based on the findings, teacher's evaluation of classroom instruction was reflected by students' academic progress. The teacher experienced some pedagogical challenges such as teaching in large classes, lack of modern instructional facilities and resources- computer aided facilities, references and textbooks.

Research site two findings description summary

Based on the research findings, all three case studies presented a similar understanding of what is meant by an LCT approach. Amos, Daniel and Frida described LCT as an approach which involves students in the instructional practices. It was noted however that teachers' understanding of LCT presented deviations as regard to classroom instructional practices based on a constructivist view of knowledge. Case studies had different views regarding the constructivist view of knowledge which consequently affected their pedagogical decision-making. Nevertheless, findings reported teachers' teaching practices were underpinned by similar aspects. These aspects included the subject syllabus; instructional methods, resources and facilities; students' class levels and class sizes; English as the medium of instruction; and classroom activities. Other instructional aspects that underpinned teachers' practices included: instructional time and the need to consider and integrate students' prior knowledge in instructional practices. Evaluation of classroom instruction though varied slightly from teacher to teacher, it was evident that students' achievement in the instructional objectives formed teachers' central

evaluation criteria. However, case studies were sceptical regarding effective implementation of LCT considering the nature of curriculum and instructional context which according to them did not favour students' active participation in the instructional processes. According to the findings, case studies and students were dispossessed from the curriculum and curriculum materials and thus affected adversely its implementation based on LCT approaches.

Contextual description of research site three

Research site three was comprised of one of the privately owned secondary schools in the Iringa region. It is a boarding school serving about 700 students in total including both ordinary and advanced level students. The school had well-organised management with each department serving its own specific activities. Departmental management ranged from administrative, academic affairs, estate, sports and recreation, students' accommodation and discipline. The researcher learned that the school management priority was to enhance a friendly learning environment by providing teachers and students with the necessary teaching resources and facilities. The school had a well-established library and computer laboratory where teachers and students conducted their private preparations and students performed group and individualised projects. The research site had a well-established daily timetable for students which showed a range of classroom and outdoor activities including performing take home assignments, projects, participating in school self-reliance activities such as gardening. Students were involved in other outdoor activities such as sports and games and undertaking general school cleanliness. From 8-10.30 every night, students attended private studies before they went to sleep. Teachers on duty monitored students' attendance and students' concentration during their preparations.

Students at research site three were recruited from all regions in the country. Research site three had about 500 ordinary level students with approximately 125 students in each year. The research site had 4 geography teachers with 11, 9, 5 and 3 years' of experience respectively. However, for the purpose of the study, only three teachers were involved. These were Steven, Heri and Gregory.

Description of case study seven (Steven)

Steven had 11 years of teaching experience in geography. He had been teaching in both private and public schools. He reported that private schools were more resourced than public schools. The teacher shared that teaching in more than five private schools he learned that those schools had more teaching resources than publicly owned schools. The teacher reported that three out of five schools had well-established computer rooms with internet facilities, and school management utilised teachers effectively. He experienced that public teachers get their full monthly

salaries whether they teach all the assigned lessons and accomplish other responsibilities or not. Unlike government teachers, private teachers were only paid for the worked days unless there was an exceptional reason. The teacher reported that in private schools, school management made a close follow up on teachers and students' teaching practices which was different from what he experienced at public schools. He experienced that due to effective school management and follow up on teaching and students' discipline in private schools, many students in private schools concentrated on their studies unlike those in public schools where teachers and students were not closely monitored. As a result, many private schools outperformed public schools in most of the national examinations.

Teacher's understandings of LCT approach

Steven described LCT as a teaching approach which focuses on involving students in the teaching processes. Unlike the teacher-centred approach where the teacher becomes the only source of knowledge at the expense of students' experiences, in LCT, students are given opportunity to share their life experience regarding specific topics. He went further describing that in LCT, students acquired instructional responsibilities through participatory teaching methods. According to the teacher, the teacher's role in LCT was that of guidance and facilitation in order to direct students' discussions towards achievement of instructional objectives as per the syllabus guidelines. Steven mentioned the common instructional methods in LCT practices. These methods included the use of Socratic teaching methods, discovery methods, group discussion, students' demonstration and individualised assignments. He reported that when participatory methods are well utilised, students participate actively in the teaching processes through integration of their experiences consequently building instructional competencies in the respective topics.

Teacher's pedagogical reasoning during planning process vis-à-vis LCT beliefs

Findings suggested Steven's pedagogical decision-making during planning reflected his desire for students to participate in the knowledge construction process, students' building of instructional competencies and achievement of instructional objectives as per subject the syllabus guidelines. The teacher reported to think about how students

would achieve instructional competencies which specified the abilities expected to be attained. He shared that he was keen to ensure instructional decision-making reflected the instructional topics and specific objectives as guided by the syllabus. In order to plan classroom instruction effectively, the teacher considered instructional resources and methods, instructional strategies and techniques, and students' classroom activities. According to Steven, such pedagogical aspects were critical as they determined the extent of students' participation in teaching and thus in the construction of knowledge.

Steven's consideration during planning for classroom instructional was also attested by his teaching portfolio. The researcher noted how the teacher stated instructional objectives such that planning reflected students' needs in a collective group and not on an individual level. For example, based on the teacher's lesson plans, instructional objectives were stated as: at the end of the lesson, students should understand: "the hydrological cycle; list and explain the hydrological cycle components; and explain the role of water bodies and vegetation in the evaporation process"

Moreover, Steven's teaching portfolio suggested his lesson plans were prepared based on subject syllabus requirements, such as, what type of learning competencies needed to be enhanced, the use of proposed teaching and learning facilities and utilisation of assigned time and application of proposed teaching and learning methods.

Steven reported his pedagogical decision-making focused on consolidating and broadening students' scope of knowledge, skills and attitude acquisition. He emphasised his focus regarding pedagogical decision-making during planning for classroom instruction observing that: "when making instructional decisions, my main concern is to support students in the knowledge construction and acquisition processes".

Steven believed that, students acquired instructional competencies only when given chances to reflect on the subject matter using participatory approaches under the teacher's appropriate guidance and facilitation.

Teacher's teaching practices vis-à-vis LCT beliefs

Steven reported that he employed participatory methods such as brainstorming, questions and answers, inquiry, field visits, panel discussions, debates, and discussion groups in order to influence students' knowledge construction.

According to Steven, during classroom processes, he organised students in such a way that students were flexible with any instructional method that he and the students decided to use. The teacher suggested that before the start of the lesson, he arranged students in proper seating where he was able to easily group students and identify students by name. He explained that depending on the instructional topic, he would always begin his lesson by presenting the topic based on guiding questions. According to Steven, he normally asked students to reflect on the respective questions based on their existing prior knowledge. Students in either groups or on an individual basis discussed the questions and his guidance. According to Steven, when students on their own or in groups worked on specific tasks by discovering knowledge by themselves through reflection, reading and practices, the level of classroom concentration was higher and students acquired longer lasting memory on the respective instructional topics. During discussion or subject debates, students presented acquisition of language communication skills and specific instructional competencies.

Classroom observations attested to Steven's use of question and answers methods and instructional models such as globes showing world distribution of water bodies and vegetation. Steven's lesson presentation followed the following procedures:

- (a) Asking students to reflect on specific instructional aspect such as role of solar energy in the hydrological cycle;
- (b) Randomly appointing students to reflect on specific instructional aspects based on those who volunteered by raising their hands;
- (c) Clarifications of students' reflections by the use of diagrams drawn on the blackboard and the globe; and
- (d) Providing students with individualised take home assignments. The assignments included questions designed across aspects within the taught instructional topic.

The researcher experienced the teacher's effective management and organisation of classes such that many students participated actively in the lessons. Steven composed questions which encouraged students to think and apply their existing knowledge in making sense of the specific subject topics. He asked questions such as why is the hydrological cycle a circular process? How is solar energy important in the hydrological cycle? What examples from your daily activities reflect the hydrological cycle? The researcher observed many students volunteering to reflect on the questions. Students' reflection on teacher's questions suggested their abilities to connect their relevant experience on the respective instructional topics. Students' reflection regarding the hydrological cycle based on the relationships that exist among different hydrological components and processes such as water bodies, vegetation, solar energy, evaporation and human activities. Based on classroom observation, it was evident that not all students participated equally in the instructional processes. The researcher viewed the nature of students' involvement was partly influenced by the large class sizes and students lack of English. Students struggled to make sense of their thoughts as they could not find proper vocabularies. Moreover, not all students volunteered to respond or ask questions of their fellow students or teacher.

Steven accounted that he faced instructional challenges which hindered effective participation in the teaching processes by all students. He mentioned instructional challenges including teaching in inclusive classrooms where both students without disabilities and disabled students were combined in one class. According to Steven, it was challenging to facilitate classroom instruction in classes where the non-disabled students were taught together with the deaf, blind and the mute. Other instructional challenges Steven faced included lack of appropriate geography teaching resources such as survey equipment, text and reference books and teaching in substandard classroom buildings with limited ventilation and scratched blackboards. He added that the geography syllabus was composed of incompatible topics and some authors presented contradicting ideas on similar or same concepts. Steven mentioned the contradiction on the topic of "structure of the earth" and its layers stating: "regarding the outer space of the earth i.e. the atmosphere, some geographers argue that it has no name since it is not part of the earth, other scholars say it is part of the earth's structure".

Steven reported the misconception to complicate the teacher's and students' conception of some geographical concepts and principles consequently affecting students' construction of knowledge.

Teacher's evaluation of classroom instructional practices vis-à-vis

LCT

Findings showed Steven's consideration, among other pedagogical aspects of students' performance in the instructional objectives. The teacher presented the use of different questions across instructional topics to assess if students' reflections on those questions demonstrated some evidence of knowledge acquisition according to the instructional objectives. Presenting his pedagogical assessment criteria, he noted: "I assess the achievement of the intended learning outcomes among the learners".

Steven mentioned strategies he used to assess instructional practices to include:

- (a) Diagnosing students' understanding of specific instructional topics;
- (b) Assessing students' achievement of learning outcomes;
- (c) Asking students to judge the value of instructional resources used;
- (d) Asking students different questions based on psychomotor, cognitive and affective domains in order to examine students' level of understanding of the respective pedagogical aspects; and
- (e) By looking at students' facial expressions.

Steven shared that he was keen to ensure students understood all instructional aspects as directed by the syllabus. He reported to prepare evaluation artefacts around aspects of instructional topics. According to the teacher, evaluation tools included oral questions and answers, students' demonstration of some pedagogical topics, students' level of involvement in group based activities and performance in take home assignments. The teacher noted that evaluation of classroom instruction focused on assessing students' ability to demonstrate instructional competencies on each instructional topic as per the syllabus requirements. He mentioned instructional competencies that students needed to acquire to include: describing, explaining,

assessing, critiquing, demonstrating, comparing and contrasting some geographical phenomena.

Steven added that students' facial impressions informed him as to whether the subject topic had been understood. Depending on the evaluation feedback, he had to modify the instructional approach in a manner that students understood the lesson in accordance with the instructional objectives. The teacher stressed about students' facial expressions stating that: "students' facial expressions with glittering eyes can tell me if students understood the concept or not"

Steven's evaluation methods of classroom instructional practices were also attested by his teaching portfolio such as the syllabus, schemes of work, lesson plans and lesson notes. For example, his teaching portfolio suggested the type of instructional competencies that students were expected to learn and proposed the instructional resources and methods to be used in every instructional topic. Steven's evaluation of classroom instruction was based on students' performance in the classroom tasks, individual assignments, and weekly tests. For example, Steven's evaluation of classroom instruction stated: "the lesson was understood by 75 percent of students. This is because students participated well in the lesson by asking and answering questions and they also performed well in the assignment provided regarding the hydrological cycle".

Steven accounted that he used a student majority basis to evaluate his classroom instruction where he assessed students' level of involvement and performance in the respective assignments. According to the teacher, classroom evaluation results formed the basis for his pedagogical decision-making in the classes that followed.

Opportunities in the implementation of LCT

Based on researcher's field experience, it was evident that the school setting, school management attitude toward both teachers' and students' affairs and Steven's extensive experience in teaching constituted instructional opportunities to influence implementation of LCT. The school location along the outskirts of Iringa municipality provided a calm instructional environment for both teachers and students. The school location also provided a worthy environment for teacher's and students' improvisation of instructional resources thus improving instructional

processes. School management support towards teachers and students in terms of funding outdoor instructional projects and day-to-day school rehabilitation was considered conducive to effective implementation of LCT. The researcher also considered the wealth and extent of Steven's professional experience to stimulate LCT practices. Based on the researcher's point of view, Steven could use those instructional opportunities to improve his pedagogical decision-making consequently implementing LCT effectively.

Challenges in the implementation of LCT approach

Steven reported the structure and composition of syllabus, lack of geography teaching resources and teaching in inclusive classes to form challenges in his instructional practices. According to him the syllabus presented not only unnecessary repetition of some instructional topics, but also the instructional topics were incompatible with one another. The teacher also shared that some instructional topics presented perplexities in conceptual understanding of some geographical aspects. He mentioned confusion in the composition of the "Earth structure" among authors as one of cases. According to Steven such misunderstanding adversely affected classroom instruction since him and his students did not agree on a common understanding and interpretation of the respective concepts. The teacher also reported inclusive classes to constitute critical challenges in implementation of LCT approaches. He presented to teach classes comprising both no-disabled and special needs students. Special needs students included the deaf, mute and visually-impaired who were combined in one class with ordinary students. According to the teacher, it was very challenging facilitating teaching especially for special needs students who needed special treatment and approaches.

Emphasising the instructional challenges he faced, Steven stated: "I face many challenges. One of the overarching challenges is to teach students with disabilities combined in the same class with ordinary students". The teacher reported to teach in inclusive classes while he had no experience in special needs education (SNE).

Summary of Steven's descriptions

Steven conceptualised LCT based on students' involvement in the classroom instructional practices. He believed students' prior knowledge was important for

students' construction of knowledge. According to Steven, the teacher's role was to use participatory approaches to facilitate students' active engagement in the teaching processes consequently constructing their own meaning of the subject matter topics. The teacher was concerned with ensuring students acquired instructional competencies as guided by the syllabus. However, the teacher shared some instructional challenges which adversely affected implementation of LCT. He mentioned instructional challenges including incompatibility of instructional topics and authors' presentation of opposing ideas in similar topics, teaching inclusive classes and lack of appropriate teaching resources. Other instructional challenges according to Steven included teaching in unfavourable instructional contexts such as large classes.

Description of case study eight (Heri)

Heri had a Bachelor of Arts degree majoring in Geography and History. He had nine years of teaching experience in secondary schools. Heri was permanently employed by the government though he also taught in this site under a part-time employment contract. He believed that students had diverse instructional experiences that they bring to the classroom context. The teacher suggested that students' experiences were critical in making connections with the instructional topics thus building understanding of the respective concepts. He shared that he was interested in seeing students share their experiences in the knowledge construction processes by getting involved in the teaching practices.

Teacher's understandings of LCT approach

Heri perceived of LCT as an instructional method where the teacher's pedagogical decision-making was underpinned by what students' already know with the focus being linking the subject matter with students' existing experiences. He observed that LCT was thus characterised by students' high level of involvement in the instructional processes under the teacher's facilitation. In his own words, Heri explained learner-centred teaching as:

type of teaching method whereby a teacher starts from what his/her student knows to unknown. The teacher usually has to use question and answer method

or assign tasks to students in groups and give them opportunity to present what they have discussed.

Heri noted that students' active participation in teaching promoted their creativity and critical thinking and enhanced students' independent learning. He shared that well-facilitated LCT provided students with opportunities to connect the instructional topics with their experience consequently building new understandings of the respective instructional topics.

Teacher's pedagogical reasoning during the planning process vis-à-vis LCT beliefs

Heri's pedagogical decision-making during planning was influenced by the instructional objectives and competencies students needed to acquire. The teacher reported that during planning for classroom instructional practices he had to reflect on some questions such as: what am I going to teach? Who are my students? What do I think students know about the topic? What do students need to know about the topic? What type of instructional resources do I need? What about instructional methods to be employed and how will I evaluate instructions? According to the teacher, these questions guided his instructional planning and classroom practices.

Heri shared that in order to achieve these pedagogical objectives, he had to think about pedagogical issues such as learners' background knowledge; availability of teaching and learning resources; teacher's and students' classroom activities; and time allocated for the lesson. His similar pedagogical experience was reflected in his teaching portfolio such as the syllabus, schemes of work, lesson plans and lesson notes. Based on the teacher's lesson planning, it was evident that his instructional decision-making was influenced by what students were expected to achieve as guided by the syllabus. In one of his instructional plans, Heri stated instructional objectives as; at the end of instruction, students should be able to: "list and explain factors influencing agricultural activities in East Africa and also explain the role of the agricultural sector in the development of the country".

Heri's lesson notes were also prepared covering those instructional aspects to be achieved by students. Based on the teacher's statement of instructional objectives and preparation of lesson notes it was clear that among other pedagogical factors, the

subject syllabus influenced his pedagogical decision-making and instructional practices.

Teacher's teaching practice vis-à-vis LCT beliefs

Interview findings demonstrated Heri's interest in ensuring students active involvement in the instructional practices. The teacher believed that students were able to construct knowledge when they were exposed to the physical instructional environment. Heri was determined to engage students in real geographical phenomena. He shared that it was possible to expose students to a real life environment when the teacher tailored the instructional practices to students existing knowledge and experience. The teacher further reiterated that active students' involvement in instructional practices depended on the teacher's careful selection of the instructional methods and resources. He also mentioned the need for teacher's classroom organisation and management skills in order to influence students' participation in the classroom processes. The teacher shared his preferred instructional methods to include questions and answers, fieldtrips, guest speakers, group assignments and lecture methods. He commented that students participated in classroom instruction when he organised classes such that every student had opportunity to share his/her prior knowledge about the subject matter. He further reported that when students were involved in the construction of knowledge, the classroom instruction was active since students freely shared what they understood regarding the subject matter.

Heri presented his application of LCT stating that:

I apply learner-centred beliefs by involving learners in the teaching processes and using teaching and learning facilities such as maps, students' classroom demonstrations, real objects, fieldtrips whereby students get exposed to actual environments

Heri experienced that students enjoyed the lesson when it was linked with what they already knew and that the teacher involved students in the selection of instructional methods and resources. According to the teacher, his role was to monitor and guide students' discussions and reflection of the subject matter in order to direct students' discussion to the instructional objectives as guided by the syllabus.

Classroom observation findings demonstrated the teacher's use of question and answers, lecture methods and take home assignments. Heri followed the following procedures in the presentation of the subject matter:

- (a) He introduced the lesson using questions and answers;
- (b) Volunteering students raised their hands;
- (c) He randomly appointed those volunteering students to respond to the questions;
- (d) He appointed students to reflect on the subject matter sharing what they knew about the respective instructional aspects;
- (e) He mostly used a lecture method to clarify the subject matter; and
- (f) Concluded the lesson by both questions and answers to emphasise some specific instructional aspects. In some lessons, the teacher provided students with individual take home assignments.

The researcher observed students volunteering to share their experience when given opportunities. Heri often interrupted students before they could finish reflecting on a particular geographical aspect. He accounted that, the aim was to ensure many students had opportunities to share their experiences without compromising the limited instructional time. The teacher further added that it was important to encourage students to manage time effectively as they were involved in the knowledge construction processes. It was also observed that some students were not involved either in answering questions or asking questions. The teacher commented that some students lacked English language skills and thus struggled to communicate their thoughts. Heri also experienced that it was challenging to involve all students using oral questions and answers or group discussion which were always too big to provide effective facilitation. He reported to teaching in large classes ranging between 70-100 students which posed challenges in effective involvement in the classroom activities. The teacher also shared that the school library had very few reference and textbooks. He suggested that in some instructional topics, he had to organise field projects in order to allow all students to participate effectively in the subject matter thus sharpening their thinking and deepening their understanding of the instructional topics. According to the teacher, fieldtrips were very expensive and

time consuming. The teacher occasionally resorted to fieldtrips depending on the urgency of the instructional topic and availability of funds.

Teacher's evaluation of classroom instructional practices vis-à-vis LCT

Findings suggested the teacher's evaluation of classroom instructional practices was based on students' achievement in the instructional objectives. The teacher thus modified his teaching approaches in order to enhance students' participation and achievement of instructional objectives as guided by the syllabus. Heri reported to use questions and answers, quizzes, and monthly tests to evaluate the achievement of the instructional objectives. He emphasised his assessment approach noting: "I use questions and answers, quizzes and monthly tests to evaluate whether the lesson objectives have been met or not".

The teacher added that whenever necessary, he administered students with individual classroom tasks or take-home assignments and checked for students' responses. According to Heri, students' participation and achievement in the respective instructional topic regulated his teaching practices. Classroom observation findings also suggested the teacher's use of oral questions and answers, group discussion and assignments to assess students' understanding in the respective topics. However, it was also apparent that not all students had opportunities to share or reflect what they understood of the topics. The same consideration was reflected in the teacher's teaching portfolio. For example, in one of the topics, the teacher stated instructional objectives as: "at the end of the lesson, students should be able to list and explain factors influencing agricultural activities in East Africa".

Opportunities in the implementation of LCT

As observed with Steven, school location and the administrative climate constituted Heri's instructional opportunities to support his pedagogical decision-making and practices. The teacher and the students could have used the school environment to make instructional resources from the locally available materials thus addressing the challenge of limited instructional resources consequently improving instructional practices. The quiet school environment provided an arena for both teacher and students to focus and concentrate on the teaching processes. It was apparent that

school support to both teachers and students was significant in enhancing effective implementation of LCT. The teacher was expected to use his professional and academic experience to create a rich instructional context for students' active involvement in the instructional practices.

Challenges to the implementation of LCT

Heri faced challenges in his pedagogical decision-making and practices. Despite his motivation to involve students in the teaching practices, he experienced instructional constraints such as teaching in large classes, limited supply of references and textbooks and lack of English among students. According to the teacher, LCT also consumed a lot of time which affected the timely completion of the syllabus. The teacher perceived that there was a need to restructure the syllabus in order to have topics equivalent to available instructional time as per the academic calendar.

Heri commented that students lacked English skills which meant they struggled to communicate their thoughts. According to the teacher, he sometimes resorted to teacher-centred approaches in order to ensure students covered all the topics within timeframe as guided by the syllabus. The teacher also shared that he was challenged to involve all students using oral questions and answers. He reported that even when he used group discussion he was always constrained with limited instructional time for effective students' participation in their discussion.

Heri noted instructional challenges he faced as: "I teach in overpopulated classes ranging from 70-100 students per class. There are no text and reference books in the library. It is very challenging to involve students in large classes like these". He had the opinion that the government should rethink and restructure the educational policy and the syllabuses in order to address all associated challenges if it was determined to implement effectively the new pedagogical orientation – "learner-centred teaching approach".

Summary of Heri's descriptions

In summary, the teacher's understanding of LCT was determined by his quest to integrate students' existing knowledge in the instructional topics. Heri was concerned with students' active involvement in the instructional processes. He was of the

opinion that students' construction of knowledge depended on their exposure to the actual instructional phenomena and the level of their involvement in the teaching practices. The teacher's understanding of LCT was also attested during classroom observation where he involved students through participatory instructional approaches that included oral questions and answers, group discussion, students' demonstration, and individualised take home assignments. In the same way, the teacher evaluated his classroom instructional practices based on the students' achievement in the instructional objectives. It was evident that the subject syllabus influenced Heri's pedagogical decision-making and practices. However, the researcher experienced not all students participated equally and effectively in the instructional practices. The teacher's accounts for the situation reflected some critical challenges that he faced during pedagogical decision-making and practices. They included teaching in large classes, limited instructional resources and lack of English proficiency among students. The teacher was concerned that LCT consumed a lot of time which constrained timely completion of the syllabus.

Description of case study nine (Gregory)

Gregory had five years of teaching experience in private secondary schools. He had a Bachelor of Arts degree in Education majoring in Geography. The teacher was motivated in implementing LCT approach. His motivation was based on the perception that the development of information and communication technology increased both the teacher's and students' awareness and access to information. The teacher experienced that science and technology development exposed students to different knowledge experience such that unlike the past belief that students were tabula-rasa i.e. they were empty minded; nowadays students are understood to have rich experience which is critical in the construction of knowledge. The teacher shared that teaching and learning processes thus required assimilation of subject matter within the rich mass of students' diverse experience. He however, experienced the development of information and communication technology did not influence in the same way in most of the school's instructional environment. He experienced schools facing significant pedagogical challenges such as poor facilities, large classes due to increased enrolment and teacher shortages. The teacher mentioned other instructional challenges including curriculum overload and limited instructional resources. Despite

his belief and motivation regarding the role of LCT in improving the quality of instructional processes, he viewed that the new instructional approach had external influence that did not consider the Tanzanian teaching and learning environment. Gregory perceived the need for educational policy innovations and curriculum overhaul in order to address the existing challenges. He suggested that unless those challenges were addressed, it was difficult to implement LCT in most Tanzanian schools.

Teacher's understandings of LCT approach

Gregory understood LCT as the kind of instructional practices where the teacher begins the lesson by exploring what students already know in the respective topic. The teacher uses questions and answers, group activities and individualised assignments to encourage students to link the subject matter with their prior experience thus building new conceptions or meanings of the topics. The teacher suggested that LCT is characterised by teachers giving students more involvement opportunities to discuss the subject matter. Gregory was concerned with instructional contexts that did not encourage effective student involvement in the instructional practices. Gregory perceived:

Although learner-centred teaching promotes students' engagement in classroom instruction, the teaching and learning environment in Tanzania does not favor its implementation. I think the new teaching orientation has been externally induced. As such, it is very difficult and challenging implementing learner-centred teaching in schools with a scarcity of teachers' vis-à-vis enormous student enrolment, acute shortage of teaching and learning facilities and resources.

Gregory also emphasised his perception and experience of LCT, with the following lamentation:

Learner-centred teaching approaches are westernised and imposed methods of transferring power from the teacher to students. These teaching approaches have deteriorated students' discipline such that students are no longer respecting their teachers.

Gregory had the opinion that in order to implement LCT effectively, there was a need to address instructional challenges facing many schools especially in the public schools.

Teacher's pedagogical reasoning during the planning process vis-à-vis LCT beliefs

Gregory's pedagogical decision-making during planning for classroom instruction was reflected in the lesson objectives and the proposed students' competencies to be achieved in every topic. Other instructional aspects considered included: availability of teaching and learning resources; learner's prior knowledge; teacher's and students' classroom activities and syllabus composition with respect to instructional time. Likewise, schemes of work and lesson plans were prepared based on subject syllabus. The lesson notes were prepared based on what students ought to achieve with regard to what the syllabus instructed.

Teacher's teaching practices vis-à-vis LCT beliefs

According to Gregory, the focus on instructional practices was to promote students' engagement in the instructional processes. The teacher experienced students' motivation to learn when they were given opportunities to perform some instructional activities. Based on interview responses, the teacher involved students in both in-class and outside-class instructional practices. Sharing his experience of LCT, the teacher stated that: "when learner-centred teaching is administered effectively, it motivates learners to share their experiences on what they know regarding the subject matter. In doing so, it gives students opportunities to participate in the construction of knowledge"

Gregory viewed that LCT required teachers to guide and encourage students to participate in the instructional processes while focusing on the instructional objectives. He shared that the teacher was responsible to shape students' thinking in a way that knowledge was created within the syllabus requirements.

Gregory's classroom observations were evidenced by students' active participation in the instructional practices. Many students volunteered to reflect questions posed by the teacher and fellow students. The teacher asked students questions such as:

What is agriculture all about?; what type of agriculture is your family involved in; for what use are the agricultural products in your family; what factors do you think affect the development of agriculture in Tanzania?; and how is development of agriculture relate to economies of East African countries?

It was interesting to note that students connected the instructional aspects with their experiences. Integration of students' experience occurred mostly when the teacher broke the subject topic into bits of aspects and then asked students to reflect on aspects from what they already knew. Some students' insights regarding agricultural development in Tanzania in particular and East Africa in general related to the availability of food, cash crops, development of social services such as schools, health services, infrastructure, the food processing industry and improvement of peoples' livelihoods. Students explained also the role of agriculture in the development of East African economies such as the Gross Domestic Products and per capita incomes. Gregory's lesson presentation followed the following procedures:

- (a) Asking students about their prior knowledge on the subject matter;
- (b) Randomly appointing students especially who raised their hands to reflect on the questions asked;
- (c) Volunteering students reflecting the questions based on their diverse experience;
- (d) Teacher clarified students' responses using maps showing potential agricultural areas and the climatic conditions;
- (e) Asking students some questions to emphasise specific instructional aspects regarding factors that influence agriculture development in East Africa (land, labour force, infrastructure, national and international markets and international policies);
- (f) Randomly appointing volunteering students to respond to the questions; and
- (g) Concluding the lesson by summarising major issues which arose in the subject topic or asking students to discuss the role of agriculture in the East African economies.

Gregory was interested to tailor new topics to students' prior understandings. He believed that when students linked their existing knowledge to the topics, they were able to make conception of the respective topics and build long lasting memory. In all observation sessions, he introduced the lesson by revising what he taught during the previous lessons. He used questions and answers to get feedback from the students. It was experienced that the teacher related students' reflections on different aspects with prevailing socio-economic and political situations in Tanzania, Africa and across the world. Gregory shared that he was concerned with students' classroom

practices that reflected and connected to what exactly was happening in the students' settings.

Teacher's evaluation of classroom instructional practices vis-à-vis

LCT

Findings suggested Gregory's evaluation of classroom instruction was underpinned by the extent students' achieved instructional objectives as per the syllabus guidelines. In the assessment process he considered students' participation in classroom activities, their reflection in different questions and how students performed in the tests and term examinations. When interviewed on how he assessed his pedagogical decision-making and practices, Gregory insisted: "I focus on the role played by students during classroom instruction sessions especially in answering questions, students' contributions in group-based activities and students' reflections on the subject matter across disciplines".

In one of Gregory's instructional evaluations, he reported his evaluation as: "the lesson was understood by 97 percent of students". The achievement was due to:

students participated well in asking and answering questions during classroom instructional processes; students reflected on the subject matter across diverse experience which suggested understanding of the subject matter and students completed the assignment well. More than 80 students performed above 70 per cent of a B+ grade.

Gregory also suggested using students' individual work and take home assignments in order to identify students' instructional needs thus informing his pedagogical decision-making and practices. Based on the teacher's interview responses, evaluation of classroom instructional practices presented the following features: syllabus dictation on the teacher's evaluation and an outcome-based evaluation of classroom instruction thus not interwoven in the instructional processes; the teacher dominated evaluation of instruction and students rarely took part in the evaluation processes; and evaluation was examination-oriented.

Opportunities in the implementation of LCT

As for Steven and Heri, the researcher perceived the school location and school management support to teachers and students formed a good basis for the effective

implementation of LCT approach. The school provided opportunities for teachers and students to improvise instructional resources from the immediate environment hence addressing challenges related to limited instructional facilities and resources. Depending on the teacher's creativity and persuasion, the school was ready to support teachers with financial and material support for instructional activities. School support included facilitation of guest speakers; project-based activities and fieldtrips. The researcher experienced teacher's teaching experience and motivation for engaging students as an important opportunity for his creativity and student-focused pedagogical decision-making processes.

Challenges in the implementation of LCT

Gregory demonstrated instructional challenges that constrained implementation of LCT practices. The challenges ranged from teaching in large classes with resource constraints, and the nature of curriculum and syllabus overload. Gregory experienced teaching in classes ranging from 65-100 students. The teacher was also concerned with the instructional contexts, which did not favour students' active involvement in the instructional processes. He was also concerned about teacher shortages and limited instructional resources, classroom overpopulation and a non-student friendly curriculum. The teacher reported to teach in classes ranging from 65-100 students where more than 10 students shared one textbook. Gregory presented his experience with an emphatic tone stating: "it is very difficult to involve students in large classes. The curriculum itself and the teaching and learning environment do not favour effective implementation of learner-centred teaching approaches".

The teacher reported that the geography curriculum not only constituted instructional topics which did not reflect students' cultural experience but it also lacked compatible features within the topics and across subject disciplines. The teacher experienced, when he resorted to LCT approaches, that the curriculum was too overloaded to be completed within the instructional time assigned.

Summary of Gregory's descriptions

Gregory perceived LCT in terms of tailoring classroom instructions to what students already knew. Gregory experienced that teachers needed to use participatory teaching methods to ensure students' active participation in the teaching practices. The teacher

mentioned such methods which included oral questions and answers, group activities, use of teaching and learning resources and provision of individual-based classroom and take home assignments. Other instructional methods included administration of students' projects and fieldtrips. In his planning processes, Gregory considered such pedagogical aspects as instructional objectives and students' instructional competencies expected to be achieved, classroom activities, instructional resources and instructional time. According to Gregory, his pedagogical decision-making was influenced by the subject curriculum and syllabus requirements.

Based on the findings, it was evident that Gregory involved students in the classroom instruction especially during introduction and conclusion stages of the lessons. During introduction, the teacher used either oral questions and answers or group discussion to explore students' prior knowledge and instructional needs with respect to different instructional topics. The teacher used most of the time to clarify students' reflections and present the topic during the presentation stage while he concluded the lessons through oral questions and answers, group assignments and take home assignments. The teacher shared that such lesson conclusion style examined students' achievement of the instructional topic and meant also to introduce the forthcoming topic. He was concerned about the instructional challenges he faced. The challenges included teaching in large classes, teacher shortage, limited instructional resources and curriculum relevance and overload. Gregory suggested the need for policy and curriculum transformation geared to address those challenges.

Research site three findings description summary

Findings presented case studies' understanding of LCT based on students' participation in classroom practices, consideration of students' prior knowledge and teaching the subject matter from known to unknown. Teachers' pedagogical decision-making processes reflected instructional competencies students needed to acquire. The instructional competencies demonstrated by the participating teachers looked similar to those outlined in the syllabus. Therefore, implementation of LCT directed towards students' engagement in classroom instructional practices and students' performance in classroom-based activities. The findings demonstrated that case studies' evaluations of classroom instruction were underpinned by teachers'

need to achieve instructional objectives. Accordingly, Steven, Heri and Gregory evaluated achievement of instructional objectives based on students' level of involvement in the instructional processes and performance on teachers' instructional evaluation artefacts.

Case studies raised issues, which are analysed and discussed in chapters six and seven respectively. Those pedagogical aspects included: nature of the geography curriculum and syllabus; students' prior knowledge vis-à-vis the knowledge construction process; teacher-student relationships during classroom instructional practices; instructional methods, resources and level of student involvement; and classroom organisation and management. Other pedagogical aspects which arose include: teacher-student ratio; classroom instructional activities vis-à-vis instructional time; relevancy of LCT vis-à-vis the instructional context; Tanzanian educational and training policy dilemma; and transformation of society's mindset from teacher-centred to LCT and from an outcome to competence-based teaching orientation. Teachers' evaluation artefacts and evaluation process of classroom instruction practices also formed aspects for analysis and discussion in light of LCT beliefs.

Generally, chapter five has presented the findings based on individual case studies within the three research sites. Three case studies were involved from each research site. Using pseudonyms, case studies included Marco, Agape, Sigimba, Amos, Daniel, and Frida. Others were Steven, Heri, and Gregory respectively. Chapter six presents data analysis which resulted in the development of the themes that formed a basis for the discussion-chapter seven.

CHAPTER 6

ANALYSIS OF FINDINGS

Introduction

Chapter five presented descriptions of data collected and transcribed directly from the field. The aim of this chapter is to immerse in the data, making meaning of them subsequently developing themes for discussion. Teachers' perceptions and experiences of LCT may not necessarily be reflected within lenses of CP because they may not be used to it. However, where necessary, their perceptions and experiences are analysed using lenses of CP. Using the generative inductive data analysis approach (Stake, 1995), and the Berkowitz (1997) questioning procedure, this chapter analyses findings from nine cases across three research sites. Data are analysed based on the findings within case studies in all research sites. Analysis of findings starts by presentation of general pedagogical aspects experienced across case studies in the respective research site. Then followed by thick description of what transpired in the field with respect to guiding research questions. Practical pedagogical experiences from individual cases are presented in the form of quotes and phrases to support the claims from the thick descriptions. Subsequently, implications are presented in the form of categories arising within the respective case studies. Afterwards, key aspects are developed across case studies in each research site by comparing and grouping the meaning patterns based on similarities and differences. The same procedure proceeds leading to development of major themes for discussion. Data analysis is guided by four research themes: teachers' understanding of LCT approach; teachers' pedagogical reasoning and decision-making during the planning process; teachers' teaching practices; and their evaluation of classroom instructional practices.

Case studies' analysis from research site one

Research site one comprised three cases namely: Marco, Agape and Sigimba. Participants' perceptions and experiences regarding implementation of LCT geography curriculum were analysed based on research questions as follows:

Teachers' understanding of LCT

Marco, Agape and Sigimba demonstrated varied understanding of LCT reflected in their level of emphasis across geography aspects in the teaching and learning. However, despite their differences in understanding of LCT, they all presented an idea of students taking part in the teaching practices. Marco understood LCT as the kind of teaching approach that focuses on engaging learners in classroom instructional processes, the aim being, to build learning capacities amongst them. The teacher had the opinion that in order to influence knowledge construction amongst students, the teacher needs to create enough chances for students to reflect and share their thoughts regarding the subject matter. The teacher described LCT as:

A method of teaching used by the teacher to enable a learner to understand what is being taught. In learner-centred teaching, a learner is given opportunity to provide his/her understanding of the subject matter before the teacher proceeds with the teaching processes

From the participant's observation regarding LCT, it would imply that his understanding of LCT was underpinned by the need for students to engage in knowledge construction. His perception of LCT also implies the teacher's role to support students in making sense of what is taught and thus building learning capacities. Marco viewed students' experiences as important in promoting their participation in the classroom practices. He shared that students use their experiences to make meaning of the subject matter. In a way, Marco was suggesting teachers' need to use teaching methods which elicit students to participate in knowledge construction through sharing their diverse experiences. Marco's perception of LCT looked similar to that of Agape. Responding to questions on how she understood LCT, Agape conceived LCT as a cooperative teaching technique whereby a teacher asks questions and students discuss questions in groups under the teacher's guidance. She emphatically presented: "in LCT, learners are given opportunities to reflect and share what they know regarding the subject matter". Teacher's interpretation of LCT and its implications for classroom practices meant that in order to engage students actively in the instructional processes, teachers need to engage in reflexive and thoughtful practices. Teachers need to devise and incorporate classroom activities that stimulate students' critical thinking and reflection about the subject matter.

Sigimba's perspective of LCT was based on such aspects as: the origin of the LCT approach, role of the teacher and student, the instructional methodologies, and classroom context. Different from Marco and Agape's conception of LCT, Sigimba perceived LCT as westernised and an imposed instructional methodology which transfers authority from the teacher to students. Sigimba presented: "the teaching approaches have deteriorated students' discipline such that students are no longer respecting their teachers. Students see themselves (sic) they know more than their teachers".

The teacher added that teaching and learning contexts do not favour the implementation of learner-centred instruction as compared to the western countries. His reflection of LCT and its effect in classroom practices seemed to suggest the long-lived teacher-student power relationships where the classroom authority is centred to the teacher and the student becomes a subjective and passive recipient of all classroom processes. His understanding of LCT also implied the need for teachers to address classroom management aspects which could accelerate students' disruptive behaviour as a result of increased students' participation in the classroom practices. Sigimba seemed also to suggest that teaching and learning environment are critical for effective implementation of LCT.

From the analysis of all three cases, it could be concluded that teachers' understanding of LCT was underpinned by corresponding instructional aspects including: students' knowledge construction; teaching methods and resources, teacher-student relationship; the role of students' prior knowledge; and classroom organisation and management. The origin of LCT was also seen to influence teachers' understanding of LCT and its implication in the classroom practices.

Teachers' pedagogical reasoning and decision-making during the planning process

The findings suggested that teachers' pedagogical decision-making was influenced by the mandated curriculum and curriculum materials such as the subject syllabus, textbooks, and teachers' schemes of work and lesson plans. For example, Marco elaborated the need for classroom instructional planning to consider what students needed to achieve by the end of each classroom instructional practice. Emphasising

his consideration for classroom instructional planning, he intoned: “My instructional decision-making is determined by the subject syllabus. The syllabus provides instructional guidelines in which all subject teachers should adhere in their pedagogical practices”.

Agape on the other hand described factors that determined her classroom instructional planning to include: classroom capacity in terms of class size, teaching resources, and the number of students in the respective classes. Emphasising her perceptions and consideration during instructional planning the teacher presented: “I teach classes exceeding 100 students different from the normal classroom capacity of 45 students. This has implications for the preparation for classroom instruction and the evaluation of classroom instruction as well”.

Sigimba also explained his consideration during classroom planning to be directed by the subject curriculum requirements. When the researcher asked what he considered during planning for classroom instruction, he responded:

I normally consider issues like the classroom instruction guidelines especially from the subject syllabus, instructional objectives, and the subject topics to be taught vis-à-vis teaching and learning materials available and the instructional activities to be provided during or after the classroom instruction.

Teachers’ experience in pedagogical reasoning and decision-making presented the top-down curriculum challenge which seemed to hinder their teaching flexibility based on the students’ interests and diverse experience. This consequently made it difficult to tailor their pedagogical decision-making to students’ real life. Based on the findings, it appears that teaching facilities and resources and classroom population also determined the nature of teachers’ pedagogical reasoning and decision-making during classroom planning processes.

Teachers’ teaching practices

Teachers’ perceptions and experiences in teaching practices portrayed common practices though with notable variations in some instructional aspects. In all three case studies, it was evidenced that Marco, Agape and Sigimba experienced the same with regard to classroom presentation methods and strategies. However, case studies showed variations with respect to: mastery of substantive and pedagogical content

knowledge; and the level of students' involvement in the teaching practices. Other aspects included: variation in the design and use of instructional resources and students' classroom activities. These variations were seen within the sub-topics and between instructional topics.

Analysis of findings on the basis of individual case studies suggested Marco's preference for group discussion and questions and answers methods to the rest of the instructional methods. The teacher stressed the role of engaging students in teaching processes through questions and answers stating that: "When students are given opportunity to ask and answer questions regarding a particular subject topic, we as teachers are building learning capacities amongst students". Marco added that using questions and answers in the teaching practices: "encourage students to learn independently and search for materials from multiple sources".

Emphasising his application of LCT beliefs, Marco noted:

I apply learner-centred teaching beliefs by involving learners in the teaching processes and using teaching and learning facilities such as models, maps, student classroom demonstrations and outdoor teaching where students are exposed to the actual physical environment.

Marco's teaching experience suggested that the aim of LCT was to create a classroom atmosphere conducive to students' independent learning and that his role as a teacher was to facilitate students in their learning. Marco's teaching experience also meant that classroom practices needed to reflect what is taking place outside the school. During classroom instruction processes, the researcher observed Marco using mostly questions and answers method to explore students' understanding of the hydrological cycle. Some questions which Marco asked included: "what is the hydrological cycle?; who can tell us factors affecting the hydrological cycle?; what is solar energy?; can you explain the importance of solar energy in the hydrological cycle?; and what is precipitation and how is it formed?". Although not many students volunteered to respond to the questions, those who shared their thoughts suggested having rich experience regarding the subject matter. From this observation, it could be argued that effective implementation of LCT is possible only if the teacher designs classroom activities which promote students' participation. Moreover, students' submissive behaviour during classroom practices implied the Tanzanian, long-standing cultural practice which requires children to respect their teachers as

elders. It also reflects the cultural practice that values teachers as students' parents and professionals designated to impart knowledge and cultural heritage to the younger generation.

As for Marco, Agape described the pride she felt when she chatted with students around the school as part of social life. Agape was content in the way students respected her: "you know when I enter the class; the students stand up and greet me with a feel of great respect".

Agape's reservation seemed to suggest that her instructional practice was motivated by the kind of relationships between her and the students. Agape's experience suggested that implementation of LCT is determined by the teacher-students relationship where students are free to share their thoughts to the teacher and amongst themselves. Regarding her practical experience in the implementation of LCT, Agape presented her experience in an emphatic tone: "Learner-centred teaching is good as it promotes students thinking and involvement in the classroom". As opposed to Marco's observation regarding teacher-students' relationship; Agape's experience suggested the need to consider students' prior knowledge and experience as important for their effective teaching practices. And that, just because the teaching is LCT, and students are actively engaged in their own learning process, it does not follow that they disrespect the teacher. Nor are they going to believe that they know more than the teacher, nor take over the class. Instead, they are being encouraged to learn how to learn and not rely on the teacher to always be available to 'input the knowledge'. As presented by the findings, the teaching contexts in the developing economies are characterised by big classes and limited resources. Thus, it is much more necessary to actively engage students in the instructional processes in the developing economies such as Tanzania's than it is in the developed ones.

However, findings from classroom observation sessions revealed Agape's relative variation in terms of evidence of mastery of concepts and principles of instructional topics, teacher's instructional methods, students' classroom participation and teacher's application of teaching and learning resources. It was observed that a lecture method dominated her classroom instruction. Students were rarely involved in sharing their experiences on the subject. Despite few students volunteering to share experiences about the subject, not all students who volunteered were given

chances to respond to the questions posed. Agape used most of the instructional time to explain and clarify concepts of the respective topic. This implied the inconsistency between teacher's theoretical understanding of LCT and its practical implications. Teacher's instructional practices were not informed by her extensive understandings of learner-centred instructional approaches. This disparity meant that teachers' understanding of LCT was not the only justification for implementation of LCT. The implementation of LCT also needs to consider other factors including the teacher's education and motivation, curriculum, and classroom contexts that are also critical for effective classroom practices

The same teaching experience was observed in Sigimba's classroom practices. The teacher portrayed to have a thorough understanding of LCT practices which could not be realised in the classroom practices. In his own words, Sigimba described his teaching experience thus: "my long and extensive teaching experience plus the varied professional training I have undergone have enlightened my conceptualisation of classroom instructional planning and therefore my teaching practices". On the contrary his teaching practices did not reflect his understanding and experience of LCT. Based on the instructional methods used and students' level of classroom engagement, it was evident that the teacher dictated classroom practices. Students were seldom given opportunities to reflect and link their life experience within the respective subject topics. Classroom observation was evidenced by teacher-centred teaching in which the lecture method dominated classroom instructional processes.

The researcher's classroom observation of Sigimba's teaching demonstrated that when students were given opportunity to share their pre-existing experiences on the subject, students' reflections on the subject matter revealed their deep understanding of the topic. For example, using experience from one of the student's home villages regarding agricultural development, the student shared her concern about how physiological and biological factors influenced agricultural development. She observed that the climate changes might have caused changes in the agricultural patterns and productivity of the area. The student further commented that: "In my opinion, something wrong might have occurred within the soil. Otherwise, we need to think about the influence of climatic changes experienced over the years on the soil fertility".

Students' reflections about factors affecting agricultural production suggested students' extensive geographical experience that is not incorporated in the classroom processes by teachers who dominate their pedagogical practices. According to Meyer (2004), students' prior knowledge is an important factor in influencing knowledge construction. The researcher argues that teacher's passive engagement of students in classroom practices suggested lack of understanding of student's mental cognition in the process of knowledge construction.

Findings from all three cases revealed challenges that constrained effective implementation of LCT. For example, Marco shared the challenges he faced in teaching to include: teaching in large classes ranging between 65-100 students and limited teaching resources such as text and reference books, computers, and projectors. The same reflection was presented by Agape during the mini interview sessions which sought to explore more information about her instructional processes. Teacher's concerns regarding classroom practices were based mainly on a lack of instructional resources and students classroom capacity. The teacher supported her use of lecture method noting that: "I teach in a class with 134 students. It is very difficult to involve students in a teaching process based on learner-centred teaching principles". The teacher added that, if she opted to apply LCT, she found used a lot of time which affected timely completion of the syllabus. Explaining the shortage of instructional materials the teacher lamented: "It is very challenging for the teacher to practice LCT in teaching and learning environment where there are no books, internet services and teaching and learning models".

It could be said that teacher-student ratio and availability of resources are significant factors in enhancing teachers' ability to involve students in classroom practices. Lack of teaching resources could also imply teachers' lack of creativity to involve students and in ability to use locally available resources in their classroom instructions.

Moreover, Agape expressed her concern regarding lack of English amongst students. The teacher reported it was difficult to implement LCT especially in the lower classes. The teacher emphasised her experience on this stating that: "My students are not good in English. They fail to construct correct and meaningful sentences about

what they know regarding certain geography concepts and conceptualisation of geographical ideas”.

Sigimba lamented on the shortage of geography teachers suggesting that the shortage resulted in combining four class streams into one class of up to 180 students. He perceived LCT as a challenging instructional method especially when applied in overcrowded classes. The teacher put his experience of LCT in an emphatic disposition: “It is a very challenging teaching approach especially in a class of many students with a lack of teaching and learning resources”. The teacher went further stating that: “Due to a lack of geography teachers, we usually combine about four class streams in a single class of up to 180 students. It is very difficult teaching in this large class using a learner-centred approach”.

This implies the need to address issues of classroom contexts for effective implementation of LCT. Findings across cases indicated important aspects for discussion. These aspects included: the nature of the curriculum, English as a medium of instruction, teaching in large classes and teaching resources and facilities, teachers’ knowledge of students’ mental cognition, and the role of information and communication technology (ICT) in teaching.

Teachers’ evaluation of classroom instructional practices

Based on findings, teachers’ achievement in pedagogical practices was determined by the level of students’ performance in instructional objectives. Teachers’ evaluation of their pedagogical practices was more outcomes based than classroom processes as suggested by critical pedagogues, constructivist theorists, and teacher educators. For example, Marco explained his orientation for assessing whether or not students grasped the subject matter content based on the instructional objectives. Marco suggested that he examined students’ understanding of subject matter, by providing individualised and group assignments, questions and answers and weekly and monthly tests. According to Marco, when more than 80 percent of students performed above 70 percent in their take home or classroom assignment and tests, he considered students grasped the expected learning outcomes and therefore, the classroom instruction was achieved. This could mean that teacher’s interpretation of LCT was underpinned by students’ ability to reproduce the instructional objectives

and not their involvement in knowledge construction processes. It could also be conceived that the curriculum and curriculum materials dictated teacher's evaluation of instructional practices. Marco's teaching practices were determined by students' ability to reproduce the readymade instructional objectives without consideration of students' ability to link the subject matter with their diverse experiences in order to foster knowledge construction.

Similarly, Agape's evaluation of classroom instructional practices was based on learners' achievement in the specified objectives across subject topics. The teacher reported that evaluation of such instructional objectives was based on the extent of student's contribution to questions and answers about the topic. Other evaluation of classroom instructional practices criteria according to the teacher depended on students' achievement in individualised tests and assignments and students' ability to use instructional models such as diagrams, maps, charts, and figures to explain different concepts. This suggested that the focus of teacher's evaluation of classroom practices was to examine students' achievement in the instructional objectives based on their ability to reproduce them. For example, Findings from the teacher's lesson plan stated:

Before instruction

By the end of the topic, a student should be able to identify different uses of water without the teacher's or student's' notes. A student should also be able to explain water management strategies and techniques for sustainable water supply

After the instruction

The lesson was understood by approximately 85 percent of students in class. This is because, the majority of students identified uses of water without referring to either teacher or student notes. Most students explained with confidence about water management strategies and techniques for sustainable water supply. Students participated effectively in the discussion about water uses and management. Next time, I will introduce a new topic about.....

According to the teacher's classroom evaluation, it was evident that the achievement of classroom processes was determined by the ability of students to reproduce the instructional objectives-the end results of classroom processes. This kind of evaluation suggested that the teacher's classroom evaluations were not interwoven

within the teaching processes thus neglecting students to take part in the knowledge construction.

On some occasions during classroom instruction, Agape used questions such as “is it clear?; any question so far?; any doubt?; and who has not understood about.....?”. The question was how the teacher’s questions and questioning technique predicted students’ involvement and knowledge construction based on constructivist approaches. It appeared that teacher’s questions and questioning techniques needed discussion in line with both CP and LCT beliefs. The questions asked did not seem to influence students’ reflective and critical behaviour as proposed by different scholars of CP and LCT. In other words, Agape’s evaluation of classroom instruction focused on students’ mechanical achievement in the respective instructional topics rather than development of students’ meta-cognition as supported by scholars from both CP and constructivist LCT across this thesis.

Sigimba’s evaluation of classroom instruction suggested the need to build student performance and learning competencies in the prescribed instructional objectives. For example, in the topic of “human population”, the teacher’s evaluation of classroom instruction stated that by the end of the lesson a student should be able to: “Define population structure; describe the concepts of age and sex, birth and death rates; and show the influence of each population aspect on the population structure”. This kind of assessment implied that the teacher’s evaluation of classroom instruction was determined by students’ instructional achievement of predetermined instructional objectives and not their involvement in knowledge construction processes.

With respect to in-class activities, during classroom observation, it was observed that Sigimba’s teaching practice varied from class to class. The nature of teaching orientation seemed to affect the teacher’s evaluation of instructional processes. It was evident that the more the teacher actively involved students in instructional processes, the more the chances he assessed his teaching practices. The change of teacher’s instructional approaches was seen to be influenced by student feedback from either individualised or group classroom activities. This could mean that,

effective teacher's evaluation of classroom practices are determined by, the type of evaluation and the level of students' engagement in the classroom processes.

However, results from all research instruments regarding Sigimba's evaluation of classroom instructional practices suggested elements of curriculum dominance in instructional processes. Therefore, like Marco and Agape, it appeared that Sigimba's evaluation of classroom practices was shaped by the curriculum requirement which included the need to ensure students achieved learning intentions and competencies specified in the syllabus.

Summary of data analysis from research site one

Teachers demonstrated comparable perceptions and experience regarding implementation of LCT approaches. Throughout three case studies, teachers presented understanding of LCT based on students' involvement in the teaching practices. Teachers however, presented pedagogical similarities and differences within instructional topics and from one topic to another. According to the findings, implementation of LCT encountered challenges ranging from the nature of curriculum, the medium of instruction, lack of instructional resources, and class sizes. Other challenges included teacher shortages; teachers' limited understanding of students' mental cognition; and the need for teachers' in-service training for LCT and improvisation of instructional resources. Limited English proficiency and teacher-student power relationships were also significant pedagogical challenges observed. Across all case studies, it was evident that students' culture was less considered in the teaching and learning processes. Lack of consideration of students' culture affected in the same way the teachers' effective implementation of LCT.

Data analyses from research site two.

Research site two comprised three cases namely: Amos, Daniel and Frida. Teachers' perceptions and experiences regarding implementation of LCT geography curriculum were analysed based on research questions as follows:

Teachers' understanding of LCT

Case studies perceived LCT in terms of several factors namely: focus of classroom instructional processes; students' prior knowledge; classroom activities; time assigned for students' involvement; and teacher's role in LCT. The main concern across case studies was students taking charge in the learning process.

Besides the varied understandings of what is meant by LCT, Amos' understanding of LCT focused on providing students with classroom activities and promoting students' confidence. "LCT is when most of the activities in my classroom are done by students and my role as a teacher is to guide students to meet learning objectives as outlined in the syllabus". Amos perceived. Amos conception of LCT fell under at least three pedagogical aspects. These were: students' involvement in classroom activities; the teacher guiding students; and accomplishing learning intentions. The teacher's understanding of LCT meant that the role of the teacher is that of a facilitator of students' learning processes (Fosnot, 1996; Von Glasersfeld, 1995; Wink, 1997). Daniel on the other hand conceived LCT as based on the students' construction of knowledge. For Daniel, LCT is when students have enough time to discuss, ask and answer questions under the teacher's facilitation. According to the teacher, when students are provided with opportunities and enough time to share their prior knowledge and experiences, they can construct knowledge of the subject and prepare their own instructional notes. Daniel's understanding of LCT implied the need to provide opportunities and time for students to make meaning of the subject. It also implied the need for application of instructional methods which promote students' freedom and reflective practices, which, Dewey (1966) and Freire (1972) refer to as "praxis teaching". Frida also presented her understanding of LCT as: "... teaching methods that place students at the centre of classroom instruction". Based on the teacher's understanding of LCT, it could be argued that students in LCT determine the teacher's instructional practices, that is, the subject content to be taught, instructional objectives, instructional methods and resources, classroom activities and teachers' evaluation artefacts.

According to Frida, LCT requires students to participate in individualised or group based classroom activities, fieldtrips, and outdoor projects. Frida's conception of

LCT exposed issues such as: students' knowledge base; classroom activities and instructional resources; adherence to instructional objectives; and classroom management. Thus, in order to understand the implementation of LCT in Tanzania, it appears logical to discuss these pedagogical concepts in line with constructivist LCT beliefs.

The understanding of LCT across case studies suggested one main shared pedagogical aspect, that is, a shift in instructional approach from teacher-centred to learner-centred. Teachers conceived the shift in teaching approach implied increased students' involvement in the instructional process. However, case studies demonstrated variation in their understanding of LCT based on the level of students' involvement. Case studies' variation was determined by a range of similar factors which included: focus of classroom instruction and role of students' prior knowledge in instructional processes; syllabus completion and the need for students to achieve instructional objectives; classroom organisation and management; instructional methods and resources; classroom activities; time for students' involvement; and role of the teacher. It was noted that each case study presented an emphasis on some of these pedagogical aspects.

Teachers' pedagogical reasoning and decision-making during the planning process

Findings across case studies portrayed pedagogical decision-making to be informed mostly by the subject syllabus. Other pedagogical aspects that influenced teachers' pedagogical decision-making included: instructional time; the syllabus package; students' instructional needs; students' ability to respond to school and national examinations; class size in relation to students' classroom activities; instructional resources and methods; and teachers' evaluation artefacts. Though case studies presented pedagogical considerations in different perspectives and different tones, they all focused on students' understanding of instructional topics as per instructional objectives.

Findings by case study showed that Amos' instructional decision-making ranged from consideration of students' needs, subject topic content, and instructional

objectives. Other factors included availability of instructional resources, selection of appropriate instructional methods and strategies, consideration of students' classroom activities, assessment protocols of classroom instruction, and instructional time for each subject topic. Teacher's pedagogical reasoning and decision-making implies that implementation of LCT is a function of multiple factors. However, in accomplishing the classroom practices, the teacher needed to adhere to the subject syllabus and examinations format. This could mean that teacher's decision-making processes were outcome-based and not process-based, neglecting students' consideration in knowledge construction. According to the teacher, the syllabus provided instructional objectives which students needed to achieve before they sat for terminal or national examinations. Teacher's teaching practice focused to help students pass their examinations and not to promote students' critical perspectives and reflective teaching. Therefore, teacher's consideration during planning for classroom instructional practices focused on the need for instructional practices to enhance students' achievement of the readymade instructional objectives.

Similarly, Daniel's pedagogical decision-making was directed by the need for classroom instructional planning and practices to be tailored to both internal and external examination formats. It appeared that the syllabus not only dictated teacher's instructional decision-making but also it was examinations oriented. "among other aspects, I consider students' classroom tasks, teaching and learning resources, and the teaching and learning methods". The teacher said. This meant that teacher's preparation for classroom practices were reflected by the need to support students in order to be able to reproduce instructional objectives as guided by the syllabus. This is contrary to the CP which requires teachers to foster students' understanding of the world based on their diverse experience and knowledge they bring to school (Dewey, 1916; Freire, 1970/1994; Simon, 1987). The teacher's responses implied his instructional practices focused on enhancing students' outcome-based performance and not on promoting problem-solving and critical thinking skills amongst students as advocated by critical theorists and constructivist theorists.

Likewise, Frida's pedagogical decision-making was influenced by the quest to meet curriculum instructional requirements. The teacher was concerned with the way the

syllabus was structured. She reported that the syllabus limited students' sharing of their experience. According to the teacher, the syllabus was not only overloaded but it was also composed of topics which did not reflect students' environment. In other words, the syllabus divorced integration of students' cultural experience in the classroom practices. The teacher was also concerned with teaching large classes suggesting that it was challenging to think about classroom activities which would attract active involvement of students. The teacher pointed out that due to large classes she ended up designing large classroom tasks whose close follow-up and management was not effective. It appeared that class size was a significant factor in the effective implementation of LCT.

In summary, teachers' pedagogical decision-making during planning for classroom instruction practices demonstrated a focus on the syllabus and the need for students to acquire instructional competencies as per instructional objectives. All case studies presented pedagogical decision-making being determined by aspects such as: the nature of curriculum, class size, instructional methods and resources; classroom activities, instructional time, and evaluation artefacts.

Teachers' teaching practices

Amos, Daniel and Frida presented similar pedagogical practices. Findings reported case studies to have profound academic grounding of geography as a subject which is significant in the implementation of LCT. Teachers demonstrated mastery of concepts and spatial distribution and relationships of geographical phenomena. However, teachers presented slight variation in the implementation of the LCT. Evidence for such differences can be seen in the level of students' involvement in instructional practices.

For example, Amos began the topic by having a discussion with students regarding previous topics. According to Amos, practices of previous topics served two purposes, namely: ensuring students were clear with the past topic in order to connect to the new topic and creating enthusiasm for participation in the lesson. This meant that the teacher was aware of the role of the students' knowledge base and motivation in building understanding of new concepts and promoting students'

dialogue and critical thoughts. According to the teacher, seeking students' level of knowledge acquisition and including existing experience in the new topic intended to attract students' attention and directed their thoughts to the respective instructional topic. Teacher's integration of students' prior knowledge in teaching seemed to enhance classroom organisation and management for improved classroom practices.

Like Amos, Daniel commented that all instructional practices needed to respond to the instructional objectives provided by the syllabus. Just like Daniel and Amos, Frida experienced syllabus requirements to influence her instructional practices. It appears that teachers' reliance on the syllabus objectives in their pedagogical practices limited their flexibility and involvement of students in the instructional processes. However, besides syllabus domination in the teachers' pedagogical practices, setting of instructional limits for students could be an important opportunity for the teacher to promote students' acquisition of geographical skills and experiences based on the educational priorities as enshrined in the Tanzania 2025 development vision (GovURT, 2000). Nevertheless, an important question is to what extent such curriculum is inclusive of students' diverse experiences. The answer to this question would inform us as to whether or not the nature of curriculum triggers or stifles implementation of LCT.

Teachers were concerned that the geography syllabus was not only overloaded but also consisted mostly of instructional topics that did not reflect the students' environment. Teachers' experiences regarding implementation of the syllabus suggest the need for syllabus innovation in terms of its content in order to reflect the day-to-day students' experiences thus promoting students' engagement in the construction of knowledge. Furthermore, teachers' experience over syllabus composition reflected the need to address both teacher and secondary education geography syllabi. This would enhance compatibility of instructional aspects within the syllabus and across disciplines and it would address the challenge of curricula mismatch between teacher and secondary education.

Similarly, Amos, Daniel and Frida's instructional practices used similar instructional approaches. The teachers' used instructional methods including: lecture method; questions and answers; group discussion and take home assignments. Other

instructional aspects considered included: class size and instructional resources; students' prior knowledge; and students' class levels. Based on the findings, it was evident that the use of instructional approaches affected the practice of LCT in the same way. For example, Amos' teaching practices showed little evidence of students' involvement in either classroom, outdoor, or evaluation activities. During observation of classroom instruction, the teacher used mostly lecture and questions and answers methods. He rarely applied group discussion. Few students got chances to ask and reflect on some questions. Classroom observations demonstrated that the teacher began a lesson by asking students for feedback on a previous lesson. From observations, it was apparent that students lacked English grammatical and structural proficiency. Students made several grammatical and structural errors as they communicated their thoughts. The researcher observed that the teacher was also not fluent in English. The teacher sometimes had to code-mix and code-switch between English and Swahili. He reported that code-mixing and code-switching necessitated students to understand concepts and ideas of the topics. Based on this teacher, it appeared that a number of factors including availability of teaching resources, language barrier and class levels affected his teaching. Students' lack of involvement due to inability to communicate effectively in English led to their alienation from their native language - Swahili - which they could otherwise have used to communicate their experience in the construction of the knowledge. Critical and cultural scholars argue that language is an important tool which individuals use to communicate their thoughts and cultural heritage including norms, values, and the way they relate to the environment (Gregg & Leinhardt, 1994; Lantolf, 2000; Vygotsky, 1986). Gay (2000) recommends the curriculum that is based on students' language. He suggests that such a curriculum promotes students' participation in building understanding of the world. Amos presented a number of challenges he faced in his pedagogical practices: "there are not enough trips because of financial difficulties. My class is overcrowded; I teach classes of over 80 students. It is hard to let all learners share their experience in the construction of knowledge" Considering the teacher's challenges, it could be suggested that the school and classroom contexts shaped his teaching practices. It seems logical that in order to implement LCT effectively, school support and class size are important factors to be considered.

Regarding the preferred methods of classroom instruction, Daniel on the other hand reported: “depending on the class size, I prefer group discussion, question and answers and lecture method”. The teacher emphasised that: “due to the acute shortage of instructional resources and existence of large classes, I prefer mostly lecture method to the rest of the instructional methods”. Daniel’s lamentation suggested that the implementation of LCT was undermined by multiple factors including the nature of the classroom context. Teacher’s teaching practice was evidenced by his flexibility in approaches from teacher-centred to student-centred. It was noted that when the teacher gave students chances to share their experiences, students made critical reflections. For example, sharing an understanding of the hydrological cycle, one student observed:

there must be an interdependence of the nature of the hydrological cycle processes that sustain the cycle. My opinion is that in any process such as: evaporation, transpiration, condensation, and precipitation, man is responsible for change of these processes hence affecting the hydrological cycle.

The student’s contribution on the hydrological cycle suggested her acquisition of relevant experiences about geography and its related phenomena. It also suggested the student’s ability to relate knowledge across disciplines. Daniel’s reflection regarding implementation of LCT suggested his awareness of the need for students to work independently and that in such circumstances, the teacher’s role, as facilitator was critical. The teacher reported that teacher’s guidance was important in order to direct students’ reflections towards attainment of instructional objectives. The teacher’s instructional experience raised some pedagogical aspects, which needed discussion in line with LCT beliefs. These aspects included: class size; instructional resources; fiscal resources; instructional objectives and examination requirements; and time for teacher’s instructional planning and practices. According to the teacher, these pedagogical aspects determined not only the methods of instruction but also affected the level of students’ participation in the classroom processes.

Frida presented subject topics integrating knowledge from different disciplines and communities. The teacher’s teaching practices on agricultural activities and their impact on socio-economic, cultural, and political development though dictated by teacher-centred approaches, were based on practical examples from the Tanzanian,

East African, African regions, and global contexts. Frida's main concern was the teaching and learning environment, which seemed unsupportive in the implementation of LCT. When asked how she applied LCT approaches, the teacher observed: "apart from direct instruction, I organise group discussion, questions and answers sessions as well as field visits to let my students be actively involved and understand the lesson". Teacher's pedagogical practices could imply a mixture of teacher-centred and learner-centred approaches depending on the classroom situation and the need to orient students in the real world. Frida was much concerned that employing LCT lead to failure in completing the syllabus. The teacher reported that, it was necessary to complete the syllabus in order for students to do their examinations well and that was the mission of each subject department and the school in general. The teacher's teaching experience suggested also that classroom instruction practices were focused on supporting students' to achieve the instructional objectives including preparing them for examinations-teaching for outcomes and not for empowering students with a critical mind and reflective thoughts. Different from other case studies in this research site, the teacher, among other pedagogical aspects, information and communication technologies (ICTs) was considered critical in the implementation of the LCT approach. Classroom observational findings suggested existence of instructional environments which suppressed teacher's pedagogical effectiveness. It was noted that some students did not concentrate in their discussion. Despite limited instructional resources as observed by the teacher, an unorganised and inappropriate management of students' group discussion resulted in limited student participation in instructional processes contributing to an unfriendly classroom environment. This suggested the need to address classroom organisation and management in order to improve classroom practices.

Based on the findings within case studies; the following pedagogical issues were raised: students' involvement in instructional practices; curriculum content, relevance and examination base; teachers' substantive and syntactic knowledge; classroom instructional activities; role of students' existing experience in knowledge construction; and language use in LCT. Other pedagogical aspects included class sizes, instructional resources, and more importantly geography and secondary education curricula mismatch.

Teachers' evaluation of classroom instructional practices

Findings across case studies reported evaluation of instructional practices depended on students' achievement in individualised assignments, weekly and monthly tests as well as students' performance in term examinations. From the findings, it was evident that teachers assessed their pedagogical practices based on results of instructional processes and not instructional processes themselves. Such evaluation of pedagogical practices alienated students' effective involvement in the evaluation processes. The CP, LCT theorists, and educators suggest teachers' use of authentic assessment which are realistic, contextually based, and which stimulate students' self-regulation and reflective practices.

Based on the findings across research instruments, it was evident that teacher's evaluation of classroom instructional practices took place mainly separately from the instructional processes. The main objective was to measure students' achievement in the instructional objectives and not the instructional process itself. This implied that teachers' understandings of LCT did not consider students' involvement in the evaluation of classroom instruction. For example, when asked how he evaluated his instruction practices, Amos noted: "I usually use assignments and tests to determine whether students achieved the learning objectives or not. I alternatively work on other LCT methods in order to ensure students acquire all instructional objectives". Based on teacher's evaluation of classroom instructional practices, it was evident that timing of evaluation and pedagogical considerations not only isolated students from evaluation process but also the process of evaluation focused on specific readymade pedagogical objectives. This implies logically that neither the subject syllabus nor the teacher integrated students' experience in the evaluation of classroom instructional practices. Teacher's reflection regarding evaluation of classroom instruction informed further that outcome-based pedagogical results underpinned the evaluation process and not the in-process pedagogical practices as reflected by constructivist LCT beliefs. This presented discreteness between evaluation and teaching processes, accordingly, affecting students' involvement in knowledge construction processes. In one of the teacher's teaching evaluation artefacts, Amos presented evaluation of classroom instruction as follows:

The lesson was understood by 80 percent of the students. This is because: students participated well in the lesson by asking and answering questions posed to them, and performed well the assignment given regarding the topic of water cycle.

The teacher's evaluation of classroom instructional practices did not show the level of students' engagement in the lesson and the degree of students' performance in the respective assignments and/or tests. Teacher's evaluation processes portrayed his focus on the instruction outcomes neglecting integration of students' instructional diversity in terms of needs and experiences in the construction of new understandings of the topics. LCT and CP theories require students throughout classroom instruction to be involved in critical thinking and problem-solving activities that support them to transfer and connect their experiences of the world (Dewey, 1966; Freire, 1970; Giroux, 1997; Roberts, 2010; Von Glasersfeld, 1996). Similarly, classroom instructional assessments need to be student-centred, that is, one which inform and regulate instruction and not sort-out students based on their good or poor performance.

Like Amos, Daniel's evaluation of classroom instruction included assessment of students' involvement in instructional practices and performance across classroom activities. The teacher reported that students' evaluation artefacts were designed to assess students' achievement in the instructional objectives. When asked how he evaluated his classroom instruction practices, the teacher observed that: "I use questions and answers; I provide assignments and tests with immediate feedback". The teacher reacted to a similar question that: "I assess my teaching processes by examining students' performance on tasks given and their ability to theorise and recall the formal tasks provided". The types of teacher's assessment of classroom instruction implied students' involvement and performance in the subject topics formed the underpinning assessment criteria. However, the teacher seemed to involve students in some instances of classroom instruction when he observed: "I usually administer questionnaires and interview checklists to students in order to find out the difficult areas. I also assign tests and check students' feedback regarding the subject matter". The teacher argued that before he could start a new topic, he was interested in understanding what students already knew about the topic. He suggested that he had to re-teach any area of difficulty if students seemed not to understand the

respective instructional aspects. It was evident those students did not participate considerably in the evaluation processes. Most evaluation activities were done separately from the instructional processes with the aim of assessing whether or not students achieved the instructional objectives as per the syllabus guidance.

Frida's evaluation of classroom instruction was also based on what went on amongst students. The teacher preferred questions and answers method to other evaluation tools. Her preference of questions and answers method was seen during classroom observation. As she lectured a particular topic, the teacher asked questions: "understood, or any question so far? Some students replied 'yes' others 'no'". She then invited students to clarify the respective concepts. Students who needed some more clarification about a particular aspect raised their hands and the teacher gave them chances to ask or say what they wanted to share. Implied in the teacher's use of questions and answers evaluation technique, is how informative and inquisitive were the questions the teacher asked students? How the timing of students' responses did promote their critical thinking and reflective practices? What about those who did not participate in asking or answering questions? What could be said about the effect of language on students' involvement in the evaluation processes? All these pedagogical aspects needed to be discussed as they seemed to affect both teacher's and students' evaluation of classroom practices. However, contrary to Amos and Daniel, Frida seemed to involve students, though not all, in the evaluation of classroom instructional practices. The teacher accounted lack of involvement of all students in the evaluation of classroom instruction was attributed to time limitation and students' inability to communicate effectively in English. Nevertheless, the need to accomplish instructional objectives underpinned Frida's evaluation methods of classroom instructional practices. This was also reported in the teacher's evaluation reports. Reporting on the topic: factors affecting agricultural development in East Africa, the teacher wrote:

The topic was understood by approximately 95 percent of all students in the class. The lesson achievement was evidenced by students' participation in the class sharing their experience regarding agricultural aspects in general and factors affecting agricultural development in East Africa in particular.

It was evident that teacher's reflection on classroom instruction was based on students' performance–outcome-based - across a range of classroom activities. It appears that the focus of the teacher's evaluation was to support students to achieve the instructional objectives and not to teach them how to build new conceptions of ideas and concepts based on their prior knowledge and diverse experiences as advocated by critical theorists and constructivist theorists.

In summary, findings suggested teachers' evaluation of classroom instructional practices used evaluation tools such as questions and answers, group and individualised assignments, and examinations oriented. Based on findings, it appeared that teachers' evaluation of classroom instruction took place mostly at the end of the instruction processes and that students were rarely involved in the process. Lack of students' effective participation in the evaluation process alienated students from sharing their experiences and their participation in the construction of knowledge.

Summary of data analysis from research site two

Based on the research findings, case studies demonstrated variation in their understandings of LCT and its implications for the instructional practices. Case studies' variation about the constructivist LCT affected their pedagogical reasoning and actions. Nevertheless, findings demonstrated similar pedagogical aspects to underpin teachers' instructional practices. These instructional aspects included the syllabus; instructional methods, resources and facilities; students' class levels and class sizes; English as a medium of instruction; and classroom activities. Other instructional aspects underpinned teachers' pedagogical practices included: instructional time and the need to consider and integrate students' prior knowledge in instructional practices. However, case studies were sceptical regarding effective implementation of LCT considering the nature of the curriculum and the general instructional contexts which did not favour students' active participation. According to the findings, case studies and students were dispossessed from the curriculum and curriculum materials and this adversely affected the implementation of LCT.

Data analyses from research site three

Research site three comprised three case studies namely: Steven, Heri and Gregory. Teachers' perceptions and experiences regarding implementation of LCT geography curriculum were analysed as follows.

Teachers' understanding of LCT

Teachers presented their understanding of LCT in terms of interaction in teaching practices and teaching the subject matter from what students already know to what they don't know. Though teachers suggested a varied understanding and emphasis of LCT, they all focused on increasing chances for students to share their thoughts about the topics.

For example, Steven understood LCT as: "... an active interaction between teachers and learners and among learners. It also includes interaction between learners and subject content and the teaching and learning materials". Teacher's understanding of LCT implied the kind of teacher-student relationship in the teaching process. That is, in CP terms, the teacher-student power relations where each individual has equal stake in constructing meaning of the world. It implies that to realise students' effective involvement in the knowledge construction, there should be a classroom democracy where a teacher and the students freely communicate their thoughts about the topics. Based on CP, LCT should promote students' active involvement through meaningful dialoguing (Freire, 1970/1998; Hershkowitz et al, 2001; Pennycook, 1999). Teacher's perceptions of LCT also reflected the role of teaching resources for improving classroom practices.

Heri described LCT as the type of teaching method whereby a teacher starts from what his /her students know to unknown. The teacher reported to stimulate students using question and answer method or assigning tasks to his/her students in groups and giving them opportunities to present what they have discussed. Teacher's understanding of LCT seems to suggest the role of the teacher, that is, to encourage students to discover and construct knowledge by themselves. According to the teacher, student construction of knowledge and/or discovery occurs when the teacher and student engage in an active dialogue-Socratic teaching. It could also mean that in

LCT environment, teachers should present information to be learned in an appropriate format for the learner's current state of understanding. This is also how Gregory conceptualised LCT.

According to Gregory, LCT is a type of teaching approach where the teacher explores what his students know about the subject matter before actual facilitation of the topic. The teacher perceived that in LCT, learners are provided with more chances to reflect on what they understand about the subject. This is based on the premises of CP. Critical theorists argue that when students are involved in critical reflection about the subject matter, they are in a better position to transfer and integrate their prior knowledge and experiences across disciplines and beyond the school. In this way, students are involved in meaningful knowledge construction that is worthwhile in informing and transforming the society (Freire, 1970; Giroux, 1997). However, the teacher reported that with LCT, students considered they know more about the topics than their teachers and that the teaching approach caused severe classroom disorder. Teacher's anxiety about LCT could imply teachers' desire for a continued teacher-student authoritative relationship, the banking model of teaching, and discontent against the implications of LCT in the classroom practices such as the transfer of instructional authority. It also suggests the need for understanding of the concepts of classroom management and organisation in relation to LCT.

Findings across case studies presented pedagogical aspects which needed discussion in order to argue the implementation of LCT in Tanzanian secondary schools. They include the role of students' prior knowledge in the knowledge construction; students' involvement in teaching; syllabus composition and time management. Other pedagogical aspects include teacher-student power relations; classroom organisation and management; teacher-student ratio; and instructional methods and resources.

Teachers' pedagogical reasoning and decision-making during the planning process of classroom teaching

The findings indicated teachers' quest to facilitate students with specific skills and knowledge in order to achieve the instructional objectives. In order to facilitate such instructional objectives, each teacher considered some pedagogical aspects deemed significant.

According to Steven, his pedagogical decision-making focused on the active engagement of students in the classroom processes. The teacher emphasised his focus regarding pedagogical decision-making observing that: "when making instructional decisions, my main concern is to support students in the construction of knowledge". This seems to indicate the teacher's awareness that individuals construct their own conception of the world and that teacher's role is to create classroom conditions that promote students' involvement in the classroom processes. The teacher reiterated that he was keen to ensure instructional decision-making reflecting the instructional topic and specific objectives as guided by the syllabus. In order to plan classroom instruction effectively, the teacher was concerned with some pedagogical aspects such as instructional resources and methods, instructional strategies and techniques, the use of a Socratic questioning method and student's classroom activities. The teacher's concern was that he was required to tailor his decisions based on the syllabus requirements regardless of its lack of relevance to the students' contextual experience. According to the teacher, the syllabus dominance adversely affected students' participation in the classroom processes. Against curriculum domination, one of the premises of CP is that, curriculum and curriculum materials should be based on the students' day to day life, and experience and that teachers should use different instructional approaches to enhance learning to all students (Degener, 2001). This suggests the need to address the challenge of curriculum if the implementation of LCT should become a reality. Similarly, Heri's consideration during pedagogical decision-making focused on the achievement of instructional objectives and building instructional competencies among learners.

Gregory's pedagogical decision-making was reflected in the lesson objectives and the proposed learners' competencies to be achieved. Other instructional aspects

considered included: availability of teaching and learning resources; learner's prior knowledge; teacher's and students' classroom activities; and the syllabus package with respect to instructional time.

In short, teachers' pedagogical decision-making during planning for classroom instruction raised issues including the nature of the syllabus and syllabus materials; instructional time; students' prior knowledge and knowledge construction; and instructional methods and resources. Other pedagogical aspects include: consideration of instructional context; classroom organisation and management; and instructional activities. These pedagogical aspects are analysed in line with other aspects across research questions leading to the development of key themes for discussion in the following chapter.

Teachers' teaching practices

Case studies demonstrated concern about implementation of LCT focusing on students' involvement in the teaching processes. Case studies however varied in terms of pedagogical emphasis with regard to student involvement. While Steven's practices focused on facilitating students to construct knowledge on their own, Heri focused on exposing students to real environments. Heri was also concerned with the role of students' background knowledge in building understanding of new geographical concepts and ideas. Gregory was concerned with the use of participatory teaching methods such as questions and answers and group work in order to promote knowledge construction amongst students. Nevertheless, teachers' experiences of LCT suggested their understanding of the need for students to participate actively in the construction of new conceptions of the topics based on their existing experiences (Brooks & Brooks, 1999). According to Brooks and Brooks, teachers who practice LCT based on constructivist teaching orientation would mainly promote autonomy among learners. They state that autonomy encourages learners to work independently in the struggle for knowledge construction. Based on CP, students' pursuits for knowledge construction are enhanced by their existing life experience and prior knowledge of the topics. Therefore autonomous learners would learn effectively when teachers and the learning environment promote students to freely construct knowledge out of their

diverse experiences, learning needs, and prior knowledge (Kincheloe, 2005; McLaren, 2003; Shor, 1996).

Heri for example was concerned with seeing students receive first-hand information regarding the topics. Based on teachers' interview findings, students were motivated with classroom instruction that exposed them to the real geographical phenomena and which allowed them to link the phenomena with their experience. The teacher further reported that when students were involved in the construction of knowledge, the classroom instruction was active since students shared freely what they understood regarding the subject matter. The teacher suggested his application of LCT stating that:

I apply learner-centred teaching principles by involving learners in the teaching processes and using teaching and learning facilities such as maps, students' classroom demonstrations, real objects, fieldtrips whereby students get exposed to the actual environment.

The teacher reiterated the preferred instructional methods including: questions and answers, fieldtrips, guest speakers, group assignments and lecture methods. Classroom observation findings demonstrated the teacher's use of questions and answers, lecture methods and take home assignments. In all observation sessions, the teacher introduced the lesson using questions and answers. Volunteering students reflected the subject matter sharing what they knew about the instructional aspects. The researcher observed that students volunteered to share their experience especially when given chances. However, teacher's wait-time for students to respond to questions seemed to be limited. The teacher interrupted volunteering students before they could finish reflecting about a particular geographical aspect. According to the teacher, the aim was to ensure many students got chances to share their experience without compromising the limited instructional time. It was also observed that some students did not get involved either in answering questions or asking questions. The teacher commented that some students lacked sufficient English to communicate their thoughts. He reported to experience difficulties involving all students using oral questions and answers.

Gregory presented his application of questions and answers and group activities in order to influence students' participation in the instructional practices. According to

the teacher, the focus was to promote students' engagement in the instructional processes. The teacher experienced students' motivation to learn when they were given opportunities to perform instructional activities. The teacher's experience regarding LCT classroom practices posed issues of students' guidance and motivation. According to the teacher, LCT needed students to be guided and encouraged to participate effectively in the instructional processes. The teacher shared that the teacher was responsible to shape students' thinking in a manner that knowledge was created within the framework of the syllabus requirements.

Gregory's classroom observations were evidenced by students' active participation in the instructional practices. Many students volunteered to reflect on the questions posed by the teacher and other students. Volunteering students were able to connect the instructional aspects with their lived experiences. Integration of students' experience occurred mostly when the teacher broke the subject topic into bits and then asked students to reflect on it from what they already knew. The teacher believed that when the student linked his/her existing knowledge to the instructional topic, the student was able to make conception of the respective topic and build longer lasting memory. It was experienced that the teacher always related students' reflections with socio-economic and political situations in Tanzania, Africa and across the world.

In the implementation of LCT, teachers were concerned with the challenges that constrained students' involvement in the instructional processes. According to Steven, the structure and composition of the syllabus, lack of geography teaching resources and teaching in inclusive classes created challenges which needed to be addressed. The teacher reported that the syllabus not only presented repetition of some topics, but also presented confusion in conceptual understanding of some geographical concepts. The teacher mentioned confusion in the composition of the 'Earth structure' among authors as one of the examples. Heri noted challenges he faced stating that: "I teach in overpopulated classes ranging from 70-100 students per class. There are no text and reference books". The teacher experienced that it was very challenging to implement LCT approaches given the instructional context which did not favour students' involvement in classroom practices. As for Steven and Heri, Gregory presented challenges that constrained effective implementation of LCT. The

challenges ranged from teaching in large classes with resource constraints, teaching in inclusive classrooms, lack of language proficiency amongst students, and the nature of the curriculum and syllabus overload. Other instructional challenges according to the teacher were the misconceptions by authors in some geographical concepts and/or phenomena and the limited instructional time. Based on teachers' experiences, it appears that the instructional delivery contexts in Tanzanian secondary schools are not supportive for effective implementation of LCT. As presented by similar studies, implementing LCT in Tanzania implies the need to employ an integrated approach to address challenges facing teachers in their pedagogical practices. Therefore, it is presumed that, addressing those challenges will motivate teachers to implement the mandated LCT geography curriculum. Students will also be in a better position to participate effectively in the classroom processes.

The researcher's field experience showed that apart from teacher-centred methods teachers predominantly relied on the questions and answers and group discussion. Besides reliance on those instructional methods, more often, teachers initiated questions and discussion problems for students. This implied that students' sharing of experience was narrowed to the kind of questions and problems teachers posed to them. The researcher experienced also that teachers did not provide enough time for students to reflect on a particular instructional concept. Teachers' questioning and the nature of group discussion did not provoke critical and creative thinking among students as advocated by CP theory and constructivist theorists. Teachers asked closed questions which were limited to short answers such as 'yes' and 'no' answers; sometimes questions required students to provide brief explanations. Examples of teachers' questions included: 'is it understood?'; 'is it clear?'; or 'who can define...?' Organisation of group discussion did not encourage students' effective participation. The researcher experienced that few students participated in group discussion. Student participation in group discussion suggested teacher's lack of classroom organisation and management consequently attracting students' lack of attention and focus. It was also experienced that class sizes attracted large group discussion which demanded teachers' creativity and classroom organisation skills for effective LCT.

From the researcher's field experience and LCT based on the lenses of CP, it could be suggested that effective implementation of LCT requires teachers' thorough understanding, creativity and practical experience of multiple LCT methods. It also implies that a teacher needs to understand students' diverse, instructional needs, experiences and methods especially in contexts with large classes. More importantly, the teacher needs to understand what it means by LCT in terms of teacher-student power relationship.

In summary, the findings presented pedagogical aspects that needed further discussion. They include: curriculum relevance; teachers' understanding of constructivist LCT; instructional resources; teaching and learning using locally available resources, abbreviated as TALULAR; and LCT methods. Other pedagogical aspects include: classroom organisation and management; teacher-student power relations; and the level of students' involvement in the instructional practices.

Teachers' evaluation of classroom instructional practices

Teachers evaluated their classroom instruction practices based on students' achievement of learning intention as guided by the syllabus, students' participation in the lesson and feedback from the students' facial expression. Teachers modified their practices depending on students' feedback. For example, responding to the question asked how teachers assessed their classroom practices; Steven reported to consider students' performance on the instructional objectives. He suggested the use of different questions within the instructional topic to see if students' reflections presented evidence of knowledge acquisition based on the proposed instructional objectives. The teacher added that students' facial expression also informed him as to whether the subject topic was understood or not. The teacher stressed about students' facial expression stating that: "students' facial expressions with glittering eyes can tell me if they have understood the concept or not".

Heri reported to assess classroom instruction focusing on students' participation on the reflection of the subject matter. The teacher reported to use questions and answers, quizzes, and monthly tests to evaluate the achievement of the instructional objectives. He added that whenever necessary, he administered students with

individual classroom tasks or take-home assignments and checked for students' responses. Likewise, Gregory reported to evaluate classroom instruction based on the extent of student involvement in the classroom processes and performance in tests and term examinations. Gregory stated: "I focus on the role played by students during classroom instruction sessions especially in answering questions, student contribution in group-based activities and student reflection on the subject matter across disciplines". The teacher also suggested using classroom tests and take-home assignments in order to assess the achievement of instructional objectives and thus making informed pedagogical decisions.

Based on case studies' interview responses, teachers' evaluation of classroom instructional practices suggested an outcome-based evaluation which was not interwoven in the instructional processes. More often, teachers' evaluation of teaching practices was examinations oriented, that is, it did not take into consideration students' acquisition of knowledge based on their abilities to reflect and integrate the learned geographical concepts and phenomena beyond the school boundary. According to Nyerere (1967), the practice of educational process should focus on "learning for life", the kind of education which promote creative and critical thinking skills as well as problem solving abilities among learners and thus building instructional competencies in the individual learners. The major objective of classroom processes according to Nyerere is to empower and integrate the individual in her/his society. This means that teachers' classroom evaluation should challenge students' understanding of geographical aspects beyond achievement of syllabus instructional objectives and preparation of students for tests and examinations. Evaluation of LCT needs to be realistic and contextually based, and promote teacher and students' self-regulation, critical thinking, and reflective practices.

Based on the findings, it appears that student's performance in the teachers' evaluation artefacts formed teachers' criteria during the evaluation process of their instructional achievement and thus regulated their instructions accordingly. For example, Steven's evaluation of classroom instruction stated that:

The lesson was understood by 75 per cent of students. This is because students participated well in the lesson by asking and answering questions posed to

them. Students performed well in the assignment given regarding the hydrological cycle.

Similarly, Heri's evaluation of classroom instruction was presented as: "the lesson was well understood by 95 percent due to the following reasons: the students participated well in asking and answering questions; and did well in the assignment provided". As for Steven and Heri; Gregory reported evaluation of classroom instruction practices as:

The lesson was well understood by 97 percent due to the following reasons: successful classroom instruction processes, students participating well by asking and answering questions; and reflecting the subject matter across diverse learning experiences.

This kind of evaluation suggested teachers' reliance mostly on the instructional outcomes based on the syllabus objectives and not the students' learning processes. Based on CP theory, teachers as transformative intellectuals need to use transformative, critical and/or emancipatory ways that fully engage students in the evaluation of classroom practices (Giroux, 1997; Wiggins, 2006). This means that teachers' evaluation of pedagogical decision-making and practice should involve students in critical analysis of geographical concepts and phenomena based on their contextual experience and knowledge base. In this way, students will be able not only to link what is learned in school with the reality but also they will apply the knowledge in their everyday life-learning for living.

In conclusion, it could be said that all case studies demonstrated similar features regarding evaluation of their teaching practices. Findings across case studies suggested teachers' evaluation artefacts to include: oral questions and answers; tests, quizzes and internal examinations; group activities, and take home individualised and group assignments. According to the findings, teachers evaluated their instructional practices based on the extent of student performance in the respective evaluation artefacts. Teachers thus modified their instructional practices depending on the evaluation results. This implied that evaluation of classroom instruction was separate from the teaching practice itself lacking the interwoven nature of evaluation and teaching consequently impacting adversely on the practice of LCT.

Summary of data analysis from research site three

Findings across case studies suggested teachers' understanding of LCT from the viewpoints of students' participation in the classroom practices and knowledge construction, consideration of students' prior knowledge, and teaching the subject based on the students' existing knowledge and experiences. According to the findings, pedagogical decision-making processes by all case studies reflected instructional competencies students needed to acquire as outlined by the subject syllabus. Findings demonstrated case studies' evaluations of classroom instruction were underpinned by teachers' need to achieve instructional objectives. Accordingly, the teachers evaluated achievement of their instructional objectives based on the students' level of involvement in the instructional processes and performance in instructional evaluation artefacts.

Overall, an analysis of findings presented issues which required further discussion in order to better understand geography teachers' *perceptions* and *experiences* in the implementation of *LCT* approaches in Tanzania. The issues which emerged were classified in *two* groups. The *first* group included those aspects needed discussion in order to understand their *influence* on the teachers' pedagogical reasoning and decision-making processes. In this group, the aspects raised include: teachers' *understanding* and the *contested nature* of the *LCT* approach; teachers' *substantive* and *syntactic* knowledge; *language and cultural-context* in *LCT*; teacher-student *power* relation; and classroom *organisation* and *management*. The *second* group included issues seemingly to *adversely* impact teachers' implementation of *LCT* approaches. The researcher identified these issues as *challenges/dilemmas* in the *effective* implementation of *LCT* approaches. They included: teachers' *surface* understanding of *LCT* as reflected by the constructivist learning theory and CP theoretical framework; teachers' *predominant* use of *teacher-centred* teaching approaches with *minimal* evidence of *LCT* features; teachers' lack of *integration* of *learners' culture* in their classroom practices; and *limited English proficiency* among teachers and students. The other dilemmas discussed include: *class sizes, curriculum design, and teacher shortage; shortage* of instructional resources; teachers' *objectives* and *examination-based* evaluation of classroom practices as opposed to *competence-based* evaluation; teachers' lack of *in-service* training regarding *LCT*

approaches; teachers' lack of *motivation* in the implementation of LCT approaches; lack of *cultural*-context curriculum relevance; and evidence of *limited* LCT beliefs within the mandated curriculum documents and teachers' portfolios. These themes are discussed in chapter seven.

Generally, chapter six presented data analysis and the themes that emerged within and across case studies. Therefore, chapter seven presents a discussion of the findings based on the major themes that developed within the perspectives of the related literature.

CHAPTER 7

DISCUSSION OF FINDINGS

Introduction

This chapter discusses the major aspects advanced in the findings analysis, chapter six. In order to successfully present a discussion of the themes, teachers' perceptions and experiences about LCT are discussed and critiqued within literature of a CP theoretical framework and constructivist view of learning. The chapter is organised into three main sections: the first section presents the contestation of significant pedagogical aspects-constructivist view of knowledge, role of language and cultural context in LCT, teacher-students' power relation, and the nature of the curriculum. Other aspects raised include: teachers' substantive and syntactic knowledge and classroom organisation and management. The second section discusses the perceived LCT dilemmas: language barrier; class sizes, curriculum design, and teacher shortage; and shortage of instructional resources. Other dilemmas considered herein include: lack of in-service training for LCT and cultural-context curriculum relevance. The third section is a summary of the chapter.

The contestation of selected themes

Constructivist view of knowledge construction

As discussed in the previous chapters, teachers demonstrated different understandings of LCT and how knowledge construction occurs in a learner-centred classroom. Teachers' varied understanding of LCT and knowledge construction influenced their pedagogical decision-making and practices. Two teachers viewed LCT as a westernised teaching approach which instils students with a culture of disrespect; four teachers understood LCT as an instructional approach that transfers authority and power from the teacher to the student. Three teachers conceived LCT is when students are actively involved in the creation of knowledge through different classroom activities which allow them to share their existing experiences. Despite the variations, all nine teachers demonstrated their conceptions of LCT to be directed mainly at students taking a participatory role in the teaching process.

Teachers' different conception of LCT and how knowledge construction occurs characterised most of their teaching practices. They mainly conceived LCT in terms of the *methods* of teaching, that is, *participatory* methods as opposed to *non-participatory* ones. The research findings suggested that teachers' pedagogical decision-making and practices were limited by their understanding of LCT approaches. This is supported by the literature which suggests that teachers' thinking and beliefs influence their teaching practices (Wilhelm & Li, 2008). Despite teachers' varied interpretation of knowledge construction in LCT environment, their classroom practices focused at achieving instructional objectives as per subject syllabus guidelines. Teachers perceived that their pedagogical decision-making to be directed by the subject syllabus which not only instructed them of what and when to teach, but also suggested how they should teach the content. This could mean that, the curriculum documents also influenced teachers' teaching practices. Therefore, teachers' varied conception of LCT and how knowledge construction occurs suggested the need for a common understanding of LCT among teachers. Teachers' acquisition of a common understanding of LCT might consequently influence its effective implementation. According to Richardson *et al*, (1991) a change in a teacher's beliefs precede a change in his/her practice. This would mean that effective implementation of LCT in Tanzania will be influenced by the way teachers perceive and understand an LCT as an instructional approach.

As opposed to the teachers' interpretation of knowledge construction in LCT environment, the aim of LCT is to enhance students' learning. Thus, while the constructivist theorists emphasise the need for LCT to provide opportunities for learners to construct their own knowledge (Tabulawa, 2004), CP theorists emphasise power sharing between the teacher and students (Freire, 1970; Giroux, 1997; McLaren, 2003). They see that when the teacher and students are engaged in a democratic dialoguing, students are empowered and therefore have greater chance to integrate their lived experiences in making conception of the topics.

Agape, Sigimba, Steven, and Heri viewed that students in LCT environments influenced teachers' decision-making processes - teachers' teaching practices based on what students need, their diverse experiences, and prior knowledge. Teachers considered LCT as an instructional approach that aimed to provide students with instructional authority and power. Teachers experienced LCT to undermine them as subject experts and trained individuals. Based on these teachers, students needed to exercise instructional autonomy - being in charge of their learning. They perceived teaching that followed LCT approaches deteriorated the

learning environment in that the approaches promoted disruptive behaviours amongst students.

Teachers' perception of LCT as a transfer of power to the students suggested their affection for the teacher-centred approach which considers teachers as the only source of knowledge (Tabulawa, 2004). Teachers' perception of LCT also demonstrated the Tanzanian long-standing cultural belief that demands children to listen and respect their elders. However, the need to give students opportunity to take control of their own learning does not need to mean teachers' loss of power and respect, rather, making knowledge construction a shared activity. Freire (1972) observes this when he notes that learners are not *blank slates*, suggesting that they have diverse experiences and prior knowledge based on their living contexts which sometimes their teachers would not know. Freire's observation could also mean that LCT requires geography teachers to promote students' use of their diverse experience to construct knowledge of the topics. According to Freire, students' experiences are a major catalyst in the knowledge construction and therefore teachers need to use instructional approaches and create learning environment that provide learners with chances to use their experience and prior knowledge as a basis for knowledge construction (Freire, 1972). Therefore, for critical pedagogues, knowledge construction in LCT is understood by the way teachers actively involve students in reflective practices, and connect the topics to the students' lives. More importantly, based on the findings and the literature review on teachers' conception of LCT and a constructivist view of knowledge construction, there is a need for a syllabus and syllabus materials to provide teachers' flexibility in their pedagogical practices - provide teachers' freedom in their pedagogical decision-making, therefore tailoring the topics to students' needs, interests, and their prior knowledge and experiences.

Language and cultural-context in LCT

There is a fundamental relationship between language and culture. Language is more than just a code; it also involves social and cultural practices of interpreting and making meanings (Lantolf, 2000). Individuals use different languages to communicate about their cultures. Equally, the research found that the language of instruction and both teacher and students' culture to constitute a significant factor for LCT practices. When teachers tailored the subject to students' experiences using simple language structures and instructional resources such as maps and models, classes were active. Many students volunteered to share their experiences relating to the subject matter topics while providing examples of different geographical

phenomena from their home settings. For example, one student shared her concern for how the physiological and biological factors influenced agricultural development observing that:

We are told, back at our home (Isimani Ward) in the past three decades the soil was very fertile. The natural fertility of the soil allowed our parents to grow maize and harvest in abundance without applying agrochemicals such as fertilizers and pesticides. Unlike those days, nowadays, the same people suffer from persistent hunger due to the reason that they harvest very little despite application of fertilizers and other farm inputs.

According to this student, the situation could have been accelerated by climate change that had been occurring over the years thus adversely affecting the soil productivity. This kind of student reflection was enhanced by the kind of questions teachers asked using the language that students easily understood and directing the questions to students' cultural contexts. Contrary, in some classes where teachers dominated classroom instruction practices, students became *recipients* of instruction. Teachers' accounts of classroom domination were caused by students' lack of English language proficiency which resulted in fear and passively engaging in the lessons. Teachers reported that they resorted to either code-switching or code-mixing between English and Swahili in order to facilitate students' understanding of the concepts or using a lecture method for timely completion of the instructional topics. On the role of language regarding LCT in geography classes, Gregg and Leinhardt (1994) state:

Geography uses the language of maps to communicate ideas about the context and distribution of phenomena and processes important for human decision, issues of scales, the dynamic nature of phenomena, and cultural perspectives. The formal language of geography is maps, which represent not only geographic features but also thoughtful compromises about the representation of global features (Gregg and Leinhardt, 1994, p. 328).

This implies that geography teachers need to facilitate and encourage students to use maps and relevant instructional models in order to stimulate students' reflective thinking about the subject matter. When students are actively engaged in reflective practices they communicate their thoughts consequently participating effectively in the construction of knowledge. Teachers' use of maps and related geographical models provoke students to think about the appropriate language in order to communicate their experience regarding the subject matter.

Based on the findings, geography teachers in Tanzania believed geography curriculum lacked integration of Tanzanian traditional cultures including language and curriculum relevance. They experienced that geography curriculum and English limited students' active involvement in the classroom practices. Teachers perceived language and the context-based

curriculum as valuable sources of curriculum content, and as a base for understanding and effective implementation of LCT in Tanzanian schools. Therefore, as a result of language and cultural limitations of the curriculum, the study reported all teachers' pedagogical decision-making and practices were influenced by the readymade course content and teaching guidelines which alienated students' cultures. Thus, teachers predominantly used teacher-centred approaches to help students not only to be able to perform some specified instructional objectives, but also to be able to pass both internal and external examinations. Gay (2000) calls for teachers' teaching that is directed to the students' culture. According to Gay, culturally responsive instructional practice would require teachers' use of learners' culture, prior experiences as well as learners' learning styles to make learning more effective and appropriate.

Therefore, in order to promote students' communication of their thoughts, teachers need to be involved in reflective teaching connecting the topics to the students' lives. Reflective teaching emphasises teachers' creativity, artistry, and context sensitivity (Harris, 1998). It also involves teachers' consideration of students' extensive and diverse experience from their cultural context thus giving students opportunities to reflect and make meaning of the subject matter out of their rich experience.

Teacher-student power relation in LCT

Findings from interview schedules and classroom observation sessions suggested that the nature of teacher-student relationships in the classroom can either promote or impede LCT practices. This was attested by all nine case studies where they perceived effective teaching in LCT geography classes occur when there is a collegial relationship between teacher and students. According to the case studies, LCT requires balanced and harmonious teacher-student power relationships such that teachers transfer teaching authorities to students in a manner that students control their learning under the teachers' guidance. The teachers' beliefs about teacher-student power relation in LCT classroom is also presented by the CP theoretical framework based on the premise that students in LCT classroom, should be engaged in a meaningful and free dialogue that creates and recreates multiple understandings of the topics (Freire, 1970; Wink, 1998). Responding to an interview question which sought to understand how teachers perceived LCT, Daniel insisted:

To me, learner-centred teaching is when my students have enough time to discuss, ask and answer questions. It is when I guide them to construct the knowledge of the subject

matter and getting their own prepared learning notes. With this approach, my students find things they learn more real and practical.

Daniel's perception of LCT could mean a change in a teacher's role from that of transferring knowledge to students to learning from the students – students taking responsibility of their own learning (Ramsey & Fitzgibbons, 2005). This change of teacher's role according to Ramsey and Fitzgibbons imply the teacher moving from doing something to students (*teaching*) to being with students (*learning*) (p. 334). This relationship between the teacher and students is built on the assumption that in LCT, learners are *teachers* and teachers are *learners* (Mansell, 2009, p. 40). In order to create a fluid teacher-students' power relationship, CP theorists emphasise teachers' teaching practices based on dialogue (Dewey, 1933; Freire, 1972). Agnew and Lodge (2000, p. 13) see that when teachers and students are engaged in a dialogue, they share the responsibility for their learning. They write about dialogical teaching: "the relationship is no longer one where the expert informs the neophyte of their judgement, but one where the roles of learner and teacher are shared and the expertise and experience of all participants are respected" (p.13).

The interview findings demonstrated that students were involved in classroom processes using participatory methods. The teaching methods mainly used included question and answers, group discussion, individual assignments, think-pair share method where in some instructional topics; teachers organised fieldtrips or project activities which exposed students to real geographical phenomena. The same was experienced during classroom observation sessions. The researcher noted that when teachers used students' names to invite them to reflect on questions or a particular pedagogical activity, students presented active response sharing what they knew about the question at hand. It appeared that calling students by their names created an intimate relationship between the teacher and students such that students felt confidence and belongingness to the classroom processes. Students also seemed to participate in classroom activities when the teacher gave freedom to form their groups and discuss the specific topics with minimal teacher intervention. This was different when teachers dominated classroom instruction as students were then perceived as listeners and consumers of teachers' instructions. Using participatory methods, according to (Eliana, 2000), students share power and authority with the teacher and are actively involved in the classroom processes including interpretation of curriculum materials. Eliana proposes teachers to facilitate the learning process by posing problems and helping students to think about geographical concepts and principles through a critical perspective, instead of using

conventional “banking education”. This could mean that geography teachers should encourage their students to take an active role in their teaching practices.

Dewey (1963) one of the CP theorists believes that learners would construct knowledge of the topics when they are provided with instructional autonomy. According to Dewey, development of learners’ autonomy would require teachers’ use of instructional approaches that promote learners active participation in the instructional practice. Dewey states that learners’ autonomy would be realised when teachers use learning-centred instructional methods and create learning environment that encourages learners’ use of their diverse experience and prior knowledge to make meaning of the topics and thus being able to use the knowledge to critique the society they live for better life. (Kincheloe & McLaren, 1994). Giroux sees teachers as ‘transformative intellectuals’ with potentials to promote critical thoughts and problem solving ability amongst learners (Sadeghi, 2008). Giroux thus believes that in order to promote creative and critical thinking as well as problem solving skills in the individual learners, teachers need to integrate learners’ diverse experience and prior knowledge in their instructional practice. Giroux understanding of LCT would mean that realising LCT approaches would require teachers’ acceptance of learners’ possession of knowledge that they could learn during teachers’ instructional practice that is based on dialogue. Giroux (1997) further explain that by creating supportive learning environment learners are enhanced to use their cultural and socio-economic experience to construct knowledge of the topics. They encourage learners active involvement in the classroom activities and proving learners with chances to share their life experiences thus learning from each other.

Therefore, in order to create a teacher-student relationship that fosters students taking charge of their own learning, it seems critical that teachers change their beliefs as learned individuals and the source of knowledge for students who thirst for it. Teachers should challenge the long lived cultural orientation that provided them with authoritative practice to their learners and thus change their classroom domination i.e. from teacher-centred to learner-centred teaching practice (Foley, 2007). Based on CP, critical geography teachers should be concerned with emancipatory knowledge that helps students to connect the influence of the political environment within and outside the school in their understanding of the spatial distribution of geographical phenomena, and the relationships between man and the environment. This will be achieved when students are provided with voice and freedom to actively reflect the classroom processes connecting what they learn in school with social realities.

However, based on the findings, teachers' teaching practices were predominantly teacher-centred lacking the active involvement of students and an integration of the topics to their everyday realities. It was evidenced that all nine teachers across research sites mainly used instructional approaches such as lecture methods and question and answers to facilitate their lessons. Using these methods, students were rarely involved in the lessons other than remaining passive receivers of what teachers prepared and wanted them to know. In this situation, students were denied the voice and freedom to conceptualise geographical concepts and themes based on their diverse needs, experiences, and prior understandings. This was different in some occurrences where the teacher actively involved students and tailored the topics to the students' settings.

For example, about 10 classroom observations, an average of one observation for each participating case study teacher demonstrated students' active involvement in the lessons which were familiar to them. In these classes, teachers not only provided students enough chances to share what they knew about the topics, but also teachers and students discussed the topics using simple language structures and examples from the surrounding environments. Students were seemingly provided with many chances to build understandings of geographical phenomena such as agricultural development in East Africa, the hydrological cycle, uses of water, and the structure of the earth to mention a few. This student freedom in the classroom processes is what defines LCT based on a CP theoretical framework.

The nature of the curriculum

Studies regarding constructivist curriculum demonstrate not only the processes involved in both curriculum development and implementation but also characterises the curriculum presenting the philosophical aspects underpinning such curriculum (Eliana, 2000; Giroux, 1997). The significant aspects considered are the curriculum relevance and accountability to socio-economic, political, and cultural issues that affect teachers' and students' life in particular and the society they live at large (Dewey, 1933; Giroux, 1997). The research findings across research instruments suggested the readymade-centralised mandated teachers' pedagogical decisions across all stages of classroom instruction-planning, practice and evaluation. It was noted also that the curriculum influenced case studies' thoughts and reflections about LCT practices. Teachers' pedagogical decision-making focused on achieving the instructional objectives as outlined in the subject syllabus and syllabus materials. Nevertheless, the major feature of geography curriculum in this study was its lack

of relevance, compatibility, ownership and support by teachers and students. This feature affected adversely teachers' practices of LCT.

Based on the findings, geography curriculum was characterised by a lack of communication and consistency within and between the curricula. This curriculum feature according to the teachers forced their instructional practices to be tailored on bits and pieces of knowledge leading to many students with little idea of how to apply to real life. The findings suggest that the curriculum did not reflect students' daily life. Due to curricula mismatch, students tended to be passive recipients of the knowledge handed down by teachers, rather than seekers of problems to be solved. The existence of subject matter curricula mismatch and the lack of real life problems and issues dealt with in the classroom were blamed on the government failure to involve teachers and students in the curriculum innovation processes. According to the case studies, teachers' and students' involvement in curriculum innovation was inevitable since they were the very focus of the curriculum. Sharing his experience regarding curricula mismatch and classroom instructional processes, Gregory asserted:

The way subjects' topics are structured, it is very difficult to transfer knowledge within the subject itself. When it comes to connecting ideas of one subject to another it is even worse. This disparity in subject curricula makes theorising knowledge to life situations more difficult

Gregory suggested the need for the government to reconsider the curricula discreteness in order to positively influence classroom instructional practices. Six teachers proposed an integrated curriculum which not only provide educators and students opportunities to link ideas between the subject matters, but also to be able to apply the knowledge acquired in adapting to the environment they live and using the knowledge to solve social-economic, cultural, and political problems. Responding to the question of what is curriculum integration; Harwood and Nolan (2002) provided the following explanation: "curriculum integration is the process of experiencing and understanding connections and, because of this, seeing things whole" (p.5).

This implies that geography curriculum should support students' integration of knowledge, skills and experiences from within the subject topics, across other subjects, and their life experiences in general. In order to promote critical thoughts among learners, learning environment and the instructional practice should support learners to construct knowledge by connecting ideas and experiences across subjects. In the same way, learners should use the knowledge constructed to build understanding of concepts and ideas across topics in different

subjects (Beane, 1995). Researchers in education have found that an integrated curriculum has the potential to promote creative, critical thoughts as well as problem solving amongst learners. Beane (1995) suggests that as teachers facilitate teaching based on the principles of curriculum integration, students are empowered to create knowledge and apply it in their contexts. He states that when teachers facilitate classroom processes within an integrated curriculum framework:

First, young people are encouraged to integrate learning experiences into their schemes of meaning so as to broaden and deepen their understanding of themselves and their world. Second, they are engaged in seeking, acquiring, and using knowledge in an organic – not an artificial – way. That is, knowledge is called forth in the context of problems, interests, issues, and concerns at hand (p. 616).

This means that despite promoting self-reflection, independent and collaborative learning amongst students, an important aspect of an integrated curriculum, is to enable students to use their diverse experience to make conceptions of the topics and apply and transfer the acquired knowledge, skills and experiences in other facets of life. Using the knowledge and skills acquired will augment students to make decisions through an informed in-depth understanding of the subject content.

Therefore, it seems logical to argue that the need for an integrated curriculum is to enhance active students' learning in LCT environment. Faraji and Mohammad (2011) (cited in Degener, 2001), reiterate that the curriculum should be founded on the belief that learners have different learning needs and that they need different instructional approaches to positively influence their involvement in knowledge construction. According to Bartolome (1996), Faraji and Mohammad maintain also that there is no set curriculum or programme because all decisions related to curricula and materials to be studied are based on the needs and interests of the learners (cited in Groux, 1997; Shor, 1992). Aliakbari and Faraji (2011) also point out that the curricula need to be developed to cater the needs and interests of learners from different learning contexts. They also suggest the need for transformative curriculum that promotes learners' acquisition of learning competencies to enable them become change agent of their society (Giroux & McLaren, 1992).

Dewey the founder of The Dewey Laboratory School in Chicago commonly identified as student-centred (Chung & Walsh, 2000; Pinar et al., 1995) (1966), in his critique of "teacher-centred education" assessed:

It's passivity of attitude, its mechanical massing of children; it's uniformity of curriculum and method. It may be summed up by stating that the centre of gravity is outside the child. It is in the teacher, the text-book, anywhere and everywhere you please, except in the immediate instincts and activities of the child himself (p. 103).

Dewey stressed the precept that learners' experience should form the basis of curriculum development and innovation rather than being external to and disconnected from children's lives. Central to Dewey's understanding was that children's immediate interests and needs should be the curriculum focus, rather than preparation for some future life divorced from these (Dewey, 1963/1966). Figure 7.1 hereunder presents features of an integrated curriculum that promotes LCT practice.

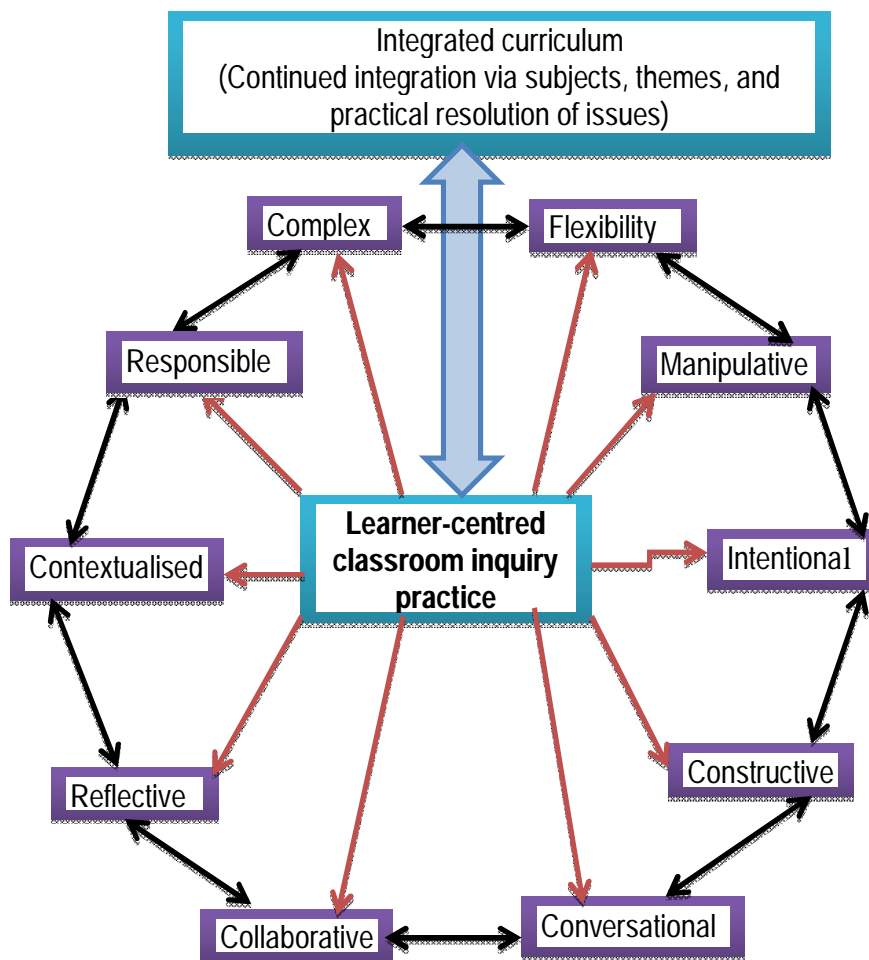


Figure 7.1 An integrated LCT curriculum based classroom practice (Adapted from Jonassen, 2001, p. 3)

Teacher's substantive and syntactic knowledge

The implementation of LCT geography curriculum presented the need for geography teachers' acquisition of a rich substantive and syntactical knowledge base of the subject in addition to the subject pedagogical component. Based on the findings; it was apparent that geography teachers' pedagogical decision-making and practices were reflected by their level of knowledge acquisition across topics and teachers' understanding of the pedagogical aspects of the subject in relation to the guiding theories of teaching and learning. Teachers' nature and ability to guide students' reflection of the subject matter topics determined students' level of involvement in the classroom processes.

The study reports that where teachers discussed students' reflections about the subject matter from different scholars' and teachers' perspectives using multiple examples from the students' settings; students were provoked to share their thoughts, answer and ask questions, and participate actively in the group activities suggesting their in-depth understanding of the instructional topics. This was different in the situations where teachers dominated classroom instruction using teachers' notes and textbooks with limited instructional resources presenting the subject matter directed in the same line of thinking. In the latter case, besides suggesting teachers' limited understanding of the substantive and syntactical subject knowledge; students remained passive and subjective receivers of teachers' knowledge. This kind of teaching according to Freire (1972) and Giroux (1997) alienate students' voices and sustain teachers' classroom domination thus hindering students' integration of their cultural experience in the creation of knowledge.

The study presents that in order to be able to effectively implement the LCT approaches; geography teachers among other aspects need to have significant content knowledge of the topic to be taught and the classroom processes. These include the knowledge of specific information, ideas, principles, and topics of the subject (substantive knowledge) and knowledge of the rules and procedures that determine the choice of what, when, how and why (instructional aspects) to be included in the specific instructional topics (syntactical knowledge) based on the students' instructional abilities and interests as also triggered by the instructional contexts and the increased use of information and communication technologies. Teachers' understanding of the subject matter is critical as it provides the basis for informed teachers' pedagogical decision-making and practices in the LCT classes. Teachers' understandings of the subject matter concepts are important for promoting students' mental

cognition thus enhancing students' active participation in the knowledge construction processes (Brant, 2006). Shulman (1986b) recommends the need for teachers' comprehension of the subject i.e. acquisition of syntactic and substantive knowledge of the subject as the basis for an effective LCT practices:

It could mean that in an era of a maximum use of technologies such as remote sensing (RS), global positioning systems (GPSs), and other forms of non-digital and digital technologies; Shulman observation about teachers' knowledge would mean their understanding and application of these technologies within the students' cultural contexts. According to Incekara (2010), geography teachers should actively engage students using different geographic technologies along with an integrative perspective on the social and life sciences. Teaching like this ought to promote students' critical thinking and problem-solving skills which is critical in LCT classroom environment. This means that geography as a multidisciplinary subject that studies the spatial distribution of geographic phenomena, their relationships, and as a home of human-beings requires teachers to use modern geographic technologies within the students' traditional technologies and cultural contexts. Tailoring teaching to students' contexts is expected to influence their conception and understanding of these phenomena and more importantly applying the knowledge created in the sustainable conservation and management of the environmental resources.

Classroom organisation and management

The findings raised issues relating to classroom organisation and management. They included teachers' classroom practices which determined the effectiveness of the classroom processes including the management of students' disruptive behaviours. The disruptive behaviours experienced included disruptive students' movements, off-task conversations, sleeping in class, excessive lateness, and prolonged chattering between students. The researcher experienced these students' behaviours to adversely affect teachers' practices. Considering different perspectives regarding classroom organisation and management (Allen, 1986; Gootman, 2008; Wolfgang & Glickman, 1986), it seems logical to argue that it is important that classes are well organised and managed in order to influence positive teacher-student-student dialoguing in the instructional practices. It is the teacher's role to create a classroom atmosphere that allows students to interact effectively with the teacher and other students (Gootman, 2008).

Some scholars consider classroom organisation and management as all about solving “negative students’ attitudes and disciplines”, other scholars focus on the teachers’ instructional effectiveness including the nature of teacher-students’ relationships, time management and teaching and learning resources, language of instruction and the teaching and learning methods, instructional orientation (teacher-centred vis-à-vis learner-centred teaching), and classroom management and organisation (Allen, 1986; Gootman, 2008). Gootman (2008) suggests that classroom management and organisation in a large part involve students’ behavioural modification in order to influence positive classroom processes. Based on Gootman’s view, organisation and management of the classroom includes the establishment of rules and procedures right at the beginning of the school calendar or classroom instruction to regulate students’ disruptive behaviour. Gootman states further that rules provide students concrete direction to ensure that teacher and students’ expectation becomes a reality. Allen (1986) considers effective classroom management to involve clear communication of behavioural and academic expectation as well as a cooperative instructional environment. This study also demonstrated the need for teachers’ understanding and practice of classroom organisation and management skills for improved classroom processes.

The findings demonstrated the need and rationale for effective classroom organisation and management in order to enhance effective implementation of LCT approaches. Based on the findings, it was evident that classroom sitting arrangements, teachers’ identification of students by their names, use of multiple instructional methods and resources, the nature of classroom activities, students’ involvement in these activities and teachers’ management of time and instructional resources determined the quality of classroom instructional practices. For example, when the teacher used different forms of classroom organisation such as using multiple instructional methods and resources, treatment of students with different instructional activities that ranged from individual to small group discussion, guided in-class movement and the use of live examples from students’ local settings; students were actively involved in reflecting the topics. In contrast, classes seemed to be inactive and passive in situations where teachers not only dominated classroom instruction but also used monotonous instructional methods and strategies to present the subject matter topics. In these situations, teachers rarely provided chances for students to share their lived experiences consequently making the instructional practices teacher-centred as compared to student-centred in approaches. Some students were observed sleeping while others were involved in prolonged

chattering. In some instances, teachers formed larger groups which they were not able to manage effectively. In these situations it was experienced some students were involved in discussion other than the respective topics suggesting lack of adequate guidance.

Shulman (1987) emphasises the need for teachers' planning of their classroom instruction in order to influence positive classroom organisation and management. Shulman (1987) states:

planning, therefore is an important aspect in whatever we do because it helps us to analyse situations systematically before deciding on a course of action. The planner (teacher) will (in most cases) always consider alternative courses of action, assessing their merits, effectiveness before choosing one of them.

This in CP theory terms means that geography teachers should be involved in the reflective processes regarding who, what, when, how, and why they teach (Dewey, 1963; Giroux, 1997). According to (Giroux, 1997; Shor, 1992), teachers should enter into what is called "meta-cognition"-thinking about their own thinking processes. Meta-cognition entails thinking of both teachers' own teaching processes and processes involved in the students' construction of knowledge in order to make positive LCT pedagogical decisions and practices. Kuhn (1996) reiterates that effective LCT is more a function of a teacher's state of mind and creativity than the school's support and nature of classes including class sizes and availability of instructional resources. Based on the findings, LCT among other aspects requires geography teachers to have effective classroom organisation and management skills including acquisition of the basics in guidance and counselling. Figure 7.2, shows a classroom organisation and management framework that supports LCT.

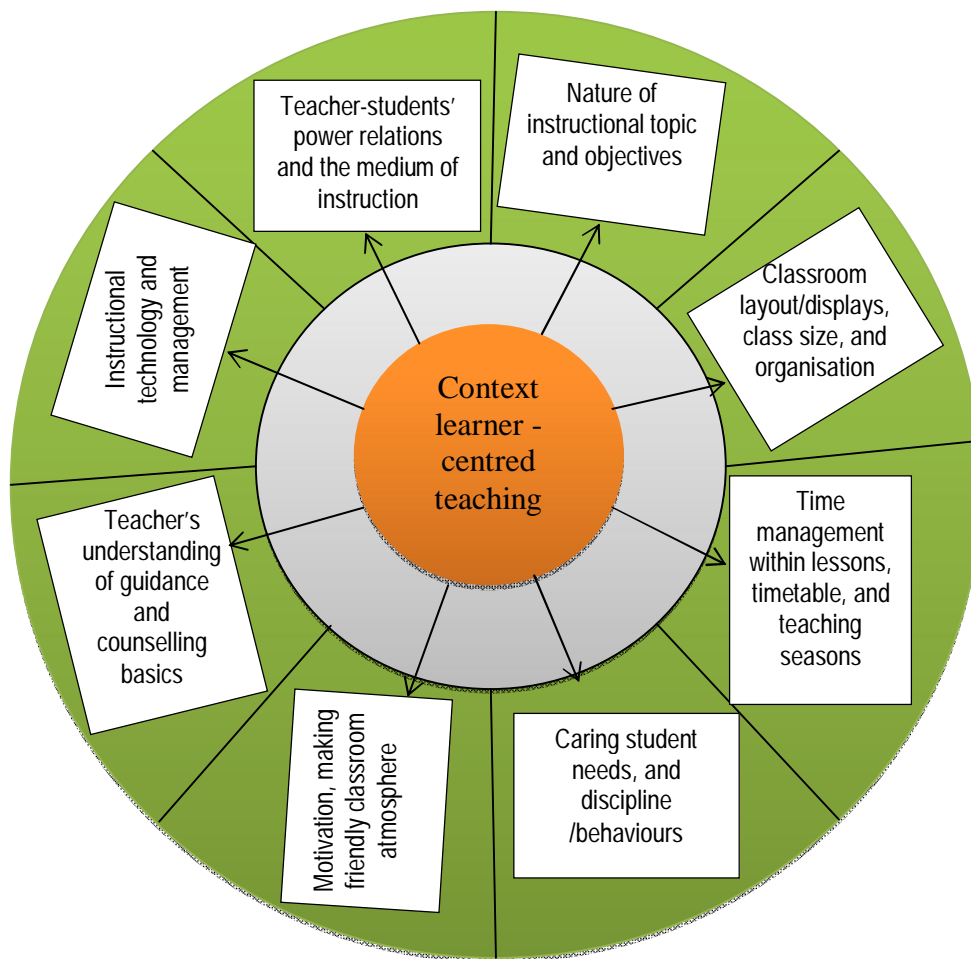


Figure 7.2 A self-developed classroom organisation and management framework for context based LCT.

The perceived learner-centred teaching dilemmas

This sub-section presents some critical dilemmas experienced in the field. They include: language barrier; class sizes, curriculum design, and teacher shortage; shortage of instructional resources; lack of in-service training for LCT; and the lack of cultural-context curriculum relevance. Chapter summary follows thereto.

Language barrier

English language as a medium of instruction was observed to constitute a critical challenge in the implementation of LCT approaches. The research findings across case studies suggested that both teachers and students demonstrated limited English language proficiency, the pedagogical factor that constrained effective classroom communication between the teacher and students and among students themselves. As presented in the findings description-chapter

five; teachers' and students' limited language proficiency resulted in teachers' classroom domination in many of their pedagogical decision-making processes. As a result, students' involvement in classroom activities was limited. Lack of active student involvement consequently affected their involvement in the construction of knowledge. This being the case, it appears logical to address the language challenge if the implementation of a constructivist LCT approach is to be a reality. The argument is founded on the belief and theoretical foundation that LCT will only occur when there is effective dialogue between the teacher and students and among students themselves. Effective dialogue is enhanced by language proficiency-the medium of instruction that allows teachers and students to communicate their experience, identity and thoughts (Vygotsky, 1986). Vygotsky (1978) and Freire (1996) have emphasised the need for social interaction. The role of language here is crucial for this dialogue to happen. Postman (1969), for example, points out that language is implied in any of our attempts to perceive reality. Postman states:

If there is no dialogue and no social interaction, we are following the steps of the telling model i.e. teacher-centred teaching and agreeing with the arguments proposed by Finkel (2008), considered ineffective and unsuitable for meaningful classroom processes. The aim of such interaction that involves teacher, student, and educative curriculum materials is the sharing of meanings. (p. 99).

Language influence on students' learning also supports Vygotsky's conception of the role of medium of instruction on the learners' construction of knowledge. Vygotsky explains that language is not only a system of communication; it is also a tool for meta-cognition i.e. mental functioning in the process of knowledge construction. According to Vygotsky (1978, 1986), student's higher cognitive functions do not develop spontaneously but are internalised from social interaction. The argument being it is only when students are conversant with the medium of instruction that they will be able to effectively participate in the construction of geographical concepts and ideas. Language of instruction thus becomes the engine that drives this process of internalisation-mental cognition of geographical concepts and ideas.

Class sizes, curriculum design, and teacher shortage

(a) Class sizes

Among other challenges, case study teachers taught in large classes which ranged between 60 and 200 students as compared to the government guideline of 45 students classroom size. Case study teachers had difficulty in organising and managing students in these classes such that students' disruptive behaviours including off-task conversations, excessive lateness,

sleeping, and unnecessary classroom movements persisted during periods of instruction. It was observed also that whenever teachers opted for group discussion activities, they had large groups which constrained close follow up and guidance resulting in unproductive students' involvement. It was evident that many students did not actively participate in the discussion of the topics. Teachers' accounts of their predominantly use of lecture and question and answer methods increased the larger the class. According to the case study teachers, the use of teacher-centred instructional methods were used to save time which would otherwise been wasted if all students were given a chance to share their thoughts regarding the topics.

However, regardless of the teaching challenges experienced by teachers, as an African adage goes, "a good father does not give his son meat. Instead, he gives him a bow and arrow, and teaches him to hunt!" This wisdom corresponds with the argument advanced by West (1960):

The larger the class and the more difficult the circumstances, the more important it is to stress learning as the objective. And the higher the elimination [i.e. drop-out rate], the more necessary it is to do so: if the pupil has learnt how to learn he can go on learning afterwards. (p. 15)

This means that it is much more necessary to drill students to take charge of their own learning in a large class than it is in a small one. This is due to the reason that it is possible and manageable for the teacher to supervise students' work in a small class as compared to a large class where it may virtually be impossible (Sarwar, 1991/2001). This view aligns also with Fonseca's (2003) argument for engaging with students' autonomy as a kind of 'rescue strategy' in resource-poor instructional settings and is consistent with Smith's (2003) claim that a 'strong version' of pedagogy for autonomy-that is one which engages with students' existing autonomy rather than differing such engagement. This could mean that in order to effectively implement LCT in large classes with a poor supply of resources, geography teachers need to be reflective and creative enough to adjust according to classroom circumstances and provide any necessary support for students to take responsibility for their learning. Nevertheless, as discussed herein, case study teachers demonstrated different experiences as they taught in large classes. The findings suggest that case study teachers' use of LCT approaches were limited by constraints posed by large classes which forced them to opt for teacher-centred methods. Case study teachers' lack of active students' involvement suggested, among other factors, their lack of creativity, flexibility, and reflective attributes in their pedagogical decision-making processes. The case study teachers' classroom dominance

also suggested their reluctance to empower students with classroom autonomy, the practice that indicated their desire for perpetuation of teacher-centred instructional approaches.

Kuchah and Smith (2011) experience:

an African teacher does not need to set out to achieve learner-autonomy in his/her classroom; autonomy naturally emerges from the difficulties that present themselves, making it incumbent on the teacher to adjust to the realities of the context. What a teacher needs, therefore, is an awareness of the role of learners in the teaching/learning process and to recognise this role by accepting learners' own rights and responsibilities in the process.

Based on the teachers' perception of teaching in large classes, Kuchah and Smith seem to suggest that teachers should not be enslaved by the LCT approach; rather, they should regulate the approach to suit their instructional contexts. Kuchah and Smith further suggest that literature on learner-autonomy can only make sense to an African teacher if it reflects the reality of his/her culture and context, and will not make sense if it merely introduces him/her to a new concept. In their *Pedagogy of Autonomy for Difficult Circumstances*, Kuchah and Smith provide four considerations-rescue strategies for effective LCT in large classes. They include:

- (a) Getting to know learners as unique individuals-recognise the variety of their talents to build rapport. The assumption is that "it is only through the proper rapport that an atmosphere conducive to learning can be built up. Also, humanising a large class is perhaps the only way to motivate learning". (Sarwar, 1991/2001, p. 129);
- (b) Negotiate with learners-treat them as partners not rivals; define common goals/make contract. Questions that Kuchah and Smith (2011) require any teacher to ask his/her students include: what do we want to achieve; how shall we achieve it; and where shall we find the resources we need;
- (c) Viewing learners as resource providers and as resources themselves-developing learners' creativity, critical thinking and voice; this can include making use of instructional resources brought in by students thus addressing teaching resource shortages such as text and reference books, geographical models, maps and globes; and
- (d) Building rapport with school management and colleagues. As it has been observed by the study, one of the critical challenges teachers faced in the implementation of LCT was lack of school management support for outdoor classroom activities such as

fieldtrips and project-based activities. Similarly, five case study teachers said that it is important for teachers to build a profound relationship with their school administration. This constitutes their immediate and significant guarantor in their professional practice. Agape for example also observed that teachers need to build good rapport with the people they are working with such as at the departmental level or school in general. These colleagues are expected to provide the necessary support for the teachers' pedagogical planning and practices.

Different from Kuchah and Smith's (2011) proposition of teaching in a difficult learning environment, findings from all nine case study teachers demonstrated their predominant use of teacher-centred teaching approaches. Using teacher-prepared lesson plan and notes and textbook, case study teachers mainly used lecture and question and answers methods to present the topics. The students were rarely given opportunity to share what they knew about the topics. The students' involvement in the teaching practices was limited to answering many of the closed-ended questions which demanded specific responses. It was evident that lecture and question and answers did not promote creativity, critical thinking, and self-reflection amongst students as proposed by Kuchah and Smith. Neither did case study teachers tailor the topics to the students' needs, interests, experiences, and prior knowledge. Thus, case study teachers' teaching practices lacked active involvement of students, the situation that made students to be passive recipient of teachers' knowledge.

Case study teachers accounted for the predominant use of teacher-centred methods to be caused by large class size with limited supply of resources. They also experienced a lack of school management support in their teaching practices. Case study teachers mentioned the school management support that they lacked to include supply of teaching resources and facilities and financial resources for organisation of field-trips and guest speakers. According to case study teachers, these factors demotivated and placed limits for effective students' engagement in the classroom processes. Based on the findings, it could be argued that Kuchah and Smith (2011) proposition of effective teaching in difficult environment could not work in Tanzanian contexts where large classes were also associated with diverse challenges including an acute shortage of instructional resources and facilities. More importantly, apart from lack of school management support, case study teachers demonstrated their furtherance of instructional autonomy suggesting that LCT approaches are meant to transfer their authority and power to the students.

Therefore, based on the research findings, it appears significant to address the challenge of large classes in order to effectively implement LCT practices. As implied and recommended in chapter eight of this study, there is a need to address issues of secondary education expansion-infrastructure and enrolment (quantitative expansion) in line with classroom processes (qualitative improvement). These will consequently result in the successful achievement in the implementation of LCT mandated curricula.

(b) Curriculum design

The study illustrates the mismatch between teacher education and secondary geography education curricula. That is, the two curricula constitute many instructional topics which differ in thematic contents. In particular, they differ in the subject matter curricula component. The argument is that teachers were entitled to implement the secondary school geography curriculum comprising topics which were unfamiliar to them. The reason being, during their teacher education training, geography teachers were exposed to different geographical themes that are incongruent with those in the secondary school geography curriculum. According to the study, teaching unfamiliar topics not only led to teachers' presentation of misconceptions as seen in five out of nine case studies but also indicated using a lot of their own time to prepare before they could facilitate the topics in the classroom. Based on teachers' experiences, it was challenging for their pedagogical decision-making especially in schools which had acute shortages of instructional resources such as textbooks, reference books and the absence of internet facility. However, the literature on teachers' knowledge base for teaching suggests that teachers need to be familiar and knowledgeable with the content knowledge that underpins the subject curriculum in order to implement it effectively. According to Brant (2006), teachers' understanding of the content knowledge is important in their pedagogical decision-making and enhancement of students' active involvement in the classroom activities. Shulman (1986b) explains the importance of teachers' acquisition of the subject content knowledge in teaching. He emphasises that teachers should be able to define and explain the subject content that they teach and also use evidence-based explanation to defend their position about different theoretical and conceptual propositions of the subject. The need for teachers' understanding of the geography content knowledge is because they attach subjective meanings to what they know and experience of classroom instruction. The teachers' meanings according to Tabulawa have significant influence on the teachers' pedagogical decision-making and practice (Tabulawa, 1998).

Therefore, there is a need to align the teacher and secondary geography education curricula in order to positively influence implementation of LCT in secondary school geography classrooms. This could mean that geography student teachers should be thoroughly trained in the topics they will teach in secondary school after the completion of teacher education programme. Incekara (2010) urges geography teachers to involve students using different geographic technologies in an integrative viewpoint on the social and life sciences. This would mean that geography curriculum, among other features; need to integrate knowledge within and across different subjects. This curriculum feature ought to allow teachers' flexibility in their pedagogical decision-making consequently promoting students' integration of their prior knowledge based on their everyday experiences.

(c) Teacher shortage

Based on the findings, the implementation of LCT was also constrained by a shortage of geography teachers. According to case studies, teacher shortages resulted in an increase in instructional workload which in turn adversely affected their pedagogical practices. For example, 9 out of 16 geography teachers in three research sites were assigned to teach other subjects such as mathematics, physics, biology, chemistry and history, the situation that accelerated teacher shortage in the geography departments. It was accounted that two of the research sites were faced by an acute shortage of natural science subject teachers which led the school's management to allocate geography teachers in these subjects. This caused the shortage of geography teachers leading to teaching overload. Frida suggested that she was too overloaded to facilitate effective teaching and learning. She said that she taught "more than 45 lessons per week. This impacts greatly on lesson preparation as well as teaching and assessing students' achievement". The teacher was also concerned that despite the teacher shortage, the teaching overload was also increased by the syllabus overload. According to Frida, the syllabus presented too many topics to be covered in a short timeframe-six to eight months (one school calendar year). The researcher experienced also that the curriculum constituted not only disproportionate instructional topics to school calendars but also the same curricula demonstrated excessive learning intentions within specific instructional topics. Teachers explained their dissatisfaction about the curriculum suggesting that given the teacher shortage and thus teacher workload, it was not possible to accomplish the respective syllabus within the prescribed instructional time if they resorted to LCT approaches.

However, for Kuchah and Smith (2011), teachers would address teacher shortage using students as resources. According to Kuchah and Smith, students possess a rich mass of experience and knowledge which is potential in facilitating learning in under-resourced classroom environment. They propose teachers to actively involve students in every stage of pedagogical decision-making. Based on Kuchah and Smith's proposition, students could be involved in designing instructional resources, classroom activities, and evaluation artefacts. They believe that teachers will motivate students' involvement when they tailor the topics to the students' everyday experiences. By doing so, according to Kuchah and Smith, the problem of teacher shortage could be solved. They emphasise teachers to use instructional challenges such as teacher shortage as an opportunity to actively involve students and promoting learners' autonomy - learners taking charge of their own learning under the teachers' support/facilitation.

Though Kuchah and Smith (2011) propose teachers to consider students as unique individuals, learning partners, and resources; yet, they seem to be silent about the challenge of syllabus overload and excessive learning intentions. In their pedagogy of autonomy for difficult circumstances, Kuchah's and Smith's major proposition is centred on engaging learners in an under-resourced secondary school setting. They seem not to consider the influence of the curriculum on teachers' pedagogical decision-making. According to Tabulawa (1998), teachers' pedagogical decision-making is influenced by, among other factors, the amount of subject content to be delivered within a given instructional time or school calendar. The assumption is that teachers will effectively engage learners when the subject content is structured in a way that provides teacher and students enough time to discuss using a range of LCT approaches.

Shortage of instructional resources

There were serious limitations in instructional resources faced by many case studies across research sites. Teachers were constrained with teaching resources such as text and reference books, instructional models, a variety of maps, research and statistical equipment, and computer and internet aided facilities. Cases studies reported facing serious challenges when they decided to involve students in the classroom activities, a situation that forced them to opt for teacher-centred teaching approaches. This was the same during classroom observation where teachers rarely used instructional resources other than teacher's textbooks and a predominant use of resources such as globes and maps. Instructional resources play a

significant catalyst for students' inquiry, critical thinking and problem-solving abilities (Tabulawa, 1998; 2004). When carefully selected and applied, instructional resources have the potential to provoke students to communicate their thoughts, experience and reflect on the subject matter topics thus enhancing their involvement in the classroom processes (Tabulawa, 1998; Incekara, 2010). Maps, geographical models, and other emerging technologies are used as language through which teachers and students communicate different geographical phenomena, their spatial distribution and relationships among them and human activities (Incekara, 2010). Based on the findings and the literature, it could mean that teachers' effective implementation of LCT will be influenced by the supply and use of various instructional resources.

Lack of in-service training for LCT

Based on the study findings, it appeared that teachers' pedagogical decision-making and practices were partly influenced by their conception and understanding of LCT as an instructional approach. In all research sites, teachers mainly conceived LCT based on the students' participation in the lesson and not on their ability to comprehend the topics. Therefore, teachers distinguished LCT from teacher-centred teaching in terms of methods of teaching – *non-participatory* and *participatory* methods. Msonde (2011) distinguishes non-participatory and participatory teaching in that non-participatory teaching is when the teacher presents the lesson without an active involvement of students. The teacher in a non-participatory teaching environment dominates the class using lecture and teacher's initiated closed-ended questions and answers methods. The students are rarely involved to share their experience about the topics. The non-participatory teaching is different from participatory approach in that, in the participatory approach, students are actively involved in the lesson. Msonde (2011) outlines instructional methods considered participatory to include: small group discussion; project activities; individualised assignments; resource personnel; think-pair-share; fieldtrips; and case studies. Similarly, case study teachers mainly understood LCT in terms of the methods used and not how teachers support students to create meaning of the topics out of their prior knowledge and experiences.

Debate and different conceptions of LCT also exists amongst scholars, teacher educators, and geography teachers. It also presents challenges of teaching and learning contexts centred at the heart of enormous information and technological transformation (Phillips, 1995;

Tabulawa, 1998; 2004). The different understandings and interpretations of LCT have resulted in the existence of different instructional approaches which are considered *learner-centred*. Din and Wheatley (2007) identify some of the different approaches considered learner-centred. They include: cooperative/participatory learning; learner-autonomy; competence-based; critical education pedagogy; the emancipatory pedagogy; empowerment pedagogy, problem-based learning; place-based learning; and many others. However, despite existence of different understanding and interpretation of LCT based on constructivist theory (Phillips, 1995), Fosnot (1996), proposes that learners participate and construct knowledge when certain conditions are met. This means that there is a need for teachers to have a common understanding and interpretation of LCT for its effective implementation.

With the rapid development and use of different technologies, and the need to have a common understanding of LCT and its implementation; there is a need for geography teachers and teacher educators to be trained on how to use the emerging technologies in their classroom practices (Incekara, 2010). Therefore, in the implementation of the LCT geography curriculum, the study findings suggest the need for teachers' in-service training regarding constructivist LCT. The case study teachers perceived effective implementation of LCT in the school context like Tanzania; the teacher needed to have a requisite and diverse knowledge of the learner. They suggested that teachers need to have extensive knowledge of learners' instructional diversities and be creative enough to be able to teach in classes of different sizes despite limited teaching resources. Incekara (2010) identifies significant areas for teachers' in-service training. These areas include teachers' training on:

how to make students more sensitive to society and environment as global citizens; how to incorporate new technologies into geography education; how to include the integrative perspective of geography in different curricula; the best available methods for making students geographically literate; how to use GIS and properly direct students in the context of project-centred geography education; and how to make students acquire geographic skills and improve their ability to be successful in a very competitive world (P. 231).

Incekara's observation requires teachers' continued in-service training to adapt to the instructional changing needs and build a deeper understanding of what LCT means from different perspectives and instructional contexts. The study presented the need for in-service training focusing particularly on theoretical and practical understandings of LCT, the use of information and communication technology in teaching and improvisation of instructional

resources from the immediate environment. As presented in the findings' description and analysis chapters, case study teachers demonstrated limited use of computer assisted facilities. Likewise, they also presented limited use of instructional resources made from the surrounding environments. Given Tanzania's educational context and associated challenges and opportunities, it was found to be important for teacher educators and secondary school teachers to be trained in improvisation and teaching and learning using locally-available resources (TALULAR). This along with improving the quality of geography classroom processes based on LCT approaches will also address the long-lived instructional resource challenge as a result of the financial limitations facing the government and other private educational providers.

Lack of cultural-context curriculum relevance

The study also reported the curricula disconnectedness to teachers' and students' life. The findings suggest that secondary curriculum constituted some instructional topics divorced from the teachers' and students' settings. This curriculum divergence resulted in classroom instruction based on teacher-centeredness where teachers and students also demonstrated an inability to connect their lived experience with the respective instructional topics consequently affecting adversely students' construction of knowledge. Five case study teachers for example said it was very difficult to translate the curriculum and tailor the classroom instruction based on students' learning needs. They experienced difficulties in relating the knowledge of some instructional topics to the students' daily lives as they were not well informed in those topics. A lack of understanding of those instructional topics was also attributed to teachers' lack of involvement in the designing of the curriculum. Teachers presented their concerns about the lack of their involvement in curriculum development which contributed to their inefficiency and ineffectiveness in implementing the respective curriculum.

As a result of incongruent curriculum to the teachers' and students' culture, Sigimba felt the curriculum was westernised and enforced in Tanzania without considering the level of development in science and technology-information and communication technology in general. Kana'iaupuni (2007) emphasizes that culturally integrated curriculum necessitates teachers and students to design and apply culturally-based instructional methods and activities making instruction participatory and effective. This also reflects what Dewey

believed about the role of the school as an agent that is ought to prepare the child for an independent and meaningful life. Dewey believed on the kind of education that connected school life and that of the society outside the school (Dewey, 1915). According to Dewey, this educational practice needed to be reflected in the curricular of different levels.

Dewey theorisation of education could be interpreted to mean that a good educational practice should integrate not only the traditional knowledge systems in so-called “modern education”, but it should also be applicable within the broader contexts of students’ lives and thus cherish the long-lived practical, moral and cultural elements of Tanzanian civilisation such as language, responsibilities, skills, norms, and values.

Against curricula dichotomy and compartmentalisation, the researcher argues and recommends for teacher and secondary education curricula reform and innovation in order to enhance effective implementation of the mandated LCT geography curriculum. The researcher appeals for the adoption of an integrated curriculum approach for effective implementation of LCT pedagogy. Integrated curriculum refers to the blending of indigenous and modern educational practices within and across subjects; the instructional approach to teaching that is informed by different pedagogical and philosophical stances with the aim of connecting classroom education with students’ real-life experiences (Oberholtzer, 1937). The argument is that the curriculum should realise knowledge integration and transferability and thus support students’ conception of topics in an integrated way ensuring provision of meaningful and life-oriented education.

Chapter summary

As presented in the introductory part of this chapter, the chapter focus was to discuss the main themes advanced by the study using lenses of CP theoretical framework. The chapter classifies the themes into two major groups: firstly, those aspects deemed significant with respect to geography teachers and their teaching in Tanzania; secondly, include themes that constituted the perceived dilemmas faced by teachers in the implementation of LCT approaches. Informed by Wink’s (2005) definition of CP, the researcher was able:

to see deeply what was below the surface-think, critique, and analyse. Pedagogy does not only mean how a teacher teaches. It is about the visible and hidden human interactions between a teacher and a learner, whether they are in a classroom or in the larger community. Critical pedagogy looks for the why that leads to action. (p. 1)

Therefore, the contested aspects discussed herein include: the constructivist view of knowledge, language and cultural context in LCT, teacher-student power relation, and the nature of the curriculum. Other aspects included in the discussion are teachers' substantive and syntactic knowledge and classroom organisation and management. The perceived LCT dilemmas included: language barrier; class sizes, curriculum, design, and teacher shortage; and scarcity of instructional resources. Other pedagogical dilemmas included lack of in-service training for LCT and lack of cultural-context curriculum relevance. As stated herein, these themes were discussed in light of LCT as reflected by lenses of CP theoretical framework. Chapter eight presents the study conclusions, implications, and recommendations regarding the implementation of LCT in the developing countries, in this case, Tanzania.

CHAPTER 8

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

Chapter seven presented a discussion of major themes advanced by the study. This chapter concludes the study and presents its contribution to the existing body of knowledge about LCT. The chapter constitutes four major sections: the study conclusions, implications, recommendations, and chapter summary.

Conclusions

From the research findings, ten (10) fundamental conclusions are presented as follows:

- (a) Geography teachers demonstrated surface understanding of LCT based on constructivist learning theory. Teachers' understanding of LCT was limited to a change of instructional methods from teacher-centred to learner-centred approaches. Teachers showed little evidence of understanding how learners' mental cognition functions and the kind of instructional competence learners needed to acquire during the teaching processes. The same was reflected during teachers' teaching practices where teachers dominated most of their instructional practices. Even when teachers assigned students into group activities, effective guidance and facilitation of students' group activities was notably absent. Many times teachers initiated questions to students contrary to the constructivist learning beliefs. Students were also given limited time to reflect on the geographical aspects under discussion;
- (b) Geography teachers presented little consideration of learners' culture in their teaching processes. Very rarely did teachers incorporate students' cultural knowledge, prior experiences, and diverse instructional performance styles to make learning more appropriate and effective for them. The researcher argues that students' lived experience across socio-economic and political aspects forms a cultural heritage and identity or a key for meaningful knowledge acquisition and consequently its application;
- (c) Teachers' instructional decision-making before, during and after classroom instruction was dictated by the mandated subject curriculum and relevant curriculum

materials such as the syllabus, textbooks and teachers' lesson notes. As such, teachers' achievement in their teaching processes were determined by students' achievement and performance in the respective instructional objectives as per syllabus guidelines and not by the ability of students to assimilate and integrate their life experience into the knowledge construction process;

- (d) Though teacher-centred dominated over LCT approaches, teachers did present some varied evidence of application of LCT beliefs. Teachers' variations in the application of LCT beliefs were observed within subject topics and from one topic to another. It was also observed that learners shared their experience regarding some instructional aspects whenever they were provided opportunities. It was experienced that teachers who demonstrated a high level of mastery of pedagogical content knowledge were likely to engage students effectively in their teaching practices;
- (e) Both teachers and students were unable to communicate effectively using English. While teachers had to code switch and code mix between Swahili and English; many students who volunteered to share what they knew about some instructional aspects suggested limited acquisition of English. Students struggled to communicate their thoughts based on their experiences and prior knowledge;
- (f) Teachers' evaluation of their classroom instruction focused on whether or not students achieved the instructional objectives as guided by the syllabus and not by students' engagement and ability to reflect on the instructional aspects based on their lived experience. Thus teachers used evaluation results to assess the extent the instructional objectives were achieved and not based on students' ability to integrate geographical aspects with their lived experience in the classroom processes;
- (g) The geography syllabus exposed unfriendly curriculum for effective and efficient implementation of LCT. The syllabus was characterised by too many instructional topics to be covered in a short instructional period. The syllabus constituted not only disproportionate instructional topics to the school calendar but also it was examination oriented, meaning it was aimed at preparing students for examinations and not for knowledge construction. Teachers' pedagogical decision-making thus focused on facilitating students' instruction for better performance in internal and external examinations. The study presents an examination-oriented curriculum challenge which needs to be addressed if teaching for critical thinking and problem-solving and not for passing examinations is to be achieved. Furthermore, the syllabus also presented

features of discreteness. It lacked communication and consistency within geography syllabus and between other subjects' syllabi.

- (h) The existence of large classes affected teachers' teaching practices. Teachers experienced teaching in large classes to adversely affect the implementation of LCT approaches. Teachers taught in classes ranging between 90-200 students. Large classes contributed to students' disruptive behaviour thus affecting classroom organisation and management for effective instructional practices. These classes were also characterised by my limited supply of instructional resources such as textbooks, computer-assisted facilities, maps, models and globes;
- (i) Teachers demonstrated a lack of motivation in implementation of LCT approaches. Based on the findings, several factors contributed to teachers' lack of motivation regarding the use of LCT methods. These factors included: curriculum overload, relevance and domination; large classes; teachers' insufficient skills and knowledge about LCT; lack of instructional resources; students' limited English proficiency, and teachers' multiple responsibilities; and
- (j) The 1995 Tanzania's educational policy and the mandated curriculum documents (syllabus, schemes of work, lesson plan, and textbooks) did not feature many of the LCT beliefs as stated by the Tanzania's 2025 development vision statement on education and the education for self-reliance philosophy that guides the provision of education in the country and as also reflected by the constructivist theory of learning.

Implications

According to the research findings, the study presents some implications as follows:

- (a) The mismatch between the intended and the mandated curricula. The mandated curriculum documents do not feature the LCT beliefs as required by the intended curriculum. Many of the instructional topics in the syllabus and textbooks do not reflect the socio-economic, cultural, and political experience of both teachers and students. The syllabus also proposes instructional methods and approaches teachers should use. Thus teachers' teaching practices were reflected in the nature and guidelines of the curriculum materials. This means that teachers' flexibility in their pedagogical decision-making and practices was limited thus constraining effective implementation of LCT approaches;

- (b) Completion of the syllabus and students' achievement in the instructional objectives and not their engagement and ability to use their life experience to make conception of the topics determined teachers' evaluation of teaching processes. Teachers used evaluation results to assess their achievement in the delivery of the instructional objectives and not to assess students' engagement in the evaluation process;
- (c) There is a need to address the curriculum relevance, compatibility and package to influence its implementation in LCT contexts;
- (d) In-service teachers need continual training regarding constructivist LCT and its application in different classrooms' contexts;

Recommendations

The study provides some recommendations for policy, practice, and further research as follows:

Recommendations for policy action

- (a) There is a need to address dilemmas in the implementation of LCT approaches. The dilemmas include: class sizes, curriculum design, and teacher shortage; shortage of instructional resources and facilities; and the medium of instruction;
- (b) The geography curriculum should be designed in a way that allows for teachers' flexibility and that teachers should also be trained to implement such a curriculum. The idea for a flexible curriculum is to support teachers to use LCT methods based on students' geographical and cultural contexts; and
- (c) Since language is both part of the teachers and students' culture and the medium through which culture is integrated in the geography curriculum during classroom practices, serious deliberations about the policy as regards the place of indigenous languages in education, in this case, Swahili should constitute part of the rethinking of promoting LCT in Tanzania in particular, and Africa in general.

Recommendations for practice

- (a) Teachers' need of mastery in the substantive and syntactic geography knowledge to enhance implementation of LCT approaches;
- (b) Teachers' need of in-service training regarding a conceptual and theoretical understanding of LCT, its approaches, and application in geography classrooms;

- (c) Teachers' use of an integrated-formative evaluation and assessment methods which promote active students' engagement and development of critical thoughts; and
- (d) The need to address and harmonise the complexities and contradictions that adversely affect the effective implementation of LCT approach in Tanzania's geography classrooms.

Recommendations for further research

This study focused on understanding the implementation of LCT from the perceptions and experience of secondary school geography teachers. The study therefore considered a narrow aspect for rigorous assessment of: teachers' understanding of constructivist LCT; teachers' instructional decision-making during the planning for classroom instruction; teachers' teaching practices; and teachers' evaluation of classroom instruction and how they use evaluation results to inform their teaching practices as reflected by LCT beliefs. Therefore, in order to widen the scope of understanding about the implementation of LCT curriculum in Tanzania, the researcher recommends the following:

- (a) The need for further research on aspects around the same topic. Preferably, areas of research interest might include: the implementation of LCT in social science curriculum in general or in a subject area other than geography; the influence of teachers' substantive and syntactic knowledge on the implementation of LCT approaches; how formative classroom evaluation and assessment influence the implementation of LCT curriculum; and the implementation of LCT curriculum within the constraints of: class sizes, curriculum design and teacher shortage; shortage of instructional resources and facilities; the medium of instruction, and teacher motivation;
- (b) The study presents qualitative findings which although they could be transferable, they cannot be generalised. Thus, the study also recommends for undertaking empirical research which will not only generate findings based on observed and measured phenomena, it will also present numerical data which could be easily generalised across case studies and research sites; and
- (c) Further research into the use of CP in understanding LCT would allow educators and future researchers to gain insight into LCT from different perspectives consequently enriching the existing body of knowledge regarding LCT practices.

Chapter summary

The chapter has presented thesis conclusions, implications, and recommendations. Generally, the thesis demonstrates a significant knowledge contribution to the existing body of knowledge regarding constructivist LCT. In particular, this thesis contributes knowledge of LCT in the following educational aspects:

- (a) International literature on LCT from the developing economy's perspectives;
- (b) Theoretical and practical understanding of the complexities and contradictions that impede the effective implementation of LCT particularly in Tanzania's education context; and
- (c) Culture and teaching

More importantly, the researcher has also advanced three basic models to guide the practice of LCT. These include:

- (a) The constructivist learning process model (p. 79);
- (b) An integrated LCT based curriculum model (p. 266); and
- (c) Classroom organisation and management framework model (p. 271)

The next two sections present the references and appendices that support the thesis.

References

- Agnew, S., & Lodge, C. (2000). Gifts, ping-pong and loops - linking feedback and learning. In S. Agnew (Ed.), *Feedback for learning* (pp. 1-17). London:
- Aliakbari, M., & Faraji, E. (2011). Basic Principles of Critical Pedagogy. 2nd *International Conference on Humanities, Historical and Social Sciences IPEDR 17 (2011)* © (2011) IACSIT Press, Singapore
- Allen, B. A., & Boykin, A. W. (1992). African-American children and the educative process: Alleviating cultural discontinuity through prescriptive pedagogy. *School Psychology Review*, 21(4), 586-598.
- Anderson, P. J., & Peck, C. A. (2007). Reconstructing practice in teacher education through art making. *The Reading Matrix*, 7(1), 19-29.
- APA Group of the Board of Educational Affairs (1997). *Learner-centred psychological principles: A framework for school redesign and reform*. Washington DC: American Psychological Association. Retrieved from: <http://www.apa.org/ed/governance/bea/learner-centred.pdf> on 18 August 2012
- Anderson, J.R., Reder, L.M., & Simon, H.A. (1996). Situated learning and education. *Educational Researcher*, 25, 5-11.
- Apple, M. W. (1999). *Power, meaning, and identity*. New York: Peter Lang.
- Apple, M. (1982). *Education and Power*. London: Routledge & Kegan Paul.
- Applefield, J., Huber, R., & Moallem, M. (2001). Constructivism in Theory and Practice: Toward a Better Understanding. *The High School Journal*, 84(2), 35-53.
- Archambault, R. D. (Ed). (1966). *Dewey on education, appraisals*. New York, NY, Random House
- Archambault, R.D. (Ed.). (1964). *John Dewey on education: Selected writings*. Chicago: The University of Chicago Press.
- Archbald, D.A. & Newmann, F.M. (1988). *Beyond standardized testing: Assessing authentic academic achievement in the secondary school*. Reston, VA, National Association of Secondary School Principals
- Aronowitz, S. & Giroux, H. (1985). Radical education and transformative intellectuals, *Canadian Journal of Political and Social Theory* 9(3): 48-63.
- Auerbach, E. (1993). Putting the P back in participatory. *TESOL Quarterly*, vol. 27, 543-547.

- Australian Department of Education, Employment, and Workplace Relations. (2008). A Final report on the study into the teaching of geography in years 3-10.
- Australian Ministry for Education, Science and Training (February, 2008). *A Study into the Teaching of Geography in Years 3-10*. A final Report to the Department of Education, Employment and Workplace Relations. Australia.
- Aydin, F. (March, 2011). Geography teaching and metcognition. *Journal of Educational Research and Review*, 6(3), 274-278. Available on line at <http://www.academicjournals.org/ERR>
- Bailey, C. (2007). *A guide to qualitative field research*. Thousand Oaks: Pine Forge Press.
- Baker, E., McGaw, B. & Peterson, P. (2007). Constructivism and learning (Eds). *International Encyclopaedia of Education (3rd Ed)*, Oxford: Elsevier
- Barnes, D. & Todd, F. (1995). *Communication and Learning Revisited*. Portsmouth, NH: Boynton/Cook.
- Bamgbose, A. (1994). 'Pride and prejudice in multilingualism.' In Fardon R & Furniss G (eds.) *African languages, development and the state*. London & New York: Routledge. 33-43.
- Bartlett, L. (August, 2005). Dialogue, Knowledge, and Teacher-Student Relations: Freirean Pedagogy in Theory and Practice. *Journal of Comparative Educational Review*, 49(3), 344-364
- Bartolomé, L. (1996). Beyond the methods fetish: Toward a humanizing pedagogy. In P. Leistyna, A. Woodrum, & S. Sherblom (Eds.), *Breaking free: The transformative power of critical pedagogy*. *Harvard Educational Review*, 27, 229-252.
- Bassey, M. (1999). *Case Study Research in Educational Settings*. UK: Open University Press.
- Beane, J. (1995). Curriculum integration and the disciplines of knowledge. *Phi Delta Kappan*, 76(8), 616-622.
- Bednarz, S. (2000). 'Geography Education Research in the Journal of Geography 1988-1997'. *International Research in Geographical and Environmental Education*, 9(2), 128-140.
- Beile, P. & Boote, D. (December August, 2006). On "Literature Reviews of, and for, Educational Research": A response to the critique. By Joseph Maxwell, University of Central Florida
- Bell, B., & Cowie, B. (2001). *Formative Assessment and Science Education*. The Netherlands: Kluwer Academic Publishers.

- Bentley, M., & Ebert, E. (2007). *Teaching constructivist science, K-8: Nurturing natural investigators in the standards-based classroom*. Thousands Oaks, CA: Corwin Press.
- Bergen, D. (1993-1994). Authentic performance assessments. *Childhood Education, 70*(2), 99-102.
- Berkowitz, S. (1997). Analyzing Qualitative Data. In J. Frechtling, L. Sharp, and Westat (Eds.), *User-Friendly Handbook for Mixed Method Evaluations* (Chapter 4). Retrieved June 21, 2006 from National Science Foundation, Directorate of Education and Human Resources Web site: http://www.ehr.nsf.gov/EHR/REC/pubs/NSF97-153/CHAP_4.HTM
- Best, J. W., & Kahn, J. V. (2006). *Research in education* (10thed.). Boston, MA: Pearson Education Inc.
- Biggs, J. (1998). Learning from the Confucian Heritage: so size doesn't matter?. *International Journal of Educational Research, 29*, 723-738.
- Branco & Valsiner (Eds.). (2004). *Communication and Metacommunication in Human Development*. Charlotte, NC: Information Age Publishing, Inc.
- Brant, J. (2006). *Subject knowledge and pedagogic knowledge: ingredients for good teaching? An English perspective*. *Edukacija, 94* (2), 60-77.
- Brantmeier, E.J., Aragon, A. & Folkestad, J.E. (2011) Examining Collaborative Learning Modalities (CLM): Critical Multicultural Education On-line? *Multicultural Education and Technology Journal 5* (1).
- Brett, M. (1996). Teaching extended class periods. *Social Education, 60*(2), 77-79.
- Breunig, M. (2009). Teaching For and About Critical Pedagogy in the Post-Secondary Classroom. *Studies in Social Justice, 3*(2), 247-262.
- Brooks, J. G., & Brooks, M.G. (1999). *In search of understanding: The case for constructivist classrooms*. Alexandria, VA: ASCD.
- Brooks, J. G., & Brooks, M. G. (1993). *The case for constructivism in the classrooms*. Alexandria, VA: Association For Supervision and Curriculum Development.
- Brown, A. (1993). Guided discovery in a community of learners. In K. McGilly (ed.), *Classroom Lessons: Integrating cognitive Theory and Classroom Practice* (pp. 229-270). London: MIT Press.
- Brown, A. L., & Campione, J. C. (1996). Communities of learning and thinking, or a context by any other name. In P. Woods (Ed.), *Contemporary issues in teaching and learning* (pp. 120-126). London: Open University.

- Brown, J., Collins, A., & Duguid, P. (1994) *Situated Cognition and the Culture of Learning*. Available on line at: <http://www.ilt.columbia.edu/ilt/papers/JohnBrown.html>
- Bruce, C. D. (2007). Questions arising about emergence, data collection, and its interaction with analysis in a grounded theory study. *International Journal of Qualitative Methods*, 6(1), Article 4. Retrieved July 15 2012 from http://www.ualberta.ca/~iiqm/backissues/6_1/bruce.pdf
- Bruner, J. (1966). *The culture of education*. Cambridge, MA: Harvard University Press.
- Bunyi, G. (1999). Rethinking the place of African indigenous languages in African education, *International Journal of Educational Development*, (19), 337-350.
- Burke, B. (1983). Teaching styles in college geography. *Journal of Geography*, 82, (6), 255-256.
- Burns, R. (2000). *Introduction to research methods*. French Frost NSW: Longman
- Carey, S. (1986). Cognitive science and science education. *American Psychologist*, 41, 1123-1130
- Carl, A. (2005). The “voice of the teacher” in curriculum development: a voice crying in the wilderness? *South African Journal of Education*, 25(4), 223–228
- Castree, N. (2005). *Nature*. London: Routledge.
- Chung, S., & Walsh, D. J. (2000). Unpacking child-centeredness: A history of meanings. *Journal of Curriculum Studies*, 32(2), 215-234.
- Cimer, A. (2007). Effective teaching in science: A review of literature. *Journal of Turkish Science Education*, 4(1), 20-44.
- Cobb, P. (1994). Constructivism in mathematics and science education. *Educational researcher*, 23(4)
- Cochran-Smith, M. (2003). Learning and unlearning: the education of teacher educators. *Teaching and Teacher Education*, 19, 5-28.
- Cohen, D. K. (1988). Teaching practice: Plus ça change. In P. W. Jackson (Ed.), *Contributing to educational change: Perspectives on research and practice*. Berkeley, CA: McCutchan.
- Cohen, L., Manion, L. & Morrison, K. (2000). *Research Methods in Education* (5th ed.). London: Routledge, Falmer.
- Cone, D. J. & Foster, S. L. (2006). *Dissertations and theses from start to finish: Psychology and related fields* (2nd ed.). Washington, DC. American Psychological Association.
- Cornelius-White, Jeffrey, H., & Harbaugh, A. P. (2009). *Learner-Centred Instruction: Building Relationships for Student Success*. Thousand Oaks, CA: Sage.

- Cennamo, K. S.; Abell, S. K., & Chung, Mi-Lee. (July/August 1996). A "layers of negotiation" model for designing constructivist learning materials. *Journal of Educational Technology* 36 (4), 39 -48
- Crabtree, R. D., & Sapp, D.A. (2004). Your culture, my classroom, whose pedagogy? Negotiating effective teaching and learning in Brazil. *Journal of Studies in International Education*, 8(1)
- Creswell, J.W. (2007). *Qualitative inquiry & research design: Choosing among five approaches*. Thousand Oaks, CA: Sage Publications.
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Thousands Oaks, CA: Sage
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed method approaches* (2nded.). California: Sage.
- Crotty, M. (1998). *The Foundations of Social Research: Meaning and Perspective in the Research Process*. Australia: Allen and Unwin.
- Culture-Based Education Working Group.(2006). *Na lau lama community report*. Retrieved Nov. 11, 2010 at http://www.ksbe.edu/spi/PDFS/Reports/Na-Lau-Lama/Culture-Based_Education_Worknig_Group_Final.pdf
- Dada, A. (1991). *Culture and Power in the Classroom: A Critical Foundation for Bicultural Education*. BERGIN & GARVEY. NEW YORK
- Dandoulakis, G. (1986, April 1-4). *Towards a student-centred teaching of English literature*. A Paper presented at the Annual Meeting of the International Association of Teachers of English as a Foreign Language, 20th Brighton, England. Retrieved July 18, 2010 from: <http://www.eric.ed.gov/ERICWebPortal/search>
- Darling, J. (1994). *Child-centred education and its critics*. London: Paul Chapman Publishing.
- Deem, R. (1996). The future of educational research in the context of the social sciences: A special case? *British journal of educational studies*, 44, (2), 143-158.
- Degener, S. (2001). Making sense of critical pedagogy in adult education. *Annual Review of Adult Education and Literacy*, 2: 25-62. National Centre for the Study of Adult Learning and Literacy. Retrieved September 20, 2012, from: http://www.ncsall.net/fileadmin/resources/ann_rev/vol_II.pdf.
- Dei, G. (1994). The challenges of anti-racist education research in the African context. *Africa Development* 19 (3), 5-25
- Denzin, N., & Lincoln, Y. (1998). *The Landscape of Qualitative Research*. Thousand Oaks, CA: Sage Publishing.

- Dewey, J. (1998). *Experience and Education*. The 60th anniversary edition. ISBN 0-912099-34-8. KAPPA DELTA PI, Indianapolis, Indiana.
- Dewey, J. (1993). *How we think: A Restatement of the relation of reflective thinking to the educative process*. Chicago: Henry Regnery.
- Dewey, J. (1966). The school and society. In F. W. Garforth (Ed.), *John Dewey: Selected educational writings* (pp. 78-120). London: Heinemann.
- Dewey, J. (1963). *Experience and Education*. New York: Collier Books.
- Dewey, J. (1938). *Experience and education*. New York: Macmillan Publishing Company.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: D. C. Heath & Co.
- Dewey, J. (1916). *Democracy and education*. New York: Macmillan.
- Dewey, J. (1915). *Democracy and Education: An Introduction to the philosophy of Education*. Columbia University, New York City.
- Diallo, A. (1997). *Topical and Sectoral Studies: Basic Education in Africa*, A paper presented at the international seminar on Basic Education and Development Assistance in Sub-Saharan Africa. UNESCO: Paris
- Din, F., & Wheatley, F. (2007). A Literature Review of the Student-Centred Teaching Approach: National Implications, *National forum of teacher educational journal*, 17, (3)
- Dlamini, S. (2008). *New Directions in African Education. Challenges and Possibilities*. University of Calgary Press, Canada.
- Doolittle, P. E., & Hicks, D. (2003). Constructivism as a theoretical foundation for the use of technology in social studies. *Journal of Theory and Research in Social Education*, 31(1), 71-103.
- Doyle, W. (1988). Work in mathematics classes: The context of students' thinking during instruction. *Educational Psychologist*, 23, (2), 167-180.
- Driver, R. & Oldham, V. (1986). A constructivist Approach to Curriculum Development in Science: *Studies in Science Education*, 13, 105-122.
- Driver, R. & Scott, P. (1994). Constructing Scientific Knowledge in the Classroom: *Educational Researcher*, 23, (7), 5-12
- Edgerton, R., Hutchings, P. & Quinlan, K. (1991). *The Teaching Portfolio: Capturing the Scholarship in Teaching*. Washington, DC: The American Association for Higher Education.

- Eliana, S. (2000). Critical Pedagogy in TESOL: A Review of the Literature. Educational Resources Information Centre (ERIC). Retrieved April 10, 2012 from <http://www.eric.ed.gov/PDFS/ED447700.pdf>
- Elliott, C. (1996). Pedagogical reasoning: Understanding teacher decision-making in a cognitive apprenticeship setting Literacy teaching and learning. *An International Journal of Early Literacy*, 2, (2), 95. South-eastern Louisiana University Press
- Enon J.C (1998). *Educational Research Statistics and Measurement: Educational Psychology*. Makerere University.
- Feuerstein, R. (1990). The theory of structural cognitive modifiability. In B. Z. Presseisen (Ed.), *Learning and thinking styles: Classroom interaction* (pp. 68-134). Washington, DC: National Education Association.
- Fischer, H. E., & Von Aufschnaiter, S. (1993). Development of meaning during physics instruction: Case studies in view of the paradigm of constructivism. *Science Education*, 77(2), 153-168.
- Fitzgibbons, D.E., & Ramsey, V. J. (2005). Being in the classroom. *Journal of Management Education*, 29(2), 333-356.
- Flick, U. (2006). *An Introduction to qualitative research*. London: SAGE
- Foley, P. (2007). A Case for and of critical pedagogy: Meeting the challenge of libratory education at Gallaudet University. *Paper Presented at the American Communication Association's annual conference*. Taos: New Mexico.
- Fonseka, E. (2003). Autonomy in a resource-poor setting: Enhancing the carnivalesque. In D. Palfreyman, and R.C. Smith: *Learner autonomy across cultures: Language education perspectives* (eds.), Basingstoke: Palgrave Macmillan, 147-163.
- Fosnot, T. C. (1996). *Constructivism: Theory, Perspectives and Practice* (2nded.). Teachers College Press, Columbia University: New York and London
- Foster, S. & Cone, J. (2006). *Dissertations and Theses from start to finish: Psychology and related fields* (2nded.). American Psychology Association: Washington, DC.
- Fox, R. (2001). Constructivism examined. *Oxford Review of education*, 27, (1), 23-35.
- Fraser, D. & McGee, C. (2001). *The professional practice of teaching* (2nded.). Dunmore Press Limited New Zealand.
- Freire, P. (1998). *Pedagogy of freedom: Ethics, democracy and civic courage*. Lanham, MD: Rowman and Littlefield.
- Freire, P. (1996). *Pedagogy of the oppressed*. New York: Continuum. (First published in 1970)

- Freire, P. (1993). *Pedagogy of the City*. New York: Continuum.
- Freire, P. (1994). *Pedagogy of hope: Reliving pedagogy of the oppressed*. New York: Continuum.
- Freire, P. (1992). *Pedagogy of Hope: Reliving Pedagogy of the Oppressed*. New York: Continuum.
- Freire, P. (1987). *The Politics of education: Culture, power and liberation*. South Hadley, Mass.: Bergin & Garvey.
- Freire, P. (1973). *Education for critical consciousness*. New York: Continuum Publishing Company.
- Freire, P. (1972). *Cultural action for freedom*. Harmondsworth: Penguin.
- Freire, P. (1971). *Pedagogy of the oppressed*. New York: Seabury Press.
- Freire, P. (1970). *Pedagogy of the oppressed*. New York: Herder and Herder.
- Frey, B.B. & Schmitt, V.L. (2006, April). *Coming to terms with classroom assessment: Are performance-based assessments authentic or visa-versa?* Presented at the Annual Meeting of the American Educational Research Association, San Francisco.
- Fullan, M. (2007). *The new meaning of educational change*. (4thed.). New York: Teachers College Columbia University
- Gatawa, B.S.M. (1990). *The Politics of the School Curriculum: An Introduction*. Harare: Jongwe Press.
- Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. New York: Teachers College Press.
- Gergen, K. J. (1995). Social constructivism and educational practices. In L. P. Steffe & J. Gale (Eds.), *Constructivism in Education* (pp. 17-39). Hillsdale, N.J: Lawrence Erlbaum.
- Geuss, R. (1981). *The Idea of a Critical Theory: Habermas & the Frankfurt School*. CAMBRIDGE University Press. Australia.
- Gibbs, G. (1995). *Assessing student-centred courses*. Oxford: Oxford Centre for Staff Learning and Development.
- Gibbs, B. (1979). Autonomy and authority in education. *Journal of Philosophy of Education* 13, 119-132.
- Gieve, B. (1997) *Assessing Student Learning in Higher Education*. London: Routledge.
- Giroux, H. (2002). "Critical Learning and the Promise of Democracy: Introduction," in Bil Johnson, *The Student-Centred Secondary Classroom Handbook*. Larchmont, NY: Eye on Education Press, pp. xv-xix.

- Giroux, H. (2000). *Stealing innocence: Youth, Corporate Power, and the Politics of Culture*. St. Martin's Press. New York, NY.
- Giroux, H. (1997). *Pedagogy and the Politics of Hope: Theory, Culture, and Schooling*. A Critical Reader. West view Press.
- Giroux, H. (1992). *Border crossings: Cultural workers and the politics of education*. New York, NY: Routledge.
- Giroux, H. (1991). Postmodernism, Ferminism, and Cultural Politics: Redrawing educational boundaries. State University, New York Press.
- Giroux, H., & McLraen, P. (1997). Writing from the margins: Geographies of identity, pedagogy, and power, *Journal of Education*, 174(1), 7-30.
- Goethals, G., Sorenson, G., & MacGregor, J., (2004). Qualitative Research. *Encyclopaedia of Leadership*, SAGE Publications London, Thousand Oaks CA, New Delhi, retrieved May 30, 2012
from:http://wagner.nyu.edu/leadership/publications/files/Qualitative_Research.df
- Goldin, G.A. (1990). Epistemology, constructivism, and discovery learning in mathematics. In R.B. Davis, C.A. Maher, & N. Noddings (Eds.), *Constructivist views on the teaching and learning of mathematics* (pp. 31-47). Reston, VA: NCTM.
- Graneheim, H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, 24, 105-112.
- Gootman, M. E. (2008). *The caring teacher's guide to discipline: helping students learn self-control, responsibility and respect, K-6* (3rd ed.). Thousand Oaks, CA: Corwin.
- Government of the United Republic of Tanzania. (2010). *Tanzania Beyond Tomorrow: Information and Communication Technology Project for rural secondary schools e-learning connectivity*. Dar Es Salaam: Tanzania.
- Government of the United Republic of Tanzania. (2005). *Curriculum and teaching: Syllabus for diploma teacher education*. Dar es Salaam: MOEC.
- Government of the United Republic of Tanzania. (2000). *Tanzania Development Vision 2025*, Dar Es Salaam, Government Printers: Tanzania.
- Government of the United Republic of Tanzania. (1997). *Curriculum and teaching: Syllabus for diploma teacher education*. Dar es Salaam: MOEC.
- Government of the United Republic of Tanzania. (1995). *Tanzania Education and Training Policy*. Dar Es Salaam: Government Printers.

- Graneheim U.H. & Lundman B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today* 24, 105–112.
- Gregg, M., & Lenhardt, G. (Summer 1994). Mapping out geography: An Example of Epistemology and Education. *Review of educational research*, 64(2), 311-361.
- Gronlund, G. (2003). *Focused early learning: A planning framework for teaching young children*. St. Paul, MN: Red leaf Press.
- Haggett, P. (1990). *The Geographers' Art*. Cambridge, MA: Blackwell
- HakiElimu. (2007b). *Two years of SEDP implementation (2004-2006): Key findings from government reviews*. Dar es Salaam: HakiElimu.
- Hardman, F., Abd-Kadir, J., & Smith, F. (2008). Pedagogical renewal: Improving the quality of classroom interaction in Nigerian primary schools. *International Journal of Educational Development*, 28(1), 55-69.
- Hardy, M. D., & Taylor, P. C. (1997). Von Glasersfeld's radical constructivism: A critical review, *Science and Education*, 6: 135–150.
- Harper, D. (2003). Developing a critically reflexive position using discourse analysis. In L. Finlay & B. Gough (Eds.), *Reflexivity: A practical guide for researchers in health and social sciences* (pp. 78-92). Oxford, UK: Blackwell Science.
- Harris, A. (1998). Effective Teaching: A review of the literature, *School Leadership & Management: Formerly School Organisation*, 18(2)169-183.
- Harwood, C., & Nolan, P. (2002, December). *Curriculum integration survey. Case study research. Final report Ministry of Education-Massey, New Zealand University professional development contracts 1998-2001*. PalmerstonNorth: Massey University.
- Heath, S. B. (1983). *Ways with words: Life, and work in communities and classrooms*. Cambridge University Press.
- Hein, G. (October 1991). The Museum and the Needs of People. *CECA (International Committee of Museum Educators) Conference Jerusalem Israel*, 15-22 October 1991.
- Hendry, G. D. (1996). Constructivism and educational practice. *Australian Journal of Education*, 40(1), 19-45.
- Henson, K. T. (2003). Foundations for learner-centred education: A knowledge base. *Education*, 124(1), 5-16.

- Heritage, M. (2010). *Formative Assessment: Making it happen in the classroom*. Thousand Oaks, CA: Corwin Press.
- Hershkowitz, R., Schwarz, B. B., & Dreyfus, T. (2001). Abstraction in context: epistemic actions. *Journal for Research in Mathematics Education*, 22, 195-222.
- Heugh, K. (2006). *Language Education Policies in Africa*. Human Sciences Research Council, Cape Town, South Africa.
- Hewson, P. W., & Hewson, M. G. (1988). An appropriate conception of teaching science: A view from studies of science learning. *Science Education*, 72(5), 597-614.
- Hiebert, J., & Wearne, D. (1993). Instructional Task, Classroom Discourse, and Students' Learning in Second Grade. *American Educational Research Journal*, 30, 393-425.
- Higgins, J. W. (May, 1996). *Sense-making as a method of practicing a critical pedagogy in the multi-cultural classroom*. Paper presented at International Communication Association annual meeting, Chicago, Illinois.
- Hodson, K. (2002). *Student-Centred Teaching: Refiguring the centre*. (ERIC Document Reproduction service No. ED465167).
- Hoepfl, M. (1997). Choosing Qualitative Research: A Primer for Technology Education Researchers, *Journal of Technology Education*, 9(1) retrieved 31 May 2012 from: <http://scholar.lib.vt.edu/ejournals/JTE/v9n1/pdf/hoepfl.pdf>
- Holec, H. (1981). *Autonomy and Foreign Language Learning*. Pergamon, Oxford.
- hooks, b. (1994). *Teaching to Transgress. Education as the Practice of Freedom*. New York, NY: Routledge.
- hooks, b. (1989). *Talking back: Thinking feminist-Thinking black*. London: Sheba.
- Horkheimer, M. (1993). *Between Philosophy and Social Science*, Cambridge: MIT Press.
- Horkheimer, M. (1982). *Critical Theory*. New York: Seabury Press.
- Hyde, A. (November 2011). The Dialogic Classroom as Pedagogy: Teaching the Civic Mission of Schools, *Journal of Peace Education and Social Justice* 5(2) 179-197.
- Incekara, S. (2010). Geography education in Asia: Samples from different countries and Turkey, *Education* 131(1), 220-232.
- Jaworski, B. (1994). *Investigating Mathematics Teaching: A Constructivist Enquiry*, Falmer, London.
- Jessop, T., & Penny, A. (1998). A study of teacher voice and vision in the narratives of rural South African and Gambian primary school teachers. *International Journal of Educational Development*, 18(5), 393-403.

- Jin, L. X. & Cortazzi, M. (1998). Dimensions of dialogue: large classes in China. *International Journal of Educational Research*, 29, 739-761.
- Johnson, B., & Christensen, L. (2004). *Educational research: A quantitative, qualitative and mixed method approaches* (2nd Ed.). New York: Pearson
- Jomtien. (5-9 March 1990). *World Conference on Education For All: Meeting Basic Learning Needs*, Thailand.
- Jonassen, D. *et al.* (1995). Constructivism and computer-mediated communication in distance education. *The American Journal of Distance Education*.9 (2).
- Kana'iaupuni, S. (June, 2007). A brief overview of culture-based education and annotated bibliography. *Culture in Education Brief Series, 1-4*. Honolulu, HI: Kamehameha Schools Research & Evaluation Division. Retrieved Nov. 29, 2010 at WWW.Ksbe.edu/spi
- Kanpol, B. (1994). *Critical pedagogy: An introduction*. Westport, CT: Bergin & Garvey.
- Kanstrup-Jensen, A. (2006). *Indigenous Education and Knowledge-a de-legitimised concept in the Education for All Strategies*, Development Research Series: Research Centre on Development and International Relations (DIR). Working paper No. 136, AALBORG UNIVERSITY
- Kasanda, C. & Lubben, F. (2005).The Role of Everyday Contexts in Learner-centred Teaching: The practice in Namibian secondary schools. *International journal of Science Education*, 27, 1805-1823
- Keesing-Styles, L. (2003). *Radical Pedagogy: The Relationship between Critical Pedagogy and Assessment in Teacher Education*. Retrieved April 9, 2012 from http://radicalpedagogy.icaap.org/content/issue5_1/03_keesing-styles.html
- Kelly, J. (1999). *Origin and Development of Education in Zambia*. Image Publishers Limited: Lusaka
- Kelly, J. (1985). Student-centred teaching for increased participation. *National Forum of Teacher Education Journal*. Retrieved June 15, 2010 from:<http://www.eric.ed.gov/ERICWebPortal/journalList/journalList.jsp>,
- Kennedy, C. (1996). *Teacher Roles in Curriculum Reform*. *Journal of English Language and Development*, 2(1).
- Killen, R. (2007). *Effective Teaching Strategies: Lessons from Research and Practice*. Thomson Social Science Press: Melbourne.
- Kincheloe, J. L. (2005). *Critical constructivism*. New York, NY: Peter Lang.
- Kincheloe, J. (2004) *Critical Pedagogy*. New York: Peter Lang.

- Kincheloe, J. L., & McLaren, P. (1994). Rethinking critical theory and qualitative research. In: N. Denzin, and Y. Lincoln (Eds.). *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage, pp. 138-157.
- Kirk, D., & Macdonald, D. (2001). Teacher voice and ownership of curriculum change, *Journal of Curriculum Studies*, 33 (5), 551-567
- Kitta, S. (2004). *Enhancing mathematics teachers' pedagogical content knowledge and skills in Tanzania*. Doctoral dissertation, University of Twente, Enschede. Print Partners: Ipskamp-Enschede
- Kuchah, K., & Smith, R. (2011). 'Pedagogy of autonomy for difficult circumstances: Principles from practice'. *International Journal of Innovation in Language Learning and Teaching*, 5 (2), 119-139.
- Kuhn, T.S. (1996). *The structure of scientific revolutions*, (3rded.) Chicago: University of Chicago Press.
- Ladson-Billings, B. (1992). Reading between the lines and beyond the pages: A culturally relevant approach to literacy teaching. *Theory Into Practice*, 31(4), 312-320.
- Ladson-Billings, G. (1994). *The dream keepers: Successful teachers of African American children*. San Francisco: Jossey-Bass
- Lalonde, C. (2011). Courses that Deliver: Reflecting on Constructivist Critical Pedagogical Approaches to Teaching Online and On-site Foundations Courses. *International Journal of Teaching and Learning in Higher Education*, Vol. 23(3), 408-423 ISSN 1812-9129
- Lantolf, J. P. (Ed.). (2000). *Socio-cultural theory and second language learning*. Oxford: Oxford University Press.
- Lewin, K.M., & Stuart, J.S. (2003). *Researching teacher education: New perspective on practice, performance and policy*. Multi-Site teacher education research project (MUSTER): Synthesis report. London: Department for International Development.
- Littledyke, M. (1998). *Teaching for Constructive Learning*, in M. Littledyke, and L. Huxford (eds). *Teaching the Primary Curriculum for Constructive Learning*, London, David Fulton Publishers Ltd, pp 17-30.
- Liu, C. H. & Matthews, R. (2005). Vygotsky's philosophy: Constructivism and its criticisms examined. *International Education Journal*, 6(3), 386-399
- Louis, S. (1982). Multisite/Multimethod Studies: An Introduction. *American Behavioural Scientist*, 26(1), 6-22.

- Maaka, M. J. (1999). Assessment for School Success: A Student-Centred Approach. *Journal of Invitational Theory and Practice*, 6(1)6-27
- MacIntyre, B. Brears, L., & Bhattacharya, M. (2005). *Integrated Curriculum: Science & Technology 210.210 Course Information*. College of Education, Massey University, Palmerston North, New Zealand. p20.
- Mack, N., Woodsong, C., MacQueen, K. M., Guest, G., & Namey, E. (2005). *Qualitative Research Methods: A Data Collector's Field Guide*, Family Health International.
- Mansell, H. L. (2009). *Collaborative partnerships: An investigation of co-construction in secondary classrooms*. (A PhD thesis, University of Waikato, New Zealand).
Retrieved from:
<http://researchcommons.waikato.ac.nz/handle/10289/3520?show=full>
- Marincovich, M. (2000). Problems and Promises in Problem-Based Learning. in O.S. Tan, P. Little, S.Y. Hee, and J. Conway, (Eds). *Problem-Based Learning: Educational Innovation Across Disciplines*. Singapore: Temasek Centre for Problem-based Learning.
- Marshall, J.D. (1996). *Michel Foucault: Personal autonomy and education*. NY: Kluwer Academic.
- Marshall & Rossman. (1999). *Designing qualitative research* (3rded.). London: Sage Publications.
- Mason, J. (2002). *Qualitative researching* (2nded). Thousand Oaks, CA: Sage Publications.
- Masters, M.M., & Holifield, M. (1996). Rousseau revisited: Compassion as an essential element in democratic education. *Education*, 116, 559-565.
- Mauthner, N. S. (2003). Reflexive accounts and accounts of reflexivity in qualitative data analysis, *Sociology*, 37(3), 413-431.
- McCombs, B. L., & Whisler, J. (1997). *The learner-centred classroom and school: Strategies for increasing student motivation and achievement*. San Francisco: Jossey-Bass, Inc.
- McLaren, P. (2007). The future of the past: Reflections on the present state of empire and pedagogy. In P. McLaren & J. Kincheloe (Eds.), *Critical pedagogy: Where are we now?*(pp. 289-314). New York: Peter Lang.
- McLaren, P. (2003). *Life in Schools: An Introduction to Critical Pedagogy*. New York: Pearson.

- McLaren, P. (1998). "Revolutionary Pedagogy in Post-Revolutionary Times: Rethinking the Political Economy of Critical Education." *Educational Theory* 48(4): 431-463. Retrieved 11 September 2012 from: tku.edu.tw
- McLaren, P. (September, 1994). Critical Pedagogy, Political Agency, and the Pragmatics of Justice: The Case of Lyotard. *Journal of Educational Theory*, 44(3), 319-340
- McLaren, P. (1989). *Life in schools: An introduction to critical pedagogy in the foundations of education*. New York: Longman.
- McLaren, P. & Giroux, H. (1986). Teacher Education and the Politics of Engagement: The Case for Democratic Schooling. *Harvard Educational Review*, 56(3), 213-239. Harvard Education Publishing Group.
- Meece, J. L. (2003). "Applying Learner-Centred Principles to Middle School Education." *Theory into Practice*, 42(2), 109-116.
- Meena, W. E. (2009). *Curriculum innovation in teacher education: Exploring conceptions among teacher educators*. (Doctoral thesis, Åbo): Åbo Akademi University Press.
- Mehdinezhad, V. (2011). Teachers' Instructional Beliefs About Student-Centred Pedagogy, *International Journal on New Trends in Education and Their Implications*, 2(5), 49-63
- Mercer, N. (2000). *Words and Minds: How we use language to think together*. London: Routledge.
- Mercer, N. (1995). *The guided construction of knowledge. Talk amongst teachers and learners*. Clevedon, UK: Multilingual matters.
- Mercer, N. (1996). The quality of talk in children's collaborative activity in the classroom. *Learning and Instruction*, 6(4), 359-377.
- Mercier, J. (2012). From Laboratory to Authentic Contexts: Two Studies of Pedagogical Reasoning Across Four Levels of Expertise, *World Journal of Education*, 2(4), 2-18
- Merriam, S. (1998). *Qualitative Research and Case Studies Applications in Education*. John Wiley & Sons.
- Merriam, & Associates. (2002). *Qualitative research in practice: Examples for discussion and analysis*. San Francisco: Jossey-Bass
- Meszaros, R. (2010). *A Learner-Centred Approach to Teaching English*. Work-in-Progress Report, Hong Kong.
- Meyer, C. (1992). What's the difference between authentic and performance assessment? *Educational Leadership*, 49(8), 39-40.

- Meyer, H. (2004). *Novice and Expert Teachers' Conceptions of Learners' Prior Knowledge*. Wiley InterScience (www.interscience.wiley.com), Wiley Periodicals, Inc.
- Michalowics, K., & Howard, A. (2003). Pedagogy in text: An analysis of mathematics text from the nineteenth century. In G. Stanic & J. Kilpatrick (Eds.), *A history of school mathematics* (Vol. 1). Reston: VA: National Council of Teachers of Mathematics.
- Miles, B. & Huberman, M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*, (2nd ed.). Sage Publications, CA: Newbury Park.
- Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: SAGE Publications, Inc.
- Msonde, C. E. (August, 2011). *Enhancing teachers' competencies on learner-centred approaches through learning study in Tanzanian schools*. (PhD Thesis), the University of Hong Kong, Hong Kong.
- Mtika, P. (2010). Developing learner-centred education among secondary trainee teachers in Malawi: The dilemma of appropriation and application. *International Journal of Education Development*, 30, 396-404
- Mtitu, E. A. (November, 2008). *Globalisation and Education: Assessing the Impact of Globalisation on the Quality of Community Secondary Schooling in Tanzania: An exploratory study*. (Unpublished master's thesis, University of Charles Darwin), Australia.
- Murray, F. B. (1996). Beyond natural teaching: The case for professional education. In F. B. Murray (Ed.). *The Teacher Educator's Handbook* (pp. 3-13). San Francisco: Jossey-Bass.
- Mushi, P.A.K. (2004). *From didactic to facilitative approach: Establishing conditions for effective teaching and learning in higher education*. Dar es Salaam: Dar es Salaam University Press.
- Mustakova-Possardt, E. (2003). *Critical Consciousness: A Study of Morality in Global Historical Context*, Greenwood, Westport, CT.
- Nash, R. (1976). Pupils' expectations of their teachers. In M. Stubbs and S. Delamont (eds), *Explorations in Classroom Observations* (London: Wiley), 83-98.
- Newman, I., & Benz, C. R. (1998). *Qualitative-quantitative research methodology: Exploring the interactive continuum*. Carbondale: Southern Illinois University Press.
- Newmann, F., Brandt, R., & Wiggins, G. (1998). An exchange of views on semantics, psychometrics, and assessment reform: a close look at 'authentic' assessments. *Educational Researcher*, 27(6), 19-22.

- New Zealand Ministry of Education. (2007b). *The New Zealand curriculum for English-medium teaching and learning in years 1-13*. Wellington: Learning Media.
- NT Department of Employment, Education and Training. (2000). *The Titjikala Experience: Introducing Group Work, Workshop 8, ESL For Indigenous Students Teacher Development Course*, adapted from ESL in the Mainstream Teacher Development Course 2000, Department of Education, Training and Employment SA.
- Nyerere J. K. (1967). *Education for Self-Reliance*. Government Printer, Dar Es Salaam: Tanzania
- Nuthall, G. (2002). Knowing what we know and need to know about effective teaching, in B. Webber (Ed.), *Teachers make a difference: What is the research evidence?* Conference Proceedings (Wellington, New Zealand Council for Educational Research), 41-61
- Oberholtzer, E. E. (1937). *An Integrated Curriculum in Practice: A Study of the Development, Installation, and Appraisal of a Certain Type of Integrated Curriculum in the Educational Program of the Public Elementary Schools of Houston, Texas*. New York: Columbia University.
- O'Donnell, A. M. (1997). Constructivism by design and in practice: a review. *Issues in Education*, 3(2), 285-294.
- Odora, C. (1994). Indigenous forms of learning with reference to Achori of Uganda. *Journal of education in Africa*, 2(7) 61-72.
- Ogawa, M. (2001). Building multiple historical perspectives: An investigation of how middle school students are influenced by different perspectives. Doctoral dissertation, University of Georgia, *Dissertation Abstracts International*, 62, (09A), 3010
- Omoke, C. M. (2011). *Quality of Education offered to Children with Special Educational Needs (SEN) in the era of Free Primary Education (FPE) in Rural Kenya: Perspectives of Educationists, Teachers, and Parents*. (PhD Thesis, Victoria University of Wellington), New Zealand
- Orb, A., Eisenhauer, L., & Wynaden, D. (2000). Ethics in Qualitative Research. *Journal of Nursing Scholarship*, 33(1): 93-96.
- O'Sullivan, M. L. (2005). Authentic individual self-assessment, praxis and community. *Herdsa*, 351-357.
- Paris, S. G., & Ayres, L. R. (1994). *Becoming reflective students and teachers with portfolios and authentic assessment*. Washington, DC: American Psychological Society.

- Passman, R. (2000). Pressure cooker: *Experiences with student-centred teaching and learning in high-stakes assessment environments*. Retrieved July 18, 2010 from: <http://www.eric.ed.gov/ERICWebPortal/search>
- Patton, M. Q. (2002). *Qualitative research & evaluation methods*. (3rd ed.) Thousand Oaks, CA: SAGE Publications, Inc.
- Patton, R. (1990). *Qualitative evaluation and research methods* (2nded.). Thousands Oaks, CA: Sage.
- Pedder, D. (August, 2006). Are small classes better? Understanding relationships between class size, classroom processes and pupils' learning, *Oxford Review of Education*, 32(2), 213-234
- Pennycook, A. (1999). Introduction: Critical approaches to TESOL. *TESOL Quarterly*, vol.33, 329-348.
- Pennycook, A. (1994). Critical approaches to TESOL. In *Alternatives in TESOL research: descriptive, interpretive, and ideological orientation*. Ed. Alister Cummins. *TESOL Quarterly*, vol. 28, 690-693.
- Petraglia, J. (1998). The real world on a short leash: the (mis)application of constructivism to the design of educational technology. *ETR&D*, 46, (3), 53-65.
- Phillips, D. C. (1997). How, why, what, when and where: perspectives on constructivism in psychology and education. *Issues in Education*, 3(2), 151-194.
- Phillips, D.C., (1995). The good, the bad, and the ugly: The many faces of constructivism. *Educational Researcher*, 24(7), 5-12.
- Pinar, W. F., Reynolds, W. M., Slattery, P., & Taubman, P. M. (1995). *Understanding curriculum: An introduction to the study of historical and contemporary curriculum discourses*. New York: Peter Lang.
- Popham, W. J. (2008). *Transformative Assessment*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Postman, N. (1969). *The end of education: Redefining the value of school*. New York, NY: Alfred A. Knopf.
- Preston, J. (2007). *Student-Centred versus Teacher-Centred mathematics instruction: A meta-analysis*. Doctoral dissertation, Indiana University of Pennsylvania
- Pretzlik, U. (1994). Observational methods and strategies. *Nurse Researcher* 2(2), 13–21.
- Punch, M. (1994). Politics and ethics in qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research*. Newbery Park, CA: Sage.

- Richards, J.C. (2001). *Beyond training*. Beijing: Foreign Language Teaching and Research Press, 10.
- Richardson, V., Anders, P., Tidwell, D., & Lloyd, C. (1991). The relationship between teachers' beliefs and practices in reading comprehension instruction. *American Educational Research Journal*, 28(3), 559-586.
- Richardson, V. (December, 2003). Constructivist Pedagogy, *Teachers College Record* 105(9) 1623-1640, Columbia University
- Riemer, F. (2008). Becoming literate, being human: Adult literacy and moral reconstruction in Botswana. *American Anthropological Association*, 39(4) 444-464. Retrieved September 7 from: <http://onlinelibrary.wiley.com/doi/10.1111/j.1548-1492.2008.00032.x/references>
- Roberts, M. (2010). Geographical Enquiry. *Teaching Geography*, 35(1), 6-10
- Rowlands, S., Graham, E. & Berry, J. (2001). An Objectivist critique of relativism. *Science & Education*, 10(3), 215-241
- Rungwaraphong, P. (2012, May). *Promotion of Learner Autonomy in Thailand Tertiary Education: Lecturers' Perspectives and Practices*. (A PhD Thesis), Victoria University of Wellington, New Zealand
- Sadeghi, S. (2008). Critical pedagogy in an EFL teaching context: An ignis fatuus or an alternative approach? *Journal for Critical Education Policy Studies*, 6(1)
- Salomon, G. (1998). Technology's promises and dangers in a psychological and educational context. *Theory into Practice*, 37 (1) 4-10.
- Sarwar, Z. (1991/2001). Adapting individualisation techniques for large classes. *English Teaching Forum* 19/2 (1991). Reprinted in D.R. Hall, and A. Hewings (2001), *Innovation in English language teaching: A reader*, (eds.), London: Routledge, in association with Macquarie University and The Open University, 127–136.
- Schiller, S. (2009). Practicing Learner-Centred Teaching: Pedagogical Design and Assessment of a Second Life Project. *Journal of Information Systems Education*, 20(3), 369-381
- Schultz, R. A. (2000). Examining the effects of block scheduling on gifted and talented students. *Gifted Child Today*, 23(5), 24-33.
- Seldin, P., Miller, J. E., & Seldin, C. (2010). *The teaching portfolio: A practical guide to improved performance and promotion/tenure decisions*. San Francisco, CA: Jossey-Bass.

- Seldin, Peter & Associates. (1993). *Successful Use of Teaching Portfolios*. Belton, MA: Anker Publishing
- Shor, I. (1996). *When students have power: Negotiating authority in a critical pedagogy*. Chicago, IL: The University of Chicago Press.
- Shor, I. (1992). *Empowering education: Critical teaching for social change*. Chicago, IL: University of Chicago.
- Shor, I. (1987). *Critical teaching and everyday life*. Chicago: University of Chicago Press.
- Shor, I. & Freire, P. (1987). *A Pedagogy for Liberation. Dialogues on Transforming Education* (Massachusetts: Bergin and Garvey).
- Shulman, L. (1987). "Knowledge and Teaching: Foundation of the New Reform." *Harvard Educational Review* 57, (1), 1-22
- Shulman, L. (1986b). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15 (2), 4-14.
- Simon, M. (2011). *Dissertation and scholarly research: Recipes for success (2011 Ed.)*. Seattle, WA, Dissertation Success, LLC.
- Simon, R.I. (1992). *Teaching against the grain: Essays towards a pedagogy of possibility*. Boston: Bergin & Garvey.
- Simon, R. (1987). Empowerment as a pedagogy of possibility. *Language Arts* 64, 370-382.
- Sithole, B. (June, 2010). Pedagogical Practices of Business Studies Teachers in Botswana Junior Secondary schools: Are Teachers and Curriculum Planners Singing from the Same Hymnbook? *International Journal of Scientific Research in Education (IJSRE)*, 3(1), 21-28
- Siwale, E. & Seif, M. (March, 1977). *The Development of Primary Education in Tanzania*. Brook University, Canada.
- Skemp, R. R. (1971). *The Psychology of Learning Mathematics*, Penguin, Middlesex.
- Slavin, R. (1994). *A Model of Effective Instruction: Centre for Research on the Education of Students Placed at Risk*. Johns Hopkins University
- Smith, E. (1997). Constructing the individual knower: A review of radical constructivism. *Journal of Research in Mathematics Education*, 28(1), 106-112.
- Smith, E. L., & Anderson, C. W. (1984). Plants As Producers: A Case Study Of Elementary Science Teaching, *Journal of Research in Science Teaching*, 21, 685-698.
- Smith, R. (2003). Pedagogy for autonomy as (becoming-) appropriate methodology. In D. Palfreyman, and R.C. Smith, *Learner autonomy across cultures: Language education perspectives*, (eds). Basingstoke: Palgrave Macmillan, 129–146.

- Stake, R. (1997). Case Study Methods in Educational Research. In R.M. Jaeger (Ed.), *Complementary Methods for Research in Education* (2nded.). Washington DC: American Educational Research Association.
- Stake, R. (1995). *The Art of Case Study Research*, Sage Publications, Thousand Oaks, California
- Starkey, L. (2010). Teachers' pedagogical reasoning and action in the digital age. *Teachers and Teaching: Theory and Practice*, 16 (2), 233-244
- Stout, J. (2004). Students as historical detectives: The effects of an inquiry teaching approach on middle school students' understanding of historical ideas and concepts. (Doctoral dissertation, University of Maryland College Park, 2004). *Dissertation Abstracts International*, 65, 4095A
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Grounded theory procedures and techniques* (2nded.). Thousands Oaks Sage.
- Strommen, E., & Lincoln, B. (August, 1992,). Constructivism, technology, and the future of classroom learning. *Journal of Education and Urban Society*, 24, 466-476.
- Sullivan, J. P. (2009, January 12). Emergent Learning: *The power of complex adaptive systems in the classroom*. A paper presented at The Complexity and Research in Teacher Education Conference, University of Aberdeen-Aberdeen, Scotland, UK.
- Sunal, S. C.& Haas, M. E. (2002). *Social Studies for the Elementary and Middle Grades. A Constructivist Approach*. Boston: Allyn and Bacon.
- Sweet J. (2003). *Art Museums: Sites of Communication*. National Gallery of Australia & the National Portrait Gallery.
- Sweet, S. (1998). Practicing radical pedagogy: Balancing ideals with institutional constraints. *Teaching Sociology*, 26, 100-111.
- Taber, K, S. (2006). Beyond Constructivism: the Progressive Research Programme into Learning Science. *Studies in Science Education*, 42, 125-184.
- Tabulawa, R. (2004). Geography students as constructors of classroom knowledge and practice: A case study from Botswana, *Journal of Curriculum Studies*, 36(1), 53-73
- Tabulawa, R. (1998). 'Teachers' perspectives on classroom practice in Botswana: Implications for pedagogical change'. *International Journal of Qualitative studies in Education*, 11(2), 249-268
- Tanzania Institute of Education. (2005). *Educational Curriculum Reform and Innovation in Tanzania*. Retrieved May 10, 2010 from Tanzania Institute of Education website: <http://www.tie.gov.tz/curriculum/publications>

- Tanzania Institute of Education.(2009). *Geography Academic Syllabus for Diploma in Secondary Education*. Dar Es Salaam: Ministry of Educational and Vocational Training Retrieved from www.tie.gov.tz.
- Tanzania Ministry of Education and Culture. (2004). *Country Education Status Report*, Dar Es Salaam, Tanzania
- Tanzania Ministry of Education and Vocational Training. (2006). *Basics Statistics in Education*, Dar Es Salaam Tanzania
- Tanzania Ministry of Education and Vocational Training.(2011). *Parliamentary budget speech for 2011/2012 fiscal year*. Dodoma, Tanzania
- Tanzania Ministry of Education and Vocational Training. (2007). *Parliamentary budget speech for 2007/2008 fiscal year*, Dodoma, Tanzania
- Tanzania Ministry of Education and Vocational Training. (2005). *Parliamentary budget speech for 2005/2006 fiscal year*. Dodoma, Tanzania.
- Tanzania Ministry of Education and Vocational Training. (2008). *The Development of Education. National Report of the government of the United Republic of Tanzania*. Dar Es Salaam, Tanzania.
- Tanzania Government School Inspectorate Department (SID). (2009). *Secondary school inspection report*. Dar Es Salaam.
- Tashakkori, A., & Teddlie, C. (1998). Issues and dilemmas in teaching research methods courses in social and behavioural sciences: US perspective. *International Journal of social research methodology*, 6(1), 61-67.
- Taylor, P. (2004). How can participatory processes of curriculum development impact on the quality of teaching and learning in developing countries? *Background paper prepared for the Education for All Global Monitoring Report 2005. The Quality Imperative*
- Taylor, P. (2003). *How to Design a Training Course – a guide to participatory curriculum development*. London: VSO/Continuum
- Technology Assistance Program (TAS). 1998). *TAP into Learning: Constructivism and Technology, on the Road to Student-Centred Learning*, 1(1).
- Terhart, E. (2003). Constructivism and teaching: A new paradigm in general didactics? *Journal of Curriculum Studies*, 35 (1), 25-44.
- Thomas, R. (2003). *A general inductive approach for qualitative data analysis*: University of Auckland.

- Thompson, S. (2007). "How is a 'good teacher' defined in a communicative learner-centred classroom?" (Master's Thesis, University of Birmingham)
- Thorp, L. (2001). *The pull of the Earth: An Ethnographic study of an elementary school garden*. Doctoral dissertation, Texas A&M University, College Station, TX
- Tyler, R. W. (1950). *Basic Principles of Curriculum and Instruction*, Chicago: University of Chicago Press.
- UNESCO. (1951). *The Use of Vernacular Language in Education*. UNESCO, Paris.
- United Nations Millennium Declaration. (6-8 September 2000). *Millennium Development Goals*, New York, USA.
- University of Glasgow (2004). *Student-centred learning*. Retrieved on September 20, 2011 from: <http://www.gla.ac.uk/Otherdepts/TLS/Project/Reports>.
- Von Glasersfeld, E. (1996). *Radical Constructivism: A way of Knowing and Learning*. London: The Falmer Press.
- Von Glasersfeld, E. (1995). A constructivist approach to teaching. In L. Steffe & J. Gale (Eds.), *Constructivism in education*, (pp.3-16). New Jersey: Lawrence Erlbaum Associates, Inc.
- Von Glasersfeld, E. (1992). *Aspects of radical constructivism and its educational recommendations*. Paper presented at the 7th meeting of the International Congress of Mathematics Education, Quebec, Ontario.
- Vygotsky, L. (1986). *Thought and Language*. Cambridge, MA: MIT Press.
- Vygotsky, L. (1978). *Mind and society: The development of higher mental processes*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. (1962). *Thought and Language*. Cambridge, MA: The Massachusetts Institute of Technology Press.
- Wardekker, W. (2002). Critical Pedagogy: An Evaluation and a Direction for Reformulation. *Journal of Curriculum inquiry*, 27(1), Vrije University Amsterdam, the Netherlands retrieved April 15 2012, from <http://onlinelibrary.wiley.com/doi/10.1111/0362-6784.00036/pdf>
- Walker, E. (1999). Experiential learning: Issues for supervision. *Journal of Advanced Nursing*, 30(6), 1459-1467.
- Wall, S. (1998). *Liberalism, perfectionism and restraint*. Cambridge: Cambridge University Press.
- Weimer, M. (2002). *Learner-centred teaching: Five key changes to practice*. San Francisco, CA: Jossey-Bass.

- West, M. P. (1960). *Teaching English in Difficult circumstances*. London: Longmans
- Wiersma, W., & Jurs, S. (2005). *Research methods in education: An introduction* (8thed.): Pearson Education, Incl.
- Wiggins, G. (2006). Healthier testing made easy: Tests don't just measure absorption of facts. They teach what we value. *Edutopia*, 49-51.
- Wiggins, G. (1998). Research news and comment: An exchange of views on “Semantics, psychometrics, and assessment reform: A close look at ‘authentic’ assessments“. *Educational Researcher*, 27 (6), 20-22.
- Wilhelm, K. H. & Li, H. (2008). Exploring pedagogical reasoning: Reading strategy instruction from two teachers’ perspectives, *The Reading Matrix*, 8(1), 96-110.
- Willis, J., Jost, M., & Nilakanta, R. (2007). *Foundations of qualitative research: Interpretive and critical approaches*. Thousand Oaks: Sage.
- Winch, C. (1999). Autonomy as an educational aim. In R. Marples (Ed.), *The aims of education* (pp. 74-84). London: Routledge.
- Windschitl, M. (2002). Framing Constructivism in Practice as the Negotiation of Dilemmas: An Analysis of the Conceptual, Pedagogical, Cultural, and Political Challenges Facing Teachers. *Review of Educational Research*, 72(2), 131-175
- Wink, J. (2005). *Critical pedagogy: Notes from the real world* (3rded.). New York: Addison-Wesley Longman Inc.
- Wink, J. (1997). *Critical pedagogy*. New York: Longman Publishers USA.
- Wolfgang, G. H., & Glickman, C. D. (1986). *Solving discipline problems: Strategies for classroom teachers* (2nded.). Boston: Allyn and Bacon.
- World Education Forum. (26-28 April 2000). *The Dakar Framework for Action-Education For All: Meeting our collective commitments*. Dakar, Senegal.
- Wyld, S., & Eklund, J. (1997). A case study of communication technology within the elementary school. *Australian Journal of Educational Technology*, 13(2), 144-164.
- Yandila, D. (1999). *Towards learner-centred approach in senior secondary school science lessons*: A Paper presented at the eighth Symposium of International Organisation for Science Technology Education, Durban.
- Yilmaz, K. (2008). ‘Social studies teachers’ views of learner-centred instruction; *European Journal of Teacher Education*, 31(1), 35-53
- Zygmantas, J. (2009). *Understanding critical pedagogy and its impact on the construction of knowledge*. ISSN 1392-5016. ACTA PAEDAGOGICA VILNENSIA 2009

APPENDICES

Appendix 1: Marco's observed lesson plan.

Class	Period	Time	Registered students		Present		Absent	
			Male	Female	Male	Female	Male	Female
Form II	8:50-10:20	80''	94	91	85	86	06	05

Subject: Geography

Teacher's name: Marco

Main topic: Hydrological cycle

Subtopic: Hydrological cycle components (solar energy, evaporation, evapo-transpiration, condensation, precipitation, and percolation)

Main objective: Students should understand hydrological cycle

Specific instructional objectives: By the end of classroom instruction, students should be able to:

- (a) Explain the concept of the hydrological cycle without the use of lesson notes and/or a diagram; and
- (b) Identify and explain all the aspects of hydrological cycle using examples from his/her locality

Instructional methods: Questions and answers, small group discussion, demonstration, and individualised classroom activities

Instructional resources to be used: Geography text book II, a diagram showing the main concepts of the hydrological cycle

LESSON PRESENTATION STAGES

Stages	Time	Teacher's activities	Students' activities
Introduction	10''	<p>Guiding students to reflect on the meaning and importance of studying water cycle.</p> <p>Guiding students to define water cycle based from their daily use and experience of water.</p> <p>Guide students to reflect on different processes related to water cycle (evaporation, solar energy, condensation, precipitation, and percolation).</p>	<p>Reflecting the meaning and importance of studying water cycle as guided by the teacher</p> <p>Defining water cycle from different experience</p> <p>Reflecting different processes related to water cycle</p>
Presentation	30''	<p>Organising students into small groups and providing each group with an aspect of hydrological cycle to discuss and present in a whole class discussion.</p> <p>Guiding students' discussion and presentations about water cycle and its aspects.</p> <p>Clarifying students' reflections about the hydrological cycle and its associated processes.</p>	<p>Forming discussion groups and participating in group discussion according to teacher's guidance.</p> <p>Participating in groups presentations and jotting down important notes,</p> <p>Listening the teacher and jotting down some points about hydrological cycle and its aspects.</p>
Reinforce ment	20''	<p>Using oral questions and answers to evaluate students understanding of the topic.</p>	<p>Listening, answering and asking questions to reflect their conception of the subject topic,</p> <p>Taking notes</p>
Practice	20''	<p>Provision of individualized assignment asking students to draw a well labeled diagram showing the hydrological cycle without the use of lesson notes and other instructional materials such as text and reference books.</p> <p>Guiding students as they perform the assignment.</p> <p>Collecting the assignment for marking</p>	<p>Doing the individualised assignment and submitting the assignment to the teacher for marking.</p>

Teacher's evaluation of classroom instruction: The instructional topic was successfully taught. Students presented their understanding of the hydrological cycle based on their experience of water resources and their diverse use such as farming, domestic purposes, and regulation of climate, vegetation growth, and industrial use. Students were actively involved in the discussion of the concept of water cycle and related. They also performed well in their assignment.

Appendix 2: Frida's observed lesson plan.

Teacher's lesson plan

Subject: Geography; Teacher's Name: Frida; Class Level: Form IV

Class	Period	Time	Reg. students		Present		Absent	
			Male	Female	Male	Female	Male	Female
Form IV	10:30 - 11:50	80''	96	75	85	70	11	05

Main topic: Agricultural Development in East Africa

Subtopic: Factors influencing agricultural development in East Africa (ecological, human and economic factors)

Main objective: Students should understand issues regarding agricultural development in East Africa

Specific objectives: At the end of the lesson, students should be able to:

- (a) Identify and explain ecological factors affecting agricultural development in East Africa;
- (b) Identify and explain human factors affecting agricultural development in East Africa; and
- (c) Identify and explain economic factors affecting agricultural development in East Africa.

Instructional resources and facilities: Geography Course Book IV, pages. 85-90, teacher's lesson notes, East African maps showing edaphic factors and cash crop producing regions.

Proposed instructional methods: Questions and answers, simulation, group discussion, individualised tasks, and observation.

Lesson presentation stages

Stage	Time	Teacher's activities	Students' activities
Introduction	20''	Asking general questions about agriculture in East Africa e.g. who can explain to us what agriculture is all about? What kind of agricultural activities you and your parents are involved in? How does your family benefit from agricultural activities? What type of cash crops grow in East Africa? Clarifying students' reflections from different questions.	Listening and answering questions from the teacher. Jotting down important points.
Presentation	40''	Forming discussion groups and distributing group activities Guide students' discussion about factors affecting agricultural development in East Africa (ecological, human and economic factors). Guide students' presentation of group discussion reports. Clarify students' conceptions and reflections of aspects relating to ecological, human and economic factors that affect agricultural development in East Africa.	Forming discussion groups. Discussing group activities on ecological, human and economic factors affecting agricultural development in East Africa. Presenting group discussion reports and sharing some reflections on factors affecting agricultural development in East Africa. Listening and jotting down important points.
Reinforcement	10''	Asking students oral questions regarding different factors affecting agricultural development in East Africa. Guiding students as they simulate and respond to different questions. Responding and clarifying different issues raised by students.	Listening, asking and answering questions from the teacher and their peers. Jotting down important ideas.
Practice	10''	Present maps of East Africa showing edaphic factors and cash crop producing regions. Guide students in groups to observe the maps and simulate the edaphic factors and cash crops producing regions in East Africa. Ask students to read more the topic in the Geography Course Book for secondary school, book IV; pp. 85-90.	Observing the maps and simulating about the edaphic factors and cash crop producing regions in East Africa. Jotting down different edaphic, ecological factors and main cash crop producing regions in East Africa. Reading more about the topic in Geography Course Book for secondary school, book IV pp. 85-90.

Teacher's evaluation of instruction

The topic factors affecting agricultural development in East Africa was understood by approximately 95 percent of all students in the class. The lesson achievement was evidenced by students' participation in the class sharing their experience regarding agricultural aspects in general and factors affecting agricultural development in East Africa in particular. Students' group presentations also suggested that students understood the factors affecting agriculture development in East Africa. Students presented aspects such as: soil, climate, labour, both skilled and unskilled, technology, capital, support services and market (domestic and international). However, I will rehearsal the topic using oral questions and answers to ensure all students grasp the main factors that affect agricultural development in East Africa before I start a new subtopic on farming systems in East Africa.

Appendix3: Victoria University of Wellington Faculty of Education Research Ethics Committee approval letter.



FACULTY OF EDUCATION TE WHĀNAU O AKO PAI
DONALD STREET PO Box 17 310, Karori 6147, Wellington, New Zealand
Phone +64-4-4639500 Fax +64-4-4639619 Website www.vuw.ac.nz/education

1 June 2011

Evaristo Mtitu
PhD Student
Victoria University of Wellington Faculty of Education
C/- School of Te Kura Maori
Donald Street
Wellington

Dear Evaristo

RE: Ethics application TKM/2010/97 18125

I am pleased to advise you that your ethics application '**Learner-centred teaching in Tanzania: Geography teachers' perceptions and experiences**', with the required changes, has been approved by the Victoria University of Wellington Faculty of Education Ethics Committee. Please note that the approval for your research commences from the date of this letter.

Best wishes for your research.

Yours Sincerely

A handwritten signature in cursive script, appearing to read 'J. A. Loveridge'.

Dr Judith Loveridge
Co-Convenor
Victoria University of Wellington Faculty of Education Ethics Committee

Appendix4: Request letter to undertake field work in Iringa municipality.

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI



10th December11

The Executive Director,
IRINGA MUNICIPAL COUNCIL
P.O.BOX 162,
IRINGA

Dear Sir/Madam,

**Re: REQUEST TO UNDERTAKE FIELDWORK IN THREE SELECTED
SECONDARY SCHOOLS.**

I am a Doctoral candidate fully enrolled in the Faculty of Education, Victoria University of Wellington (New Zealand). My research interest is to investigate the implementation of Learner-centred teaching approach as per Tanzania's government curricula requirement. Specifically, the proposed study needs to examine geography teachers' perceptions and experiences in the implementation of learner-centred teaching based on constructivist learning beliefs.

In order to achieve this, I will purposely select nine (9) geography teachers from the three (3) secondary schools within the municipality. I will observe classroom instructional practices, undertake interview sessions with respective teachers and do a detailed analysis of teachers' teaching portfolios.

I therefore request your esteemed office to give me a permission to undertake the study. It is my expectation that the findings from the study might be useful in a number of ways within the educational sector. The field work is scheduled for six months as from January, 2011.

I look forward for your consideration to my request.

Yours sincerely,

Mr. Evaristo Andreas Mtitu, PhD Candidate; Victoria University of Wellington (New Zealand),
ID No. 300177315
Mobile phone: 0767006645
Email address: evaristo.mtitu@vuw.ac.nz or mwalupembe@yahoo.co.uk

Appendix5: Permission letter to undertake field work in Iringa municipality.

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI



IRINGA MUNICIPAL COUNCIL

Tell: Na : 026 -2702647
Fax Na : 026 - 2702203
E-Mail:



Municipal Director Office,
P. O. Box 162
IRINGA- TANZANIA

Ref. No. IMC/T.40/34/85

09/01/2011

HEADS OF SCHOOLS,
LUGALO, KLERRUJ AND CAGLIERO,
IRINGA MUNICIPAL.

**REF: PERMISSION FOR MR. EVARISTO MTITU TO UNDERTAKE FIELD
WORK IN THREE SELECTED SECONDARY SCHOOLS.**

The heading above refers.

The above named person is a student for Victoria University of Wellington (New Zealand), who is now granted a permit to undertake an educational study at your Institution.

Kindly please give him any needful support.

Yours sincerely.


M. P. MDANDAMA
FOR: MUNICIPAL DIRECTOR
IRINGA.

Appendix 6: Information sheets for Teachers.



Research topic: Learner-centred teaching in Tanzania: Geography teachers' perceptions and experiences.

Evaristo Mtitu is working towards a PhD and would like nine geography teachers to work with.

Would you give your permission for:-

- Evaristo to visit you at your school between June and August 2011; and
- Talk with you about how you interpret, perceive and experience the implementation of learner-centred teaching approaches;
- Talk with you about the opportunities and/or challenges you face as you implement learner-centred teaching approaches;
- Observe your classroom instructions to see how you implement learner-centred teaching approaches;
- Talk with you about classroom instruction processes after each observation session; and
- Review your teaching portfolio and examine how the portfolio materials reflect learner-centred teaching beliefs.

If you would give your permission for this, then read the following:

About the research:

Learner-centred instruction proposes that teachers need to understand the learner's perspective and must support capacities already existing in the learner to accomplish desired learning outcomes. Learning goals are then achieved by active collaboration between the teacher and learners who together determine what learning means and how it can be enhanced within each individual learner by drawing on the learner's own unique talents, capacities, and experiences (Richardson, 2003). This understanding of the teachers' role in influencing learning amongst students forms a basis for the proposed study. Based on Tanzania's government policy documents (ETP, 1995; TIE, 2005/2009; URT, 2010), the mandated curriculum requires teachers to change from the teacher-centred to learner-centred teaching approaches. Thus, the proposed study intends to examine the implementation of learner-centred teaching from the perceptions and experiences of secondary school geography teachers.

Methods of research:

The researcher aims to follow nine geography teachers from three schools. Three teachers will be selected from each participating school. Teachers will form case studies where schools research sites. This study has an approval from the Victoria

University Faculty of Education Ethics Committee at Victoria University of Wellington and the Municipal Director, Iringa District Municipal Council in Iringa region, Tanzania.

Research questions:

Main research question: what are the geography teachers' perceptions and experiences regarding learner-centred teaching in Tanzania?. The question includes the following sub-research questions: how do geography teachers understand learner-centred teaching approach?; how does a teacher's pedagogical reasoning and decision-making during the planning process reflect learner-centred teaching beliefs?; how does a teacher's teaching practice reflect learner-centred teaching beliefs?; and how does a teacher's evaluation of classroom instructional practices place the learner at the centre of instruction?

Becoming a participant:

If you would like to volunteer to become one of the teacher participants in the research, please complete the attached consent form. All students in the selected classes will automatically be involved in the study especially during classroom observation. However; I will discuss with students to ensure they fully understand their part in the research. As the teacher you can withdraw from participating at any stage up to the end of data collection (August 2011).

What being a participant involves:

Between [June and August 2011], you will be interviewed by the researcher to explore your perception and experience of implementing learner-centred teaching approaches and what you consider to be the opportunities and/or challenges facing you as you implement the new teaching approach. The interview will take up to one hour. The interview will be recorded and the results summarised and given back to you to check for correctness. As a participant, you will have the right to alter, delete or add any information to transcripts when checking for accuracy.

In the same period, Evaristo will also observe three of your teaching sequences whenever appropriate and conduct an interview after each observation session in order to clarify some instructional processes. Evaristo will take notes of classroom instructional practices where he will analyse them based on learner-centred teaching beliefs. The teachers' and some students' reflections on the subject matter will also be recorded, and be linked with learner-centred teaching beliefs. Notes taken from the observation and recording will be checked with you for accuracy at the conclusion of each transcription session. When checking for accuracy, participants will have the right to alter, delete, or add any information they think is necessary to notes or transcripts.

Finally, Evaristo will review your portfolio (teacher's portfolio) examining how your pedagogical reasoning and decision-making is aligned across your instructional activities and how these instructional practices place the learner at the centre of instruction. Portfolio review will include materials such as schemes of work, and lesson plans where statements of learning intentions will be scrutinised in light of learner-centred teaching beliefs. Other documents will include students' evaluation artefacts. Likewise, transcripts made from your portfolio will be given back to you to check for accuracy before they are subjected for analysis and discussion processes.

How the results will be shared:

The data will be pooled together and analysed, then included in a PhD thesis that will be available through Victoria University of Wellington library. You will be sent a summary of the results if you wish. The results will be shared with the education and teaching community through journal articles and conference presentations.

Confidentiality:

Your identity and the school in which you teach will remain confidential. Any aspect that may identify you will be changed in the thesis and any presentations. You will be asked to keep your school and your participation in this research confidential. All notes and raw data will be destroyed at the conclusion of the thesis. You can withdraw your offer to participate any time during the data collection period.

For more information about this project:

Researcher: Mr. Evaristo Andreas Mtitu Victoria University of Wellington, Faculty of Education. Evaristo.mtitu@vuw.ac.nz or mwalupembe@yahoo.co.uk mobile phone: +655006644	Supervisors: Principal supervisor: Prof. Wally Penetito. Email:Wally.penetito@vuw.ac.nz Second supervisor: Dr. Louise Starkey (PhD). Email:Louise.starkey@vuw.ac.nz
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

'This research has been assessed and approved by Victoria University Faculty of Education Ethics Committee'.

Appendix 7: Consent form for Teachers.



Research topic: Learner-centred teaching in Tanzania: Geography teachers' perceptions and experiences.

I _____ (name) agree to participate in the study examining how teachers perceive and experience learner-centred teaching in a geography classroom. By ticking the boxes below I understand that:

- My identity will remain confidential;
- The researcher will digitally record a conversation regarding my perception and experience of learner-centred teaching;
- The researcher might develop a presentation using my interview and samples of my work (portfolio) to illustrate teachers' pedagogical reasoning and decision-making as they implement learner-centred teaching (only if the school and the teacher identities remain confidential);
- Data will be stored securely in a locked cabinet at researcher's place of work, and will be destroyed at the conclusion of the research;
- I can withdraw my decision to participate up until data gathering has finished;
- The researcher will check with me that what he records is what I meant to say after the interview. I will have the opportunity to alter, delete or add any relevant information to the transcript or notes;
- If the researcher and I agree, the researcher might match some of my recording with a sample of my work (portfolio) I give him. If this happens, I will be given a copy and will make the decision whether this can be shown to anyone else;
- The researcher will keep the identity of participants in this research confidential including; the school, students and the teacher; and
- I agree that the researcher may use interview data, observational data and portfolio data in his thesis and publications

Or

- I do not want to take part in this research at this time.

Signed.....

Date.....

Email contact or other address.....

Contact information

Researcher: Mr. Evaristo Andreas Mtitu Email address: Evaristo.mtitu@vuw.ac.nz or mwalupembe@yahoo.co.uk mobile phone: +655006644	Supervisors: Principal supervisor: Prof. Wally Penetito (PhD). Email: Wally.penetito@vuw.ac.nz Second supervisor: Louise Starkey (PhD). Email: Louise.starkey@vuw.ac.nz
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

'This research has been assessed and approved by Victoria University Faculty of Education Ethics Committee'

Appendix 8: Information sheet for students.



Research topic: “Learner-centred teaching in Tanzania: Geography teachers’ perceptions and experiences”.

My name is Evaristo and I am a student at Victoria University of Wellington (New Zealand). I am currently doing field work collecting data regarding the practices of your teachers. My data collection methods include observing in your classroom where you will automatically be involved. The main reasons for these observations are to examine how teachers’ go about their teaching and how their practices are linked with the way they think about learner-centred teaching beliefs. However, during classroom observation, I will voice record some of your reactions and/or reflections regarding instructional processes. The information collected will be analysed based on your teacher’s beliefs about his or her practice.

Methods of research:

The researcher aims to follow nine geography teachers from three schools. Three teachers will be selected from each participating school. This study has an approval from the Victoria University Faculty of Education Ethics Committee at Victoria University of Wellington and the Municipal Director, Iringa District Municipal Council in Iringa region, Tanzania.

Becoming a participant and what being a participant involves:

You will have the opportunity to hear me talk about this research in your classroom before you will be asked to participate. If you voluntarily agree to be voice recorded during classroom observation, please complete the attached consent form. All students in the selected classes will automatically be involved in the study especially during classroom observation. However, you have the right to decide either to be voice recorded or not. Any decision you make will not affect you in anyhow. You can still withdraw from being recorded at any stage up to the end of data collection.

How the results will be shared:

The data will be pooled together and analysed, then included in a PhD thesis that will be available through Victoria University of Wellington library. You will be sent a summary of the results if you wish.

Confidentiality:

Your identity and the school in which you attend will remain confidential. Any aspect that may identify you will be changed in the thesis and any presentations. You will be asked to keep your school and your participation in this research confidential. All notes and raw data will be destroyed at the conclusion of the research.

For more information about this project:

Researcher: Mr. Evaristo Andreas Mtitu Email: Evaristo.mtitu@vuw.ac.nz or mwalupembe@yahoo.co.uk mobile phone: +655006644	Supervisors: Principal supervisor: Prof. Wally Penetito. Email: Wally.penetito@vuw.ac.nz Second supervisor: Louise Starkey (PhD). Email: Louise.starkey@vuw.ac.nz
---------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

'This research has been assessed and approved by Victoria University Faculty of Education Ethics Committee'.

Appendix 9: Information sheet for parents/caregivers.



Research topic: Learner-centred teaching in Tanzania: Geography teachers' perceptions and experiences.

Dear parent/caregiver

Evaristo is taking part in a research project that examines teachers' perceptions and experience regarding the implementation of learner-centred teaching approach. The study includes examining how teachers guide students' construction of their own knowledge and understanding of the subject matter using their existing experiences and connections. The research also includes observing classroom instruction as a teacher implements learner-centred teaching approaches and (voice) record students' reflections on the subject matter.

About the researcher:

Evaristo has an extensive teaching experience across a range of educational institutions and student levels. He has taught and been involved in management in Tanzania's secondary schools, Teachers Colleges and the Open University of Tanzania before joining Victoria University of Wellington for a PhD Candidature. This research is part of his PhD study.

About the research:

Learner-centred teaching proposes that teachers need to understand the learner's perspective and must support capacities already existing in the learner to accomplish desired learning outcomes. Learning goals are then achieved by active collaboration between the teacher and learners who together determine what learning means and how it can be enhanced within each individual learner by drawing on the learner's own unique talents, capacities, and experiences. This understanding of teachers' role in influencing learning amongst students forms a basis for the proposed study.

Method of research:

The researcher aims to follow nine geography teachers from three schools. Three teachers will be selected from each participating school. This study has an approval from the Victoria University Faculty of Education Ethics Committee at Victoria University of Wellington and the Municipal Director, Iringa District Municipal Council in Iringa region, Tanzania.

Between June and August 2011 Evaristo will observe three of the teacher's instructional sequences and (voice) record some students' reflections whenever appropriate. The researcher will interview teachers after each observation session to clarify some classroom instructional processes. The student, teacher and school confidentiality will always be maintained. Evaristo will take notes of classroom instructional practices where he will analyse them based on learner-centred teaching beliefs. The teachers' and some students' reflections on the subject matter will be linked with learner-centred teaching beliefs. Notes taken from the observation and

(voice) recording will be checked with both the teacher and the student involved in the recording for accuracy at the conclusion of each transcription session. Both teachers and students will have the right to alter, delete, or add any information they think is necessary to notes or transcripts.

Furthermore, permission for any student recording to be used as part of this project will be asked (if the student does not like it to be used, then it will be deleted). The purpose of recording students' reaction and/or reflections is to aid in analysing and augmenting the information regarding teachers' pedagogical reasoning and action in the implementation of learner-centred teaching approaches. In other words, students' recording will assist to assess how the teachers' teaching approaches influence students' curiosity, critical and independent thinking.

How the results will be shared:

The data will be pooled together and analysed, then included in a PhD thesis that will be available through Victoria University of Wellington library. Students will be given a summary of the project if they wish.

Confidentiality:

The students and the school in which they attend will remain confidential. Any aspect that may identify a student or the school will be changed or omitted in the thesis and any presentations. All notes and raw data will be stored securely in a locked cabinet at my place of work, and will be destroyed after the completion of the study.

For more information about this project:

Researcher: Mr. Evaristo Andreas Mtitu Email: Evaristo.mtitu@vuw.ac.nz or mwalupembe@yahoo.co.uk Mobile no. +655006644	Supervisors: Principal supervisor: Prof. Wally Penetito (PhD). Email: Wally.penetito@vuw.ac.nz Second supervisor: Louise Starkey (PhD).Email:Louise.starkey@vuw.ac.nz
------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

'This research has been assessed and approved by Victoria University Faculty of Education Ethics Committee'.

Appendix 10: Consent form for students and parents/caregivers.



Research topic: Learner-centred teaching in Tanzania: Geography teachers' perceptions and experiences

(a) To be completed by student

[Please tick each box]

- I, _____ agree to be voice recorded during classroom observation session of the research examining how teachers perceive and experience learner-centred teaching in my geography classroom.
- By taking part in the observation session I understand that:-
- My identity will remain confidential;
 - The researcher will record my reflection on the subject matter as I explain what I understand of the subject matter;
 - Parts or all of my critique and reflections on the subject matter might be included in the presentation about teachers' perceptions and experiences on the implementation of learner-centred teaching approaches;
 - All notes and raw data will be stored securely in a locked cabinet at my place of work, and will be destroyed after the completion of the study;
 - I can withdraw my decision to participate at any stage of data gathering;
 - The researcher will check with me that what he records is what I meant to say after the observation. I will have the right to alter or delete any information to transcripts or notes collected from me;
 - If the researcher and I agree, the researcher might match some of my reflections with a sample of teacher's work-classroom instruction approaches used and/or teacher's portfolio to better analyse, discuss and present the data. If this happens, I will be given a copy and will make the decision whether this can be shown to anyone else;
 - The researcher will keep the identity of participants in this research confidential including; the school, students and the teacher; and
 - I agree that the researcher will use classroom observational data in his thesis and publications.

Or

- I do not want to take part in this research at this time.

Signed.....

Date.....

Email contact or other address.....

(b) To be completed by the parent/caregiver

If under 16 years old, parents/caregivers will be asked to give permission for their sons and daughters:

Parents/caregiver please consent that you give or do not give permission for your son/daughter to take part in the classroom observation session and be voice recorded.
 “I consent to my son/daughter -----being involved in this research. I understand that his/her involvement will entail him/her being observed as part of a class, and that he/she may be voice recorded about his/her reflection on classroom processes.”

Or

I do not want my son/daughter to take part in this research at this time.

Signed.....

Date.....

Email contact or other address.....

Contact information

Researcher: Mr. Evaristo Andreas Mtitu Email: Evaristo.mtitu@vuw.ac.nz or mwalupembe@yahoo.co.uk mobile phone: +655006644	Principal supervisor: Prof. Wally Penetito (PhD). Email: Wally.penetito@vuw.ac.nz Second supervisor: Louise Starkey (PhD).Email:Louise.starkey@vuw.ac.nz
------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------

‘This research has been assessed and approved by Victoria University Faculty of Education Ethics Committee’.

Appendix 11: Consent form for students and parents/caregivers (Swahili version).

Kiambatisho 11: Fomu ya Idhini kwa ajili ya wanafunzi na wazazi / walezi



Mada ya utafiti: "Ufundishaji unaomjali mwanafunzi nchini Tanzania: Maoni na uzoefu wa walimu wa somo la Jiografia"

(A) Kukamilishwa na mwanafunzi

[Tafadhali weka alama ya vema (v) katika kila kisanduku]

o Mimi _____ (jina) nakubali kurekodiwa wakati mtafiti akichunguza jinsi mwalimu anavyofundisha somo la jiografia.

Kwa kushiriki katika kipindi cha uchunguzi naelewa kwamba: -

- o Utambulisho wangu utabaki kuwa siri;
- o Mtafiti atarekodi ung'amuzi wangu juu ya mada inayofundishwa;
- o Sehemu au mawazo yangu yote juu ya mada inayofundishwa yanaweza kutumika katika semina na makongamano yahasuyo maoni na uzoefu wa walimu katika ufundishaji unaomjali mwanafunzi isipokuwa tu kama utambulisho wa shule na mwanafunzi utabaki kuwa ni siri;
- o Maelezo yote na takwimu ghafi yatahifadhiwa katika hali ya usalama katika sanduku lililofungwa lililopo sehemu ya kazi ya mtafiti ambapo taarifa hizi zitaharibiwa baada ya kukamilika kwa utafiti;
- o Naweza kusitisha ushiriki wangu katika utafiti wakati wowote katika kipindi cha kukusanya taarifa;
- o Baada ya uchunguzi, mtafiti atanionesha taarifa aliyorekodi ili niweze kuhakiki kama kilichorekodiwa ndicho nilichotaka kusema au la. Nami nitakuwa na haki ya kubadilisha au kufuta taarifa yoyote katika nakala au maelezo yaliyokusanywa kutoka kwangu;
- o Kama tutakubaliana na mtafiti, mtafiti anaweza kuoanisha baadhi ya tafakari/mang'amuzi yangu na sampuli za kazi za mwalimu kama vile mbinu zitumikazo katika ufundishaji na maandalizi ya mwalimu kwa ujumla. Kama itakuwa hivyo, nitapewa nakala ya taarifa na nitakuwa huru kuamua kama taarifa zinaweza kuoneshwa kwa mtu mwingine au la;
- o Mtafiti atahakikisha utambulisho wa washiriki katika utafiti huu unabaki kuwa siri; hii ni pamoja na; shule, wanafunzi na mwalimu; na
- o Nakubali mtafiti kutumia takwimu za uchunguzi darasani katika kukamilisha ripoti/tasinifu yake na machapisho.

Au

o Sikubali kushiriki katika utafiti huu.

Saini

Tarehe

Barua pepe au njia nyingine ya mawasiliano... ..

(B) Kukamilishwa na mzazi / Mlezi

Kama mwanafunzi atakuwa chini ya umri wa miaka 16, wazazi /walezi wataombwa kutoa ruhusa kwa ajili ya watoto wao

mzazi/Mlezi tafadhali unaombwa kutoa au kutotoa idhini ya ruhusa kwa ajili ya mtoto wako aweze kushiriki katika kipindi cha uchunguzi darasani na kurekodiwa maoni yake juu ya somo linalofundishwa.

"Mimi mzazi/ mlezi natoa ridhaa ya mwanangu/binti ----- kushiriki katika utafiti huu. Naelewa kwamba kuhusika kwake kutajumuisha kuchunguzwa kama sehemu ya wanadarasa na kwamba wakati wa mchakato wa ufundishaji anaweza kurekodiwa maoni/uelewa wake wa somo."

Au

Sikubali mtoto wangu / binti yangu ashiriki katika utafiti huu.

Saini

Tarehe

Barua pepe au njia nyingine ya mawasiliano.....

Kwa mawasiliano:

Researcher: Mr. Evaristo Andreas Mtitu Email: Evaristo.mtitu@vuw.ac.nz or mwalupembe@yahoo.co.uk mobile phone: +655006644	Principal supervisor: Prof. Wally Penetito (PhD). Email: Wally.penetito@vuw.ac.nz Second supervisor: Louise Starkey (PhD).Email:Louise.starkey@vuw.ac.nz
---------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------

'Mwongozo huu wa utafiti umetathiminiwa na kupasishwa na Kamati ya Maadili ya Utafiti ya Kitivo cha Elimu katika Chuo Kikuu cha Victoria cha Wellington'.

Appendix 12: Guiding semi-structured interview questions for secondary school geography teachers.



Introduction

Greetings! My name is Evaristo Andreas Mtitu. I am the Assistant Lecturer in the department of Curriculum and Instruction at the Open University of Tanzania. I have extensive experience working with both pre-service and in-service primary and secondary school teachers. I am currently undertaking a PhD-Education at Victoria University of Wellington (New Zealand). I am very interested in understanding the implementation of learner-centred teaching approach from the viewpoint of secondary school geography teachers. You are therefore invited to participate in this research by responding to the semi-structured open-ended interview questions.

PhD study: Learner-centred teaching in Tanzania: Geography teachers' perceptions and experiences

It is hoped that this study will develop an understanding of what learner-centred teaching means from the Tanzania's teaching and learning context and portray the influence of this understanding and practice of learner-centred teaching on students' classroom engagement, reflection and knowledge construction among students with diverse learning abilities and experiences.

1. How do you perceive learner-centred teaching approach?
2. How does students' learning experience inform your instructional planning?
3. How do you guide your students to use their existing understanding to construct knowledge based on the subject matter?
4. How do you create classroom environment to influence knowledge construction amongst students?
5. What types of instructional tasks do you use to guide your students in the teaching process? How do the instructional tasks influence your learner-centred teaching approach?
6. How do the teaching models and/or theories inform your instructional practices?
7. What kind of evaluation techniques do you use to inform your teaching process?
8. How does the evaluation of your instructional practice inform your instructional decision-making process?
9. What are the enablers or impeters you experience in the implementation of the learner-centred teaching in geography?
10. Is there any issue of concern regarding the implementation of learner-centred teaching approach at your school that you would like to share?

This is the end of the interview session; I thank you so much for your time and readiness to share your experience on learner-centred teaching.

===END===

Appendix 13: Classroom observation schedule.



STAGE	APPX. TIME	TEACHER'S PRACTICE	STUDENT'S PRACTICE
Lesson introduction			
Lesson presentation			
Practice			
Reflection			

After class mini-interview notes (reflection of classroom processes)

Appendix 14: List of tables and figures.



(a) List of tables.

Table 3.1: The difference between learner-centred and teacher-centred teaching practices

Table 3.2: The types of dialogue according to commitments, goals and instructional methods and a summary description of the dialogue types

Table 4.1: Summary of data collection process

(b) List of figures.

Figure 2.1 A summary of CP premises

Figure 3.1. The constructivist learning process in geography

Figure 3.2. An advanced illustration of Shulman's major categories of teacher's knowledge base for LCT

Figure 4.1. A self-developed research model

Figure 7.1. An integrated curriculum based LCT classroom practice model

Figure 7.2. A self-developed framework for classroom organisation and management

Appendix 15: Glossary of acronyms and research terms.



ACSEE: Advanced Certificate of Secondary Education Examinations

ADEEWR: Australian Department of Education, Employment, and Workplace Relations

AMfEST: Australian Ministry for Education, Science and Training

APA: American Psychological Association

APABEA: American Psychological Association Board of Educational Affairs

CBG: Blend of Chemistry, Biology and Geography

CP: Critical Perspective

CSEE: Certificate of Secondary Education Examinations

DFA: The Dakar Framework for Action

DoIMU: Director of Iringa Municipal Council

DTT: Diagnostic Teaching Techniques

ECE: Early Childhood Education

EGM: Blend of Economics, Geography and Mathematics

EMS: Environmental Management and Sustainability

ESDP: Education Sector Development Program

ESR: Education for Self-Reliance

GoURT: Government of the United Republic of Tanzania

HGL: Blend of History, Geography and English Language

HGK: Blend of History, Geography and Swahili language

IE: Inclusive Education

LCT: Learner-centred teaching

MEO: Municipal Education Officer

NECTA: National Examination Council of Tanzania

PGM: Blend of Physics, Geography and Mathematics

PSNE: Primary School National Examinations

SEDPs: Secondary Education Development Plans

SNE: Special Needs Education

SOSE: Social Science Education

TALULAR: Is an acronym for teaching and learning using locally available resources

TAP: Technology Assistant Program

TGSID: Tanzania's Government School Inspectorate Department

TIE: Tanzania Institute of Education

TMoEVT: Tanzania Ministry of Education and Vocational Training

TMoEC: Tanzania Ministry of Education and Culture

TMRALG: Tanzania Ministry of Regional Administration and Local Governance

TETP: Tanzania Education and Training Policy

WEF: World Education Forum

Education for self-reliance (ESR): A philosophy of education stating that the major purpose of an educational system should be to prepare all people for a meaningful and productive life. It also includes teaching and learning that link theory and practice (Nyerere, 1967).

Effective geography teaching: High level of facilitation of geography learning by promoting students' participation, creativity, curiosity, and critical thinking and problem-solving skills (Shulman, 1987; Killen, 2007).

Learner-centred teaching: An approach to teaching and learning that is characterised by an active involvement of students. Teachers focus on developing students' critical perspectives and reflections regarding geographical concepts, principles and the spatial distribution and relationships of geographical phenomena based on their contextual-cultural experience (Dewey; 1966; Fosnot, 1996; Freire, 1970).

Pedagogical reasoning and action: Include teacher's decision-making processes and the resulting teaching strategies, processes and reflections (Shulman, 1987; Nuthall, 2002).

Teaching/learning context: Location that could be a class, school, a community, or a country where learner-centred instruction is practiced (Sullivan, 2009).