

**THE EFFICACY OF INSTRUCTIONAL MODELS IN
DEVELOPING LIFELONG LEARNING ATTITUDE: FINDINGS
FROM SELECTED TANZANIA HIGHER EDUCATION
INSTITUTIONS**

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Bryson Daudi Kinyaduka

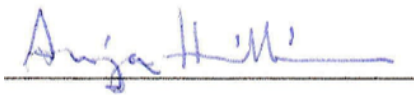
**A Thesis Submitted in Fulfilment of the Requirements for Award of the Degree
of Doctor of Philosophy of Mzumbe University**

July 2020

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a thesis entitled **The efficacy of instructional models in developing lifelong learning attitude: Findings from selected Tanzania higher education institutions** in fulfilment of the requirements for award of the degree of Doctor of Philosophy of the Mzumbe University.

Major Supervisor



Co-supervisor

Internal Examiner

Accepted for the Board of Faculty of Social Sciences

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DEDICATION

This thesis is dedicated to the late wife, Shukuru A. Kingwe and to our children, Gilibati, Neema, Noeli and Luka; the children missed unequivocal parental love and care.

ABBREVIATIONS AND ACRONYMS

B. Ed	Bachelor of Education
BA Ed	Bachelor of Arts with Education
CBM	Competence-Based Model
CCBM	Concentrated Competence-Based Model
D	Pseudonym for University of Dar es Salaam
ECBM	Elusive Competence-Based Model
ETM	Elevated Traditional Model
HEIs	Higher Education Institutions
LLL	Lifelong learning
LLLA	Lifelong learning Attitude
MA.HI	Master of Arts in History
MEMA	Master of Educational Management and Administration
M	Pseudonym for Mwalimu Nyerere Memorial Academy
MNMA	Mwalimu Nyerere Memorial Academy
MiTM	Mild Traditional Model
MTM	Moderated Traditional Model
MTLM	Modified Traditional Lecture Model
MTLMs	Modified Traditional Lecture Models
TTLM	Typical Traditional Lecture Model
MU	Mzumbe University
NACTE	National Council for Technical Education
SDG	Sustainable Development Goal
SUA	Sokoine University of Agriculture
TAU	Tampere University
TCU	Tanzania Commission for Universities
TIE	Tanzania Institute of Education
TM	Traditional Model
TTM	Typical Traditional Model
TP	Teaching Practice

TPC	Teaching Practice Coordinator
TPCs	Teaching Practice Coordinators
UDSM	University of Dar es Salaam
URT	United Republic of Tanzania
YIP	Yeh's Index of Perception
YLLLAIP	Yeh's Lifelong Learning Attitude Index of Perception

ABSTRACT

The study's main purpose was to explore the efficacy of implemented instructional models in developing lifelong learning attitude (LLLA) in Tanzania higher education institutions. The specific objectives were first, to examine the implementation of norm instructional models in Tanzania higher education institutions. Second, analyse factors for the dominance of implemented instructional models in the institutions. Third, determine how far the implemented instructional models inform the development of LLLA. Exploratory sequential design was used. This study used a sample of 171 of whom 19 were participants and 152 were respondents. Participants were *professors*, Head of departments, Quality Assurance Officials and teaching practice coordinators. Respondents were students. Data were collected using observation, interviews, documentary review and questionnaire. Content analysis analysed data from observation, interviews and documents. Yeh's Index of perception (YIP) analysed data from questionnaire. The findings show norm instructional models are Competence-Based Model (CBM) and Moderated Traditional Model (MTM). The implemented instructional models were Concentrated Competence-Based Model (CCBM) and Elusive Competence-Based Model (ECBM) as breeds from the CBM. The Elevated Traditional Model (ETM) and the Mild Traditional Model (MiTM) were breeds from Traditional Model (TM). Factors that led to implemented instructional models were economic conditions, instructional culture and *professor's* professional intuitions and qualities. The factors affecting the implementation of norm instructional models are not universal. The ECBM and MiTM implemented in institution M and ETM in institution D resulted in gradual development of LLLA among undergraduates. The CCBM and the ETM implemented in graduate programmes, MA, HI and MEMA in institution D resulted in deterioration in LLLA. Implication of study is qualitative and quantitative multiple-aspect alignment enables adequate implementation of educational innovations and sufficient achievement of educational outcomes. To conclude, it seems inadequate implementation of norm instructional models culminated in gradual development or deterioration in LLLA. Thus, the study recommends a pilot implementation of educational innovations to establish multiple-aspect alignment.

TABLE OF CONTENTS

CERTIFICATION	i
DECLARATION.....	ii
COPYRIGHT	ii
ACKNOWLEDGEMENT	iii
DEDICATION.....	iv
ABBREVIATIONS AND ACRONYMS	v
ABSTRACT	vii
TABLE OF CONTENTS.....	viii
LIST OF TABLES	xii
LIST OF FIGURES	xiii
CHAPTER ONE	1
PROBLEM SETTING.....	1
1.1 Background to study.....	1
1.2 Statement of the problem	6
1.3 Research Questions	7
1.4 Main Research Objective	7
1.4.1 Specific Research Objectives	7
1.5 Significance of study	7
1.5.1 Academic significance	7
1.5.2 Policy significance	8
1.6 Delimitation of study.....	9
1.7 Definition of Key Terms	10
1.8 Organisation of thesis.....	12
CHAPTER TWO	13
LITERATURE REVIEW.....	13
2.1 Introduction	13
2.2 Theoretical literature review	13
2.2.1 Variation Theory	13
2.2.2 Lindgren theory of teaching and learning	14
2.2.3 Constructivism	16

2.2.4	Behaviourism	16
2.2.5	Theories of Perception	17
2.2.6	Understanding lifelong learning and its development through formal education	18
2.2.7	Purpose and alignment in providing education for intended outcomes .	23
2.2.8	Historical perspectives on education and present day instructional models in Tanzania.....	27
2.3	Empirical literature review.....	34
2.3.1	Implemented instructional models in classroom settings.....	34
2.3.2	Factors for the dominance of implemented instructional models	37
2.3.3	Instructional models and development of lifelong learning attitude as a learning outcome	41
CHAPTER THREE		47
RESEARCH METHODS		47
3.1	Introduction	47
3.2	Research approach.....	47
3.3	Research Design	47
3.4	Study area and inclusion of institutions, respondents and programmes	48
3.5	Study population and unit of analysis	52
3.6	Selection of study participants	53
3.7	Type and sources of data: methods and instruments.....	54
3.7.1	Observation	55
3.7.2	In-depth interview	56
3.7.3	Documentary review	58
3.7.4	Questionnaire	58
3.8	Validity and reliability issues	60
3.9	Data analysis	62
3.10	Ethical considerations	64
CHAPTER FOUR.....		65
NORM INSTRUCTIONAL MODELS IN TANZANIA HIGHER EDUCATION INSTITUTIONS (HEIs)		65
4.1	Introduction	65

4.2	Norm instructional models in HEIs.....	65
4.3	Discussion	69
4.3.1	Norm instructional models in HEIs.....	69
CHAPTER FIVE.....		72
IMPLEMENTED INSTRUCTIONAL MODELS IN TANZANIA HIGHER		
EDUCATION INSITUTIONS		72
5.1	Introduction	72
5.2	Indicants and perceived implemented instructional models in HEIs	72
5.2.1	Main teaching principles and methods.....	72
5.2.2	Recurring utterances in classes	79
5.2.3	Assessment methods	80
5.2.4	Curriculum designs	81
5.2.5	Sitting arrangement	81
5.2.6	Textbooks.....	82
5.2.7	Classes: noisy or passive	82
5.2.8	Lesson direction	83
5.3	Discussion	91
5.3.1	Implemented instructional models in HEIs	91
CHAPTER SIX		103
FACTORS FOR THE DOMINANCE OF IMPLEMENTED		
INSTRUCTIONAL MODELS.....		103
6.1	Introduction	103
6.2.	Factors for the dominance of implemented instructional models	103
6.2.1	Poor economic conditions	103
6.2.2	Poor instructional culture	110
6.2.3	Professor's professional intuitions and qualities.....	122
6.3	Discussion	128
6.3.1	Factors for the dominance of implemented instructional models	128
CHAPTER SEVEN.....		141
IMPLEMENTED INSTRUCTIONAL MODELS AND THEIR EFFICACY IN		
DEVELOPING LIFELONG LEARNING ATTITUDE		141
7.1	Introduction	141

7.2	Efficacy of implemented instructional models in developing LLLA in the institutions	141
7.2.1	Shouldering responsibility for learning.....	143
7.2.2	Managing different situations.....	149
7.2.3	Application of learning.....	153
7.2.4	Evaluation of information	156
7.2.5	Looking at things in “big picture”	157
7.3	Cross-case understanding of findings	158
7.4	Discussion	162
7.4.1	Efficacy of implemented instructional models and in developing lifelong learning attitude.....	162
CHAPTER EIGHT		169
SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS.....		169
8.1	Introduction	169
8.2	Study summary.....	169
8.3	Conclusions	172
8.4	Policy Implications.....	178
8.5	Limitations of study and suggestion for further studies	183
8.6	Contribution of study	184
8.7	Areas for further research.....	187
REFERENCES.....		189
APPENDICES		205

LIST OF TABLES

Table 3.1:	Participating institutions, expected and reached participants and respondents	52
Table 6.1:	Poor economic conditions sub-factors and frequencies	110
Table 6.2:	Poor instructional culture sub-factors and frequencies	121
Table 6.3:	Professor's professional intuitions and qualities.....	125
Table 6.4:	Factors culminating in implemented instructional models from related and present study literature	127
Table 7.1:	Cross-case comparison for YIP average results for studied programmes by phases.....	160
Table 7.2:	Yeh's Index of Perception average scores for phase I and II by LLLA dimensions and programmes	161

LIST OF FIGURES

Figure 2.1:	Research Model	45
Figure 5.1:	Professors' teaching process schema.....	75
Figure 5.2:	Students' learning process schema	76
Figure 5.3:	Passive-active seminar model: presenter-participant-centred seminar model	77
Figure 5.4:	Passive-active seminar model: presenter-professor centred seminar model	78
Figure 5.5:	Active seminar model.....	79
Figure 5.6:	Implemented instructional model in institution M	88
Figure 5.7:	Implemented instructional model in institution D: BA Ed programme	89
Figure 5.8:	Implemented instructional model in institution D: MEMA programme	90
Figure 5.9:	Implemented Instructional model in institution D: MA.HI.....	91

CHAPTER ONE

PROBLEM SETTING

1.1 Background to study

The origin of this study has its attribution to the ReWell project implemented from April 2014 to February 2016 with its base at the Tampere University, Finland (FinCEAL, 2016). The project involved three partner universities, namely Mzumbe University in Tanzania, Kyambogo University in Uganda, and the University of Tampere in Finland. The project aimed at improving society wellbeing through adult and vocational education in three cities, Morogoro in Tanzania, Kampala in Uganda, and Tampere in Finland. The partner institutions were expected to increase ethical and environmental awareness through developing research-based and practically relevant curricula involving practitioners and policy makers. The project employed action research to achieve its objectives. The following stages were involved in the action research. The stages include theme identification, action selection, action execution, action evaluation, and action reflection (McNiff, 2010). In this regard, the first stage of action research culminated in the present study. The researcher visited different educational institutions situated in Tampere city in Finland and in Morogoro municipality in Tanzania. From the visits and observations, the researcher learnt that the instructional model used in Finnish institutions was the Competence-Based Model (CBM). In the instructional model, *professors* used group presentations, group discussions and problem-based learning as teaching methods and themselves were part of learners. Equally, formative assessment dominated in the institutions. The CBM uses learner-centred methods unlike the Traditional Model (TM), which uses teacher-centred methods; for example, a lecture method used today, may not be a traditional lecture we know (Sepesiova, n.d). Indeed, the weaknesses of the Traditional Model methods, namely lecture, demonstration, memorisation, choral repetition, imitation, copying and direct instruction may have opened a space for the CBM (Westbrook *et al.*, 2013). The TM methods considered learners as passive receivers of learning whereas the CBM methods regard learners as active creators of knowledge (Muganda, Komba & Mwakamela, 2008).

As such, five (5) institutions were observed in Tampere in Finland, namely Tampere Regional Adult Education Centre, Tampere Vocational Adult Education Institute, Tampere Vocational Education Teacher College, Tampere University, and Tampere Regional Vocational School. Three (3) institutions were observed in Morogoro municipality in Tanzania, namely Mzumbe University, Institute of Adult Education and Vocational Education Teacher College. The CBM features were more visible in all institutions in Finland than they were in Tanzania institutions except in some specific programmes in some institutions and programmes in the projects. The experience from the institutions in the two countries attracted the researcher's attention on how the CBM and the TM are implemented in higher education institutions. The researcher was interested finding out the efficacy of the two instructional models in developing lifelong long learning as a learning outcome. In this respect, the researcher reviewed literature relating to the implementation of the CBM and the TM.

According to literature (Fulmer & Yeo, 2014; Lee, 2014; Okoye & Isaack, 2015; Pridane, 2017), the CBM develops lifelong learning attitude (LLLA) among learners. Lifelong learning is an inclination that involves learning everything through life-course (Soni, 2012). Lifelong learning attitude embraces multiple competences, namely teamwork, eagerness to learn in lifetime, ability to apply knowledge, ability to solve problems, creativity, communication and interpersonal skills, good citizenship, and self-directedness (Soni, 2012; Okoye & Isaack, 2015; Evans & Vander, 2018).

In light of the above skills, a number of competences are subsumed in LLLA making it the most important learning outcome, which is needed in the twenty-first century (Prendergast, *et al.*, 2005; Srebrenkoska, 2014; Jha, 2017; Mkonongwa, 2018). In addition, lifelong learning attitude addresses problems of unemployment, economy, health, and social well-being (Collins, 2009; Field, 2012; Tamez, 2014). In respect of this, it is reasonable to assume that lifelong learning attitude is critical to improvement of many life domains of individuals and society.

Furthermore, the Sustainable Development Goal (SDG) number four envisages equal quality education for all and opening doors for lifelong learning for all people (UN, 2018). Tanzania strives to create an educated and learning society by the year 2025 in Tanzania. This could be achieved through opening more learning avenues in Tanzania in order that whoever wants to learn can use the opportunities to do so (Kikwete, 2014). Lifelong learning attitude is increasingly becoming a human right (Blessinger, Sengupta & Makhanya, 2019). Today, unlike in the past, people are employed to learn in lifetime (McGowan, 2019). Despite the assumed importance of LLLA, the pedagogies used in higher education in Africa do not develop critical thinking, a subsumed learning outcome in lifelong learning attitude (UCL, 2019). However, scholars (Demirel, 2009; Pascarella & Terenzini in Mwaikokesya, 2014; Peterson, Labun & Eikenaar, 2016) claim that higher education systems develop LLLA.

Competence-Based Model is assumed to develop LLLA. Despite its ability to develop LLLA, the implementation of the CBM in Tanzania and beyond is often inadequate (Berns & Erickson, 2001; Garret, 2008; Kanyonga, Mtana & Wendt, 2019). Logic seems to suggest that the Traditional Model dominates in education systems. If the CBM, develops lifelong learning attitude is not implemented properly, the quality of humanity life is likely be severely affect in the fast changing world. Many people are likely to go unemployed. Even those who already have jobs, their efficiency and effectiveness in what they do is likely to decline tremendously. Therefore, the instructional model used in educational institutions determines the kind of society to be created. Thus, it can be conclude that if the TM was chosen the whole society would be affected in most domains of life, including economic and health. The Variation Theory by Marton as improved by Lo (2012) and the Lindgren theory of teaching and learning (1959) provides factors that influence the application of teaching methods among teachers (see Chapter Two).

As it is, the CBM is not a new phenomenon; for example, Plato and Socrates used the concept of midwifery in education (Curko, 2016), which involved helping a child to give birth to knowledge. This is similar to competence-based model, which

orchestrates students to use their prior learning to construct knowledge. In Tanzania, the CBM existed in the form of apprenticeship (Nyerere, 1967), and it was associated with integrating community activities in schools through Education for Self-Reliance (ESR). The ESR was a form of the CBM, because both the ESR and the CBM emphasise on learning by doing and linking education to real life (Saytseva, 2016). However, the ESR implementation was not sufficient (Sanga, 2016). The legacy of ESR in Tanzania is reflected through Work Skills subject introduced in primary schools. However, the implementation of the Work Skills syllabus is not effective. In this regard, standard seven graduates are not prepared to become entrepreneurial and self-reliant in Tanzania (Kinyaduka, 2018).

The resurgence of the CBM in Tanzania education system seems to result from the efforts of the National Council for Technical Education Accreditation (NACTE), which was the early adopter of the instructional model from the western countries. The NACTE has advocated for the adoption of the CBM in Tanzania education system (Rutayuga & Kondo, 2006), and this was attributed to the emergence of free market economy and the need for quality education (Tuxworth, 2005; Malan, 2012; Barman & Konwar, 2011; Ford, 2014). Some higher education institutions including institutions under NACTE such as, the Mwalimu Nyerere Memorial Academy (MNMA), and in recent years, institutions under the Tanzania Commission for Universities (TCU) have adopted the CBM.

Following the emphasis on the adoption of the CBM, in 2005 Tanzania introduced the CBM in secondary schools (Komba & Mwandangi, 2015; Makunja, 2015). This shift made teacher colleges change the way they prepare teachers (TIE in Lukanga, 2012). However, it seems that the Traditional Model dominates in classes of in institutions conferring non-degree programmes. Studies from higher education institutions conferring degree programmes appear to corroborate this view (Mwaikokesya, 2014; Ishengoma, 2017). Mwaikokesya (2014) examined the development of lifelong learning attributes for undergraduates at the University of Dar es Salaam (UDSM). The study cited examination syndrome, lack of teaching training, large classes, culture of dominance (i.e. the belief that a *professor* is the one

who knows), and inadequate infrastructure in the institutions as impediments to development of lifelong learning (LLL). The study concludes that LLL seems to develop very slowly. However, this study did not cover the implementation of instructional models in higher education. Moreover, the study focused on one institution and on the undergraduates. The present study looks into class learning environment as it informs the development of LLLA. Importantly, the present study covers both, undergraduate and graduate students in institutions under the NACTE and under the TCU.

From the foregoing explication of the two instructional models, CBM and TM, it was deemed important to study the implementation of the models to understand their efficacy in developing lifelong learning attitude among students in higher education. To support this, Rogoff, Matusov and White (1996) suggest three predominant instructional models, namely community-based models, transmission models and learning models. The community-based models involve *professor*-student intercourse (learning process is interactive). The learning must be directly connected to the needs of the community. In transmission models, a learner is a mere receiver of information from an adult or a more knowledgeable person. As for learning model, a learner assumes a more active role in the teaching-learning process while a *professor* acts as a facilitator. A critical analysis of the three models suggests existence of two basic instructional models, transmission models and learning models. In the former, a *professor* dominates, and in the latter, a learner is in control of the learning process. A combination of transmission and learning models result in the interactive model, that involves the knowledgeable and the less knowledgeable sharing information through dialogue. Similarly, Kelly (2009) talks about active model and passive model as the main instructional models in education systems. The dominant instructional models today in the teaching profession are the CBM (interactive model) and the Traditional model (behavioural Model) (Hodkinson, 1992). The CBM focuses on learner-centred approach whereas the Behavioural Model focuses on teacher-centred approach to teaching. Nonetheless, according to Greemers (2005), behaviouristic model has been criticised for its inability to promote higher-order thinking skills, which are seemingly most critical today. From this

literature, it can be concluded that norm (standard) instructional models in higher education institutions in Tanzania are the Competence-Based Model (active model/interactive model/community-based model) and the Traditional model (passive model/transmission model).

Despite the adoption of the Competence-Based Model in the education system, its implementation appears to be inadequate. Mahoney and Thelen, 2010 theorise that institutions usually change in a gradual way and in unnoticeable manner. However, little is known about the implementation of the CBM and the TM in higher education and their efficacy in developing LLLA in Tanzania.

Moreover, the study is useful because despite the importance of LLLA to humanity, there is inadequate information on the development of LLLA through formal education system. In this respect, the present study focuses on the implementation of instructional models in Tanzania higher education institutions and the development of LLLA, specifically on student ability to shoulder responsibility for learning; manage different situations, apply learning, evaluate information, and look at things in overall perspective (big picture). The selection of these dimensions of LLLA is based on the availability of scientifically developed scales to measure the dimensions (Kirby, Knapper, Lamon & Egnatoff, 2010).

1.2 Statement of the problem

Despite the potential importance of LLLA to humanity, the implementation of CBM, which is assumed to develop LLLA, has largely remained a mystery in many parts of the world. It is also ambiguous, whether CBM and TM result in same academic achievements or not. In Tanzania, there are studies about the inadequate implementation of CBM and underlying factors at lower levels of education. However, higher education is vital for individual, societal and economic prosperity. This study is addressing the problem of lacking knowledge about the implementation of norm instructional models, factors for implementation status, and the implementation contribution to the development of LLLA among students in higher education, in the context of Tanzania.

1.3 Research Questions

The study is guided by a major research question: “How does the implementation of instructional models in Tanzania higher education institutions affect the development of LLLA?”

More specifically the study addressed the following sub-questions:

- (i) What instructional models are implemented in selected Tanzania higher education institutions?
- (ii) Under what situations are implemented instructional models dominant in selected Tanzania higher education institutions?
- (iii) How far do implemented instructional models inform the development of LLLA in selected Tanzania higher education institutions?

1.4 Main Research Objective

The study explores the implementation of instructional models and their efficacy in developing lifelong learning attitude in selected Tanzania higher education institutions.

1.4.1 Specific Research Objectives

The specific research objectives of this study are:

- (i) to examine the implementation of norm instructional models in the selected Tanzania higher education institutions;
- (ii) to analyse factors for the dominance of implemented instructional models in the selected Tanzania higher education institutions;
- (iii) to determine how far the implemented instructional models inform the development of LLLA in selected Tanzania higher education institutions.

1.5 Significance of study

1.5.1 Academic significance

In principle, the plethora of existing literature on the CBM in many parts of developed and developing world focus on the CBM and TM effect on academic achievement. In both, developed and developing economies, there is scanty

information on the instructional models and their effects on learning outcomes, specifically on the development of lifelong learning attitude. For example, in Tanzania, a few studies have covered the implementation of the CBM mainly, on how student teachers implement the CBM (Makunja, 2015; Paulo, 2014; Komba & Mwandanji, 2015). The present study therefore intends to study the implementation of the CBM and the TM in higher education institutions and to determine the efficacy of the instructional models in developing lifelong learning attitude. Lo (2012) in the Variation Theory identifies factors influencing the choice of teaching methods; however, it is not clear whether the factors are the same in all contexts. The current study provides a lucid explanation about this dilemma. The current study informs factors that influence the choice of instructional models in the context of higher education in Tanzania, and the extent to which the implemented instructional models inform the development of LLLA. Additionally, the study provides planners and implementers of educational innovations a rule of thumb on identification of pre-conditions for successful implementation of an educational innovation.

This study is important because of two counts: first, little information is available on how higher education institutions implement the competence-based teaching and learning. This is particularly for higher education institutions under the NACTE offering degree programmes using competence-based teaching and learning. Since literature is scarce for institutions under the NACTE offering degree programmes, this study adds knowledge in the area of higher education institutions. Second, the available studies have done a commendable job in comparing between the CBM and TM in academic achievement among students in different subjects. The current study compares the two instructional models in developing LLLA in Tanzania higher education institutions. In this respect, the study makes significant theoretical contribution in the area of higher education institutions in Tanzania and beyond.

1.5.2 Policy significance

This study also contributes to understanding of the nature of theory and practice gap and how to bridge it in implementing educational innovations. Thus, the study paves

the way toward improving the implementation of the educational policy, teacher classroom practices and critical educational processes and innovations in Tanzania. In view of this, the study is a practical guide for policy makers, educational planners, educational innovation implementers, parents, and students. It provides a rule of thumb on how to bridge theory and practice gap in implementing educational plans and/or innovations. This is because the thesis requires considering multiple-aspect-alignment before implementing educational plans and/or innovations. Briefly, there must be a balance of all necessary aspects for successful implementation of an educational plan or innovation. The balance of necessary aspects must be qualitative and quantitative. For example, if *professors* are one of the necessary aspects, then, they should possess appropriate qualifications (qualitative balance) and they should be in adequate number (quantitative balance). This example applies in other necessary aspects in implementing a plan or innovation.

Finally, this study is a revelation in Tanzania on whether the implemented instructional models in higher education institutions cultivate LLLA among students. This understanding helps Tanzania to make deliberate reforms in teaching and learning system with a view of creating an educated and a lifetime learning society by 2025 and with a view of achieving the fourth Sustainable Development Goal (SDG) by the year 2030.

1.6 Delimitation of study

This study covers classroom context activities and documents based on the instructional model that was supposed to be in operation at the time of this study. Classroom environment include classroom learning environment that comprises curriculum design, methods (teaching and assessment methods), and the main principle of teaching. In addition, it includes sitting arrangement, resources used and classroom management. On the part of lifelong learning attitude, the study focuses on measuring its development in formal higher education context among year one undergraduates and graduate students. This is because higher education is responsible for developing LLLA (Yang, Schneller & Roche, 2015).

Therefore, this study excludes examination of the nature of questions in examinations; certification, recognition of prior learning, learning time (whether open or bound), and retention of students in higher education system. Further, the study excludes graduates from higher education institutions who were not students at the time of this study. Therefore, the findings of the study are generalizable mainly to classroom settings of undergraduate and graduate students, but they are assumed to be indicative about the implementation of instructional models and their efficacy in developing LLLA more broadly.

1.7 Definition of Key Terms

Competence-Based Model refers to task- and outcome-based programmes (Tritton, 2008). This means it is an instructional model that focuses on the competences a learner develops rather than the knowledge one gains (Republic of Rwanda, 2015). In this regard, competences refer to all knowledge, skills, values, attitudes one uses to perform a task based on defined standards in a professional way and in a successful manner; the skill can be inborn or one has received out of training (Kouwenhoven, 2009; Blaskova, Blasko & Kuchorcikova, 2014; Ford, 2014; Republic of Rwanda, 2015). The instructional model primarily emphasises on the use of learner-centred methods during teaching. Learner-centred methods are creative teaching methods that promote the ability to communicate and to shoulder responsibility for learning among learners (Took in European Student's Union, 2014). This study adopts the definition by Took in European Student's Union (2014). This is because this definition reflects appropriately the main principle of the competence-based teaching and learning.

Traditional Model involves focusing on unchanging knowledge, and it gives an upper hand to education for education sake while a teacher assumes ultimate powers in the teaching and learning processes (Young, 2013). It also refers to student-*professor* face-to-face interaction during classes usually, the main interest is in merely knowing what is in the textbook (Li, 2016). This study adopts a definition by Li (2016) because it incorporates the most important principle of Traditional

Model, which is banking of information to learners rather than students searching for information, analysing it, and creating meaning out of it.

Higher education institution refers to institutions under the NACTE or under the TCU that offer degree programmes. The target of the current study is the institutions offering education degree programmes or non-education degree programmes but uses the Competence-Based Model in teaching and learning.

Learning outcomes refer to learners' knowing, understanding, and the ability to perform when they complete a module (Gallavar *et al.* 2008). Nusch (2008) sees learning outcomes as a change occurring within an individual from learning process. Learning outcome refers to what a student is expected to show and their likelihood of being able to perform or behave in certain direction after receiving training in courses under a given programme for a particular duration (Devis, 2003). This study adopts the definition by Nusch (2008) and Devis (2003) because they focus on learning process as a whole, which is relevant for this study looking into the learning processes informing the development of LLLA.

Lifelong Learning is an inclination that involves learning everything through life-course (Soni, 2012). According to Soni, lifelong learning is a lifetime process; it results in a dynamic person; it offers a balanced value for formal, informal and non-formal learning (Cropley & Knapper, 1983). The definition by Soni (2012) is adopted in this study because it covers all the four principles of lifelong learning as a learning outcome.

Lifelong learning attitude (LLLA) is a tendency to learn from whomever, in whatever context, whenever the need arises, and without refraining from exposing one's weaknesses (gaps) in terms of one's possessed knowledge and skills (Jha, 2017).

Instructional models are representations of how learning context can be shaped, and learning organised and conveyed (Wilson, 2014). The study adopts this definition

because it shows the way the instructional models help teachers create a learning environment and teaching experiences in a staged manner. This is relevant because the study strives to understand the students' learning environment and the development of LLLA.

Norm instructional model is an overt or covert (implied) standard teaching and learning representation in a higher education institution through which learning environment and learning experiences (teaching methods) are created (researcher's construct).

Implemented instructional model is the model, which is executed at expected, below, or beyond the norm instructional model standards. In a situation where the features of a standard instructional model are all applied this is assumed expected implementation, in a situation where some features, at least three of them are not applied this is below standard implementation. In a situation where the some features are applied to the degree that is not expected; this is assumed to be beyond standard implementation (researcher's construct).

Professor is any person teaching in higher education institution mandated to confer a degree in Tanzania (adapted from Advanced Learners' English Dictionary).

1.8 Organisation of thesis

This thesis is organised in eight chapters. Chapter one introduces the study. Chapter Two comprises theoretical and empirical literature review. Chapter Three covers research methodology. Chapter four is on the analysis of norm instructional models. Chapter five addresses the research objective one. Chapter Six deals with the research objective two; analysing factors for the dominance of implemented instructional models in selected higher education institutions. Chapter Seven addresses the research objective three: the efficacy of the implemented instructional models in developing lifelong learning attitude in Tanzania higher education institutions. Chapter Eight presents the summary, conclusions, and policy implications of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The previous chapter is about an introduction to the study. This chapter covers theoretical and empirical literature review that set the scene for the present study. It presents the literature synthesis, which shows what has been done in the previous studies. The chapter also shows research knowledge gap(s) and a research model, which is compass for the study.

2.2 Theoretical literature review

2.2.1 Variation Theory

Marton and colleagues developed the theory in 2004. It is a theory that explains variations in the teaching methods. Variation theory of learning proposed by Lo (2012) assumes that variation among teachers during delivery is what makes them effective or ineffective. According to the theory, teachers vary in teaching because they are free to choose learning principles from any theory and use them to achieve a particular object of learning. Thus, the choice of principles and learning strategies is what facilitates effective learning. In this respect, the choice of teaching techniques should be intentional and carefully thought. In this case, the choice of teaching strategy is a function of an object of learning. In this theory, Lo (2012) asserts that the selection of teaching methods by an individual teacher leads to differences in teaching among teachers.

In connection to the above assertion, Marton and Booth in (Lo, 2012) propound that it is impossible for different individuals to focus on the same phenomenon at the same time. Furthermore, the scholars establish that individuals with different prior experience and learning in a similar situation take a rather different action or reaction. This implies that prior experience and learning determines the action one takes in encountering a particular situation.

According to the variation theory, students and teachers may have different understanding about the object of learning. This difference acts as an ignition key toward designing the methods and tasks that facilitate students' learning. This also means that the kind of a teaching technique that would be adopted by a certain teacher in class will vary from other teachers elsewhere depending on what the students and their teachers have agreed on as the best method of delivering the subject. This theory articulately explains how teachers make decisions on teaching methods used in their situations. From the variation theory assumptions, the application of instructional model or rather teaching methods depends on situations a teacher and students find themselves.

In summary, the Variation Theory suggests flexibility in classroom practices among teachers. This implies that though the provision of education has to consider the alignment of a number of aspects including the purpose (philosophy of education); teachers have to be considerate in exercising practical competence in classroom settings. Although the purpose of education influences the selection of teaching methods, the conception that is missing in the variation theory, yet it is the best theory of explaining teacher practices in classroom settings.

2.2.2 Lindgren theory of teaching and learning

Another school of thought in explaining the variation of teacher practices in classroom settings is one by Lindgren (1959) who propounds that two theories guide human actions, namely implicit and evidence-based theories (Lindgren, 1959). According to Lindgren (1959), the implicit theory informs most actions of professionals and non-professionals. In this regard, implicit theories inform most teachers' decisions in classes. Lindgren (1959) sees implicit theories as dominating teacher's decisions during teaching because of the embodied values on what it takes to be a teacher. The scholar sees implicit theories as a function of traditions and personal experiences. The set of values are the second nature of humanity and are born out of traditions and experiences. The values determine humanity feelings and actions. From this, Lindgren (1959) asserts that teachers often use traditional ways of teaching.

Concerning the evidence-based theory, it is claimed to be born out of research process (Lindgren, 1959). In the teaching profession, one would expect research-based theories to inform classroom practices, and this would reduce remarkable variation in the practices among teachers. According to Lo (2012), the choice of teaching strategy always has effect on the learning outcomes of a student. However, these effects have not been clearly put. Clearly, an institution or a country implementing an educational innovation in varied ways, cannot achieve creating the indented society (Lee, Thenault, & Linderholm, 2012).

In light of reviewed theories, a number of factors influencing the choice of instructional model (teaching methods) can be identified. The factors based on the Variation Theory of learning include teacher's freedom to choose principles of teaching from whatever theory of learning, the intentional choice of a particular teaching method, the object of learning, the unlikelihood of humanity to focus on the same aspect, prior experience, and student-teacher understanding of the learning object. From the factors influencing the choice of teaching methods, the learning outcomes are affected. However, the theory does not show how the outcome is affected. Moreover, the second view by Lindgren (1959) identifies factors that may influence the choice of teaching methods such as traditions and personal experiences, and implicit and research-based theories. While the two views have different dimensions determining a teacher's decision about the teaching method to use, experience is the most important variable appearing in both theories in determining the decision of a teacher on teaching methods to use. Other scholars (Jean Piaget 1896-1980 (in Olusegan, 2015; Plato 427-347 and Rene Descartes 1596-1650 in Olusegan, 2015; Tennyson, 2010) cite experience as an important variable in a learning process. Thus, the current study applied the two views in explaining classroom practices in terms of teaching methods as far as the two instructional models the CBM and TM are concerned.

The theories discussed in the foregoing sections are good at explaining the situations that make teachers go for a particular instructional model or teaching methods. An inherent logic informs us that it is also important to review theories of learning to

explain some of the classroom teacher practices. Since the study assumes that competence-based model (interactive model) and traditional model (behaviouristic model) are perceived as norm (standard) instructional models. The review of constructivism and behaviourism theories is an important endeavour. This is because the instructional models seem to be compatible with the reviewed theories of learning; this is from the learning environment each of them creates. After this brief introduction, the subsequent section reviews the theories.

2.2.3 Constructivism

Constructivism as a theory of learning has its roots to Piaget (1896-1980) and later other psychologists such as Vygotsky (1896-1934). In this theory, learners are responsible for creating their own knowledge from interaction. In classes, learners are subjected to an environment that makes them problem solvers, and they develop the attribute through working and discussing in groups to perform meaningful mind engaging tasks. The learners are encouraged to work together and interact to do or to find solutions of problems presented to them. Further, learning is perceived as effective through interaction with others and performing authentic activities. Moreover, the theory believes that knowledge is constructed by learners rather than passed on from teachers to students, and that novel knowledge is built upon prior learning. This way of teaching is different from the conventional use of lecture method, which is based on the assumptions of behaviourist theorists (Dagar & Yadav, 2016).

2.2.4 Behaviourism

The founders of behaviourism are Ivan Pavlov (1849-1936), J. B. Waston (1878-1958) and B. F Skinner (1904-1990) (Baulo & Nabua, (2019). According to the theorists, learners receive knowledge through interacting with the environment and by doing things, as in Thorndike's (1874-1949) laws of learning. Therefore, behaviourists believe that a human being is empty headed thus they receive knowledge from the environment, but they can learn better when they practice it. The view that learners are empty headed makes behaviourists focus attention away from interactive classes; consequently, students do not ask questions, do not

contribute and do not present. The core job of a student in class is to listen. In this respect, Thorndike as a behaviourist identified three laws of learning, namely the law of readiness, the law of exercise and the law of effect. For effective learning to happen, a learner must be willing and mentally matured enough to learn or study. In a situation where a learner is not ready learning process is likely to be ineffective. Moreover, the learners have to practice as much as possible to internalise knowledge. If the learners do not use the knowledge obtained then the teaching process becomes less productive. Finally, learners are more effective when there are satisfying conditions for learning process. If learning process in classes results in dissatisfaction, the learning activity is likely to be ineffective (Baulo & Nabua, 2019).

2.2.5 Theories of Perception

Like the previously discussed theories, Gregory's theory of perception advanced by Richard Gregory in 1966 signals experience and past knowledge as important in making interpretation on what we see. The theory propounds further that context, motivation and expectations are important determinants of perception (Demuth, 2013). This is to say forces external to an individual (context) and forces within an individual (motivation and expectations) determine individual's perception towards a phenomenon.

Moreover, James Gibson developed a theory of perception in 1966, called Gibson's theory. The Gibson's theory was a critique to Gregory's theory (Demuth, 2013). The premise of this theory is that the environment in which we live has direct influence on one's perception or rather the process of perception. Because of this, the change of position or response toward the same stimulus is directly related to the change of one's understanding about the world one sees. Sensory data have to be conceived in the cognition and have to be interpreted based on the available knowledge.

These theories covertly inform that perception is a function of environment and the cognition. Perception is a function of environment and a person as an independent

and unique entity. This is because the theories mention both context (environment) and interpretation. Logically, interpretation is not separate from an individual's cognitive processes. This understanding is held as true at least for now despite raising a couple of questions, such as, is cognition not part of environment? If it is part of the environment, what does it mean when we talk about perception? If it is not part of environment, how is it possible? Despite these unresolved questions, the theories of perception guide the understanding of the findings, especially the findings from research objective three, which strives to understand the development of students' attitudes over time. The review of the theories of perception is relevant because the study seeks to understand responses on the stimulus relating to attitudes at different times. These theories can explain an inclination in attitudes among respondents. In any case, this study is guided by three theories: Variation Theory, Lingren Theory of Teaching and Learning and the theories of perception. The Variation Theory and Lindgren theory of teaching and learning explain findings for research objective one and two, which seek understanding the implemented instructional models and factors for the dominance of implemented instructional models. The theories of perception explain the findings of objective three, which is about the change of students in terms of their perception on lifelong learning attitude overtime. The other two theories (behaviourism and constructivism) are reviewed because they have a close connection with main principles of teaching of the norm instructional models under study. In essence, the theories show the philosophy behind the norm instructional models.

2.2.6 Understanding lifelong learning and its development through formal education

In the previous chapter, lifelong learning has been defined. In this section, a review of some of attributes of lifelong learning is provided. Collins (2009) identifies the following are features of a lifelong learner: learners taking responsibility for learning, learners deciding on activities to engage in the learning process, but usually with the help from other individuals, and learners being self-directed in the learning process. Others include competences already earned usually being used as resources in deciding on the competences to learn or grapple to master, learners setting

personal learning goals, which are instrumental to individual learners as well as to the society, and learners thinking about and evaluating their own learning. Others include learners deciding on the right person to help them and resources to use during learning, learners normally being highly motivated to learn, previous learning being important in fostering or inhibiting the new learning. Others include, learners being open to self-criticism (they are self-corrective), learners preparing and implementing learning plans, learners being able to locate relevant data when needed, learners being able to think hard, creatively, solve problems, and make decisions; and finally, learners having a habit of making self-reflection throughout the learning process.

In addition, Srebrenkoska (2014) believes that lifelong learning does not detach itself from the following, learners reflecting about their own learning, planning for their own learning, assessing their own learning and skills, executing their own learning plan, and evaluating and refocusing their own learning. As such, the role of *professors* is that of a facilitator while learners shouldering more responsibilities in the learning activity. Furthermore, Carlson (2016) identifies features of lifelong learning as valuing self-directed learning, education for application, and not education for its own sake. The scholar adds the ability for one to set their own learning goals; ability for one to make self-evaluation in their own learning and ability for one to possess intrinsic motivation to learn. More importantly, the scholar mentions the ability to make one good at learning from other people, making one good at communication, making people dynamic beings, and making one share useful practices and knowledge with other people.

From the secondary data, the main characteristics of a lifelong learner are ability to plan what and how to learn with the help from others, take more responsibility in the learning process, and monitor and evaluate own learning progress, learning from internal motivation, changing through life from sustained learning and self-reflection, and grow to problem solving entities. Others include evaluating information, and taking relevant information for use in previous learning to learn new knowledge. As

it is, there are more characteristics presented by scholars above; however, some of them are too closely related such that they can be considered as one theme.

In order to promote the above features of a lifelong learner, education systems can use several strategies, namely researching and communicating the obtained knowledge (McCollough, 2014); encouraging learners to value learning through formal, non-formal, informal and work-based learning (Clamans, 2015). In this respect, *professors* have a critical role of developing LLLA attitude among students (Perterson, Labun & Eikenaar, 2016).

Scholars (Cropley & Knapper, 1983) propose teachers to use student-centred approach to develop LLLA. These student-centred approaches could include project work, use of students as learning resources, democratic ways of setting objectives, peer assessment, making self-assessment, placing students in the work settings and making students submit their workplace report. According to McCollough (2014), three methods can be used to develop lifelong learning among students. These include flipped classrooms, which involve learning outside classrooms, problem-based learning, which involves making content compatible to reality by applying it in real world context to determine what is useful and what is not. Lastly, they mention about working on (studying) grand problems, which involve extensive research that is normally one year-long. In addition, collaborative learning promotes lifelong learning (Clamans, 2015). Lifelong learning is education without borders, it is education for now and not for future use, it is “cash in hand” education and not “cash in bank” education (Carlson, 2016).

With no doubt, learning is inherently human being behaviour (Nuisl & Przybylska, 2016). This inherent behaviour of humanity has been distorted through education systems that covertly tell humanity learning is segmented into elementary, primary, secondary, and higher education cycles. This segmentation of education provides a subtle message that education is for certification and has levels, which are satisfactory for an individual to live a quality life. However, in recent years, the global educational policy wants to process an overt message through education

systems that learning happens even beyond the school fence and it is a lifetime process. The resurgence of lifelong learning in education systems is attributable to rapid changes occurring in all spheres of life; for example, social, economic, technological, political and cultural changes. However, globally the changes are not new, and thus, they are as old as human race. Lifelong learning is a concept that may have existed even Before Christ (Nuissl & Przybylska, 2016). However, the concept is more important today when there is digitalised information, which is available everywhere in digital and in non-digital forms. Because of this, the role of an individual is to evaluate the information to see its credibility to use it or to discard it. One can learn anything through digital information available (digital platforms) and other sources.

The today's changes are faster than yesterday's ones making skills on learning independently more important. From the pace of changes and proliferation of accessible information, sustained learning is a mandatory for professionals and non-professionals alike. The importance of continued learning can be corroborated through the presence of phrases such as on-the-job training, in-service training, continuous professional development, and innovations to mention but a few. This implies that learning through life is an inevitable process to humanity.

The above situation makes it safe to assume that learning is an inborn human behaviour. We can prove this through questions children ask adults when they have acquired language. From the researcher's experience, children usually ask adults many questions to explore and understand the world. These questions are important and nobody teaches them how to ask such good questions. Without doubt, the questions make children learn tremendously. This experience from children infers that learning is an innate human trait. Nonetheless, the flaw of valuing formal schooling (segmented education) and academic certifications suppresses the ability of humankind to learn all the time assuming that "diploma" is ultimate until otherwise. To revive the distorted vital innate learning behaviour vibrant at tender age, education system began to adopt the concept of lifelong learning in the 1970's (Nuissl & Przybylska, 2016).

Despite the perceived importance of lifelong learning attitude, it is surprising to learn that scientific way of measuring the development of LLLA appears to be a recent activity. Scholars (Kirby, Knapper, Lamon & Egnatoff, 2010; Hursen, 2016) over the past decade have been grappling with developing scales of measuring scientifically the development of lifelong learning attitudes for teachers and students. The scale developed by Kirby and colleagues is adopted in this study.

Globally, lifelong learning policy has been perceived as operating within certain divides. For instance, some of the policies are based on delimitation of education, core inclination, and the purpose of lifelong learning, *learning modalities*, and *recognition, validation and accreditation of all forms of learning* (UIL, 2016). The policy focusing on the recognition, validation, and accreditation of all forms of learning is a policy that appears to operate in Tanzania educational context. This is because experience has shown that in higher education, for example, students are admitted through the recognition of prior learning (RPL). Similarly, at lower levels of education, experience has shown that there are educational centres commonly known as tuition centres that offer drilling and teaching to whomever is interested, particularly for secondary school subjects. A few of these centres are registered as adult education centres and a good number of them operate informally. Learners from these centres can register for national secondary education examinations as private candidates and proceed to next levels of education if they qualify to join the level that deem appropriate for the aspirant. Therefore, the informal, formal, and non-formal learning are recognised and open opportunities for developing LLLA in Tanzania.

Despite the fact that each country or region has a different policy for lifelong learning, for some countries, the development of LLLA appears to have stagnated because of recent years of economic upheavals, as it is the case in Japan (Sawamo, 2015). Furthermore, Viron and Davies (2015) see the development of LLLA in universities as gradual because there is inadequate funds and reluctance to change among key implementers of lifelong learning strategies. For example in South Africa, political and economic conditions are major bottlenecks toward

implementation of the CBM (Walters, 2015). Based on these data, it is obvious that the development of LLLA is barred by poor economic conditions, ingrained culture, and political contexts in some countries. Despite these drawbacks, scholars (Kerby and colleagues, 2010) have developed possible ways of measuring the development of lifelong learning attitude in the formal education system.

In view of the above, running education and creating LLLA through formal education system cannot happen in a haphazard manner. When a country or an institution offers education to prepare graduates with lifelong learning orientation, it is important to have a defined purpose with proven learning environment and strategies that culminate in lifelong learners. In this regard, it is important to have a broad overview of educational philosophies, theory of learning clusters, and curriculum design, and their relationships.

2.2.7 Purpose and alignment in providing education for intended outcomes

Education provided in any country or institution has a purpose (philosophy behind it). Philosophy of education determines the rest of educational processes. The section discusses the manner in which the purpose of education needs to keep everything aligned to facilitate the achievement of the desired attributes of graduates or society. Along this understanding, we show the relationship between educational philosophies and curriculum designs. This connection is never incidental, but it aims at producing graduates with certain qualities for improving the quality of the life of humanity.

Drawing from the foregoing arguments, there are four major educational philosophies, namely essentialism, progressivism, perennialism, and existentialism. Essentialism as an educational philosophy assumes the purpose of education is to develop basic skills and strives towards enabling learners to master the content and the basic skills (Russell, 1971, Bagley in Lee & Moss, 2010). In this philosophy, the emphasis is on the use of textbooks, drilling the learners, and the use of lecture method in classes (Russell, 1971, Bagley in Lee & Moss, 2010). Given these features, one could align essentialism as educational philosophy with behaviourist

theories, which assume a learner as *tabula rasa* and that exercises are critical to students as suggested by Edward Thorndike (1874-1949) through his law of exercise. Looking further into this educational philosophy (essentialism), one can clearly see that it has a direct link with the subject matter on curriculum design, and whose focus is on the mastery of content and it assumes that education is for future life or adulthood (Types of Curriculum Designs, 2014).

As for perennialism as an educational philosophy, its purpose of education is to cultivate moral development, reasoning skills and higher order thinking skills (Paris, n.d). In this philosophy, the teacher's teaching philosophy is based on the use of student-centred methods such as Socratic Method and inquiry sessions (Paris, n.d). Moreover, Perennialism promotes reasoning and emphasises on core subjects. In the philosophy, the content is the most important and it is the same for all learners. It values the great works authored in the past; it regards all human beings as the same; therefore, they should receive the same education and education is for life preparation (Brennen, 1999; Hutchin in Lee & Moss, 2010). This implies that the educational philosophy does not provide learners with the opportunity of learning from their needs. Therefore, although the methods for the philosophy are active, it aligns with the teacher-centred curriculum design which gives a teacher ultimate powers to decide on content and methods to use (Types of Curriculum Design, 2014).

As for progressivism as an educational philosophy, its purpose is to create a democratic society, and that education is for the present life (now) (Dewey in Paris, n.d). In this philosophy, learners through schooling have to get equipped with contextualised problem-solving skills (Dewey in Lee & Moss, 2016). More importantly, the learners have to develop problem-solving skills (Lee & Moss, 2010). During teaching, the teachers have to use hands-on activities and allow the learners to interact with nature and society (Lee & Moss, 2010). Given its philosophy, one can relate it with cognitive theories, which assume that the learners are active participants in a learning process (Tennyson, 2010). In fact, the philosophy correctly aligns with the learner-centred curriculum design, which focuses on the interest and

needs of students (Types of Curriculum, 2014). In this case, the teaching must base on the previous experience of the learner (Types of Curriculum, 2014). More importantly, the philosophy aligns with activity, learner-centred and integrated curriculum designs their goal is to help learners create knowledge and apply the knowledge in real life situation.

Existentialism as an educational philosophy assumes that human beings have to choose a way of life and are free to choose the goal of their life. In addition, as human beings, they are responsible for the consequences from their choices in life (Brennen, 1999). As it is, this educational philosophy aligns with the cognitive theories. Again, this philosophy aligns with activity, learner-centred, and the integrated curriculum designs, which value the interest and needs of a learner and their ability to apply the knowledge acquired.

In view of the foregoing observations, this study clusters the theories of learning into two main categories, behaviourist and cognitive theory clusters (see also Austin, Orcutt & Rosso, 2001). The researcher is aware that scholars also talk about constructivist theories of learning, which are simply an extension of the cognitive theories. The theories assume that humankind is a social being who learns much when they interact with other beings especially those more knowledgeable. From the interaction, one uses one's experience to create his or her own meaning. In view of this, the process of creating meaning is not a separate department of cognition. Thus, for the purpose of this study, constructivist theories fall under the cognitive cluster of theories of learning.

As we are aware that theories of learning have their models of teaching, for example, the dominant model of behaviourist theory cluster is the Traditional Model (behavioural model). In the context of higher education, the instructional model moves from lecture to seminar sessions that are usually coupled with a number of academic tasks such as individual and group assignments for students. In contrast, the cognitive theory of learning cluster their dominant model of teaching is the Competence-Based Model. In this instructional model, students taking responsibility

for learning dominates educational processes. This is to say in the instructional model, active teaching methods dominate the educational processes. The details of teaching methods based on the instructional models are presented in a lucid way in other chapters of this thesis.

The above overview about educational philosophies, theory of learning clusters and curriculum designs is important because any educational endeavour in a country has a purpose. The purpose of education must be born out of a particular educational philosophy (Oliva, 2009). As such, the purpose of education, which is offered or is to be offered, influences the choice of a theory of learning and an instructional model a teacher uses in class (Oliva, 2009). Accordingly, the educational philosophy in operation influences a curriculum design to be used. Based on the analysis of the reviewed literature on educational philosophies, theory of learning clusters and curriculum designs, it is obvious that essentialism and perennialism as educational philosophies align more with behaviourist theory cluster, and they align with teacher-centred curriculum design.

On the contrary, progressivism and existentialism as educational philosophies align with cognitive theories of learning cluster, especially with activity, learner-centred and integrated curriculum designs. Therefore, the review of the educational philosophies is important because an educational philosophy of a country influences the content and all educational processes (Oliva, 2009). Understanding the inter-link between philosophies, theories of learning, and models of teaching and curriculum designs offers a room for a study to understand and explain the balance of the three aspects, namely philosophies, theories of learning, and curriculum designs as implied in institutions under study. Consequently, from the obvious alignment of the three aspects the study will be able to explain why the learning outcome (lifelong learning attitude) in higher education institutions are the way they are.

2.2.8 Historical perspectives on education and present day instructional models in Tanzania

In this section, we cover education before colonialism, during, and after colonialism. The focus in the epochs is on the instructional models and methods that were presumably used in each era. The section provides an overview of indigenous, colonial, and post-colonial education in Tanzania. In this regard, the section shows how the eras connect to or deviate from the presumed norm (standard) models of teaching in present day Tanzania.

Before seeing the methods as they inform instructional models, which seemed to have been used during pre-colonial era in Tanzania, it is necessary to understand what indigenous education is and how it was offered. Indigenous education is a form of knowledge, skills, and values (education) which was offered before colonialism in Tanzania and elsewhere in the world. However, in this thesis, the focus is on indigenous education in Tanzania. As such, according to Nyerere (in Weaver, 2011) through indigenous system of education, learners acquire knowledge, skills, and values (education) through living and working (doing something) under the supervision of more knowledgeable others. In indigenous education, the more knowledgeable individuals were the elders who were full of experience, wisdom, knowledge, and thinking capability Oruka (in Azenabor, 2009).

Without doubt, the selection of teachers was based on Oruka, a Kenyan African philosopher who is a renowned sagacity philosopher in African context. In sage philosophy, the major premise is that elders are rich in wisdom, knowledge, and can think critically. This thinking guided on how teachers were selected during pre-colonial education; that is to say, the elders were teachers of the young, and they taught through apprenticeship or through initiation ceremonies (Fafunwa & Aisiku in Clark, 1995). Moreover, the methods, which were used to make learning happen were discovery learning, observation, and listening Nyerere (in Weaver, 2011). The media of instruction used in learning from all sorts of activities seem to be the languages of respective ethnic groups.

As such, looking into how the learners were trained, one can be tempted to assume that the socio-cultural theory of learning was in operation during pre-colonial days in Tanzania. This is because the learners learnt by living, discovering, and observing how the more experienced, or rather, more knowledgeable peer/elder/colleague did what they were learning. It also appears that not only the socio-cultural theory of learning, but also the behaviourist theory of learning was used. This is because the learners also learnt through listening; this is a typical behaviourist way of learning. This means that the two theories were applied during indigenous education teaching and learning processes in Tanzania.

From the above data, it is precise to argue that, the CBM of teaching was more valued because learners learnt through living and doing what was really happening in the communities (Mushi, 2009). Moreover, indigenous education valued lifelong learning because learners learnt by living and doing, and therefore, LLLA attitudes were developed by virtue of the mode of delivery. Again, from this understanding, it is correct to assert that the techniques for promoting LLLA, such as those of placing students in the field for practical training are not unique in Tanzania and elsewhere in the world. Therefore, the techniques for promoting lifelong learning existed even before the colonial education, and in the colonial education. Yet, modern theories of learning in education continue to emphasis on learning by doing through practical training as critical for effective learning.

As we may be aware that many parts of the world were colonised, colonialism destroyed the culture of indigenous people. The culture which is referred to include, education system, language, religion, philosophy, and many other traditional practices of indigenous people, all these were bombed to ashes. The colonists introduced new ways of life, which deemed to be appropriate, and superior to those, which existed before their arrival in a territory of a colony (Shazha & Kariwo, 2011). While there were a number of cultural values that the colonists eroded in the then Tanzania, here we solely focus on their influence on education and its mode of delivery. The rest are not within the scope of this thesis. As such, the arrival of colonialism greatly changed the system of education in many ways, namely mode of

delivery, qualification of teachers, and the purpose of education and learning environment (Bah-Diallo, 1997). Here we concentrate on the mode of delivery; qualification of teachers, and the learning environment. Concerning the mode of delivery in colonial period learners had to attend formal classrooms to be taught how to do things, and these were taught for a number of years with no or with very little practice. Therefore, colonial education was theoretical. Additionally, the teachers during colonial education were trained in teachers' colleges before embarking upon teaching, and therefore, they were not necessarily old or elders. The colonial education depended heavily on documented knowledge, that is, learners had to read books to learn. Concerning the learning environment, students had to sit in classes quietly and in rows to listen to the teacher. The learners were given exercise books to write what their teachers taught them, and they were provided with books to read in classes or after classes. A lot can be said about colonial education, but the information given about it suffices for the purpose of this study.

The foregoing available data on indigenous and colonial education take us to the following differences of the two forms of education. First, indigenous education concentrated on apprenticeship and learning by living as the main method of teaching and learning. In this regard, learners learnt through helping a certain community segment to which the learner was affiliated, for example, helping parents, and relatives in doing a particular task. Therefore, we can assert that indigenous education was practical-oriented. In contrast, in the colonial education, learners learnt more through listening to their teachers rather than doing through apprenticeship. Practical training was very specific to some of courses offered mainly to those relating to technical education.

Further, colonial education used teachers who were trained to be teachers in defined subjects or disciplines. Therefore, in colonial education, age of a teacher did not count; this was unlike in the indigenous education where teachers were elders who were perceived to have stored in their heads a lot of wisdom, knowledge, and skills, and were assumed able to think critically.

In addition, Indigenous education was not documented; instead, it was stored through memory, and it heavily relied on experience, knowledge, skills, and the ability of the respective elder (teacher) to think. Therefore, indigenous education was an informal form of education whereas colonial education was mainly formal and relied on documented wisdom, knowledge, and skills.

Looking into the two systems of education, we learn that on one hand indigenous education learners were inherently lifelong learners. They learnt everything and everywhere through organised activities and through interacting and working with their seniors. More importantly, they learnt through living this is a typical form of lifelong learning. It was not examination-based education, but competence-based education. On the other hand, in colonial education learners stayed in classes banked with information for a longer period than they applied the information they received. Therefore, colonial education was more theoretical than practical-oriented, and it did not seem to create lifelong learners because it was examination-based. The examinations implicitly informed learners that they learnt to pass examinations, and therefore, learning was not important if there was no examination to attempt. Therefore, seemingly, indigenous education was competence-based kind of education whereas colonial education was knowledge-based education. This further implies that colonial education eroded the lifelong learning orientation among graduates.

In the post-colonial Tanzania, the country was under the leadership of Nyerere, the teacher who is also known for his great ideas on education in Tanzania, Africa and beyond. Immediately after independence, Tanzania strived towards creating an egalitarian society, which would have no exploitation of one man by another man. To achieve this object, Nyerere in 1967 introduced what was known as the Arusha Declaration, which based on the philosophy of Socialism and Self-reliance. The philosophy greatly influenced the Tanzanians' thinking in every sphere of life including education. The philosophy of Education for Self-Reliance (ESR) is a progeny of Arusha Declaration. In this philosophy, schools were communities on their own right. Students and their teachers had to emulate the life of their

communities, especially, the life of rural communities since the majority of the Tanzanians lived in rural areas, and their main economic activity was agriculture. The view probably, holds true to this day. From this understanding, schools concentrated on productive activities related to agriculture, namely crop production, gardening, and animal husbandry (Weaver, 2011). The assumption was that the educated were prepared to serve the communities and live with people in rural areas without isolating themselves. The ESR emphasised on work-oriented education; that is, learning by doing and respect for manual work. The ESR as a philosophy and policy of education dominated the Tanzania education system from 1967 to 1990's, and was expected to create graduates who had satisfactory practical skills, critical thinking, and able to work in cooperation with other members of Tanzania communities, especially those living in rural areas (Nyerere in Weaver, 2011).

However, the Arusha Declaration was discarded under the leadership of the then Tanzania president, Ally Hassan Mwinyi in the 1990's. Ever since, liberalisation has spurred and everything including education was liberalised. In 1995, a new education policy was formulated and brought into effect. The reform of the policy intended to provide education that would meet the political, social, and economic changes in the country (Hinzen & Hundsdorfer, 1982). However, it should be remembered that the ESR has not been completely discarded, but rather it has been improved in the way it is reflected in the curriculum, especially it is visible in primary schools. For example, in primary schools, the subject referred to as Work Skills was introduced in 1990's to help class VII leavers possess entrepreneurial traits and be self-reliant after completing primary education cycle. The skills envisaged to be taught in this subject included all activities common in rural and urban areas; the activities include ceramics, watch repair, tailoring, agriculture, animal husbandry, weaving, bicycle repair, and photography to mention but a few (Kinyaduka, 2018).

The Work Skills subject reflects the legacy of the ESR policy in Tanzania. This means that the teaching of the subject needs to be practical-oriented, but this has been inadequate. This is because teachers lack content-pedagogical knowledge on

the subject. In addition, there are no workshops and equipment for teaching the subject, further, there is multiple interpretation about the subject among teachers, and therefore, the intended learning outcomes, creation of entrepreneurs and self-reliant graduates are not realised (Kinyaduka, 2018).

Apparently, the implementation of the ESR as a practical oriented education in the Education and Training Policy (ETP) of 1995 has remained a puzzle (Sanga, 2016). This implies that the implementation of the ESR and the ETP has been insufficient; thus, it is not easy to evaluate their suitability in terms of the realisation of the intended educational outcomes. Since the two educational policies, the ESR of 1967 and the ETP of 1995 emphasise on the need for practical training, learning by doing and more importantly, the recent education and training policy of 2014 seems to underscore the competence-based teaching and learning. Again, seemingly, the competence-based teaching and learning existed in the pre-colonial, colonial technical schools, and post-colonial Tanzania. However, the implementation of practical-oriented teaching and learning seems to have remained weak in many of formal educational institutions, including higher education institutions (Tambwe, 2017).

From the heritage of colonial education and colonial acculturated mindsets among the educated, it has been difficult to get rid of colonial culture in education. This happens despite the good will of introducing the ESR, which among other objectives aimed at Africanising education to suit the needs of indigenous people after independent Tanzania in 1961. These aims include but not limited to preparing a learner to be self-reliant and shoulder adulthood responsibilities (Kasulwe, 2014). The ESR intended to provide the people with indigenous education through colonial education inherited system; however, this seems to have not worked. Although, the philosophical foundations of indigenous education, namely education for the good of the community, instrumentalism, mastering diversification of skills and education based on gender roles, are present in the inherited colonial education system (Kasulwe, 2014).

Of all listed indigenous education philosophical foundations, education based on gender roles is strongly opposed in the present western education system, but the rest philosophical foundations are more or less the same. For example, instrumentalism in indigenous education is also a highly valued education philosophical stance in higher education institutions today. This is because higher education is increasingly discouraging education for education sake today, and much emphasis is on education for life, “applied education” (Kouwenhoven, 2009; Carlson, 2016).

In addition, colonial education or rather western education puts primacy on improving the quality of humanity life as the most vital educational objective. This objective is directly connected to the education for the good of the community (communism) as a philosophical foundation of indigenous education. In this regard, learners have to learn to live in the community (society) in harmony while helping each other (Garcia-Serna, Arcos-Vega, Sevilla-Garcia & Oliveros-Ruiz, 2018). Similarly, mastering diversified skills as a philosophical foundation of indigenous education has a direct connection with the ideation of competence-based education, which emphasises on mastering subject specific competences and generic competences such as Communication Skills (Kouwenhoven, 2009). In this respect, philosophical foundations of indigenous education are present in the western education, and they are highly valued and emphasised, but they are not implemented in the manner and in the language, indigenous people implemented and used before colonialism.

Therefore, cultural intercourse between African and western traditions in the present day globalised world in education is an important driving force that makes African higher education unable to implement the normative African way of teaching and learning in higher education (Hammersmith, 2007; Kaya & Seleti, 2013). From this situation, implementing the CBM is made even more complicated from this unbalanced education system emanating from cultural intercourse, for example, using the CBM requires proficiency in the language of instruction; however, most of the African countries do not use their own native languages as media of instruction, Tanzania is not different.

2.3 Empirical literature review

2.3.1 Implemented instructional models in classroom settings

The section highlights on the dominant of the two norm instructional models. The sections also show what happens when one norm instructional model is used in a country or in an educational institution, the CBM, for example. Therefore, this section provides information on the dominance of the instructional models in classes worldwide.

Gerges (2001) studied the efficacy of a pre-service teacher in using multiple teaching methods. There was no relationship between pre-service teacher efficacy and the use of multiple teaching methods. However, there was a significant relationship between subject specialisation, pre-service teacher pedagogical knowledge, and pre-service teacher status. However, the multiple methods referred to in this study are not clear. The study seems to believe that no single method suits all classroom situations. Nonetheless, this study is too old to trust its findings today and it focused on pre-service teachers, but the current study focuses on the higher education institution.

Similarly, as Austin, Orcutt and Ross (2001) claim, no single learning and teaching theory explains how a teacher can manage to handle all attitudes in the classroom situation. Jarome Bruner (1915-) in Austin, *et al.*, (2001) claims that, the content is the main determinant of a teaching method. This implies that the content is what determines the instructional model to be used in classes. However, it might be correct to assert that the content may not be the main determinant in choosing a teaching method. This is because a teacher may not choose a teaching method that is unfamiliar to them for teaching a particular content.

In the same way, Greemers (2005) claims that teachers encounter problems when they use one model of teaching. Therefore, they prefer to combine the two models of teaching. However, the study does not articulate the problems teachers encounter. This implies that the use of the two instructional models in a symmetric manner is a more productive way of teaching. Again, Al-Zu'be (2013) conducted a study in Saudi Arabia aimed at determining the differences between teaching methods based

on CBM and those based on TM. Each of these instructional models had merits and demerits. However, the CBM was more preferred. Furthermore, it is said the two instructional models complemented each other because each instructional model had its weaknesses. This implies that the two instructional models are equally superior because the context is the main determinant on which instructional model can generate the best results.

According to Archer (2016) who studied CBM in higher education institutions points out that, sometimes the CBM was combined with the TM to clarify concepts in Chemistry subject. Archer (2016) asserts that college teachers have more confidence in CBM in creating productive learning environment, and in making efforts toward that end. Evidence from literature indicates that it is not always possible to use one instructional model in classroom settings. This implies that the use of the two models in teaching and learning is a matter of both necessity and choice rather than a matter of choice alone.

Interestingly, while the two models appear to be equally important, Major and Mangope (2012) studied how the CBM was used to teach Mathematics in Botswana primary schools. The teachers applied TM methods more than they did CBM methods when they taught Mathematics. In addition, Dasman (2011) reports remarkable variation between the content, the achieved curriculum, and the implemented curriculum. In Dasman's study, the reasons for the variation were not established.

In the same way, Plessis (2016) studied the beliefs of teacher trainees of science education toward teacher-centred and learner-centred approaches to teaching. There was incongruence between what teacher trainees believed in and what they practised in classes. Plessis claims that the teacher trainees used mainly traditional teaching and learning although the beliefs they held about teaching and learning were predominantly competence-based. Literally, there were no learner-centred activities in their classes. Nonetheless, the study does not show why these teacher trainees did their job against their own beliefs. The present study seeks to understand why

professors in higher education institutions may or may not act against their beliefs in classroom settings, and how far their action influence the development of lifelong learning attitude.

Kazen and Soleimani (2016) conducted a study in Iran examining the relationship between teacher classroom management and major teaching styles. Teachers used more TM (teacher-centred methods) than CBM methods while the instructional model recommended in the country was the CBM (learner-centred methods). Similarly, Kovacevic and Akbarov (2016) studied *professors* in finding out whether they supported the learner-centred style to teaching. Most of the *professors* studied preferred teacher-centred style over learner-centred style. This implies that the studied faculties rarely used learner-centred approach in classes. This further indicates that each institution has its academic cultural values, which are deeply ingrained in the minds of *professors*.

While the above studies show that, there was an obvious gap between the expected and the actual practice, in some rare situations, the norm instructional models are implemented as expected. For example, Guzman (2016), who examined methods preferred when using CBM in Philippines, reported that Faculty members often used cooperative learning, guided discussion, collaborative learning, and demonstration. This is surprising since the available data indicate that teachers tend to deviate from implementing the norm instructional model methods. This implies that there are a number of factors influencing classroom practices among teachers, which might be beyond teachers' knowledge about the norm instructional model. However, the study does not show factors that made them abide by the recommended instructional model. In addition, the study does not show whether the studied faculty members always used the competence-based teaching and learning in classes, or they were sometimes obliged to mix with TM methods. In some situations, teachers in adequate way implement the norm instructional model. Given that many of the available studies reviewed are from lower levels of educational institutions, it is important for the present study to find out factors making *professors* in higher

education institutions deviate from or stick to the norm instructional models in their respective institutions.

2.3.2 Factors for the dominance of implemented instructional models

This section presents literature on the factors influencing the choice of an instructional model in different parts of the world. It identifies factors that facilitate or impede the implementation of innovations in other fields as well. Experience from other fields is important because it provides highlights of what might also happen in educational innovations. For example, the implementation of the CBM has been a globally pervasive educational innovation in recent decades.

As for factors that facilitate or impede the implementation of innovations, Venezky (n.d) conducted a study on information communication technology (ICT) innovative schools: case studies of change and impacts for some countries that maintained the traditional curricula. However, the study used performance assessment. In the meantime, some countries reformed their curricula; trained their staff through continuous professional development programmes, underscored how to help students learn how to learn, and promoted interactive teaching methods and collaborative skills. According to Venezky (n.d), there was noticeable variation in the pace of the adoption among countries and teachers. The variation in adopting ICT among schools resulted from the differences in the availability of infrastructure and in the ability to use ICT among teachers and students. In connection with infrastructure, sub-factors such as shortage of computer rooms, resources, equipment, and poor internet connectivity impeded the adoption of ICT in schools. In the same study, some schools had infrastructure, but teachers did not use ICT whereas teachers in schools without infrastructure did. Similarly, teachers with skills on ICT did not use it whereas those without skills used it with the help from the technical staff. Furthermore, teachers did not adopt ICT at the same pace and time.

Apart from variation in the adoption of ICT, Magijima-Msindwana (1991) conducted a study on implementing educational innovations the case of secondary school curriculum diversification programme in Lesotho. The implementation level was

low because implementers were unable to interpret the objectives of the curriculum diversification. In addition, inadequate skills in managing the implementation of the innovation were attributable to the low level of execution. Finally, peculiar features of schools were in a way attributed to ineffective implementation of the curriculum. This literature is relevant because it involves the implementation of a curriculum innovation, which is focused by the present study through studying the implementation of instructional models.

In addition, scholars (Benveniste & McEwan, 2000) studied the constraints of implementing educational innovations focusing on multistage schooling. There was a wide variation in the use of standard instructional methods. Scholars revealed that teachers' will was the most important motivation of the adoption of novel teaching techniques. In any case, the study established that attitude, motivation, and lack of trust toward multi-grade pedagogy resulted in variation in practice. This study seems to suggest that for the norm instructional model to be implemented as expected, a will of the teacher is an important pre-condition. However, the findings of this study are based on only one country, which is Cambodia. This implies that implementing educational innovations requires consideration of core forces for successful implementation.

Furthermore, Struvven and Mevst (2010) assessed the implementation status of the competence-based teacher education in Belgium based on a teacher and student perspectives. This study reported multiple interpretations of competence-based education and consequently the difference in practice across teacher trainers. From multiple interpretations, four groups in terms of implementation emerged, namely internship-oriented group, institution policy and program planning-oriented group, theory and practice-oriented group, and non-implementer group. Interestingly, more experienced teachers were in the non-implementers group. The implementation of competence-based teacher education varied within and across institutions. The findings of this study are quite plausible in the perspective of constructivism. The perspective assumes that human beings create own knowledge based on the prior

knowledge. The variation in the interpretation of the implementation of competence-based teacher education in Belgium is therefore not surprising.

In contrast to cited scholars, Shao and Brueining (2005) studied teachers' perception on curriculum reforms and teacher training programs in Chinese Agricultural schools. Three main factors, namely knowledge/skills and attitude of teachers, and new facilities and equipment constrained the implementation of the curriculum reforms. This implies that when teachers have expertise, positive attitude towards an innovation, and appropriate facilities and equipment successful implementation of an innovation is expected. This further suggests that successful implementation of an innovation requires important aspects to be in place.

Moreover, Dasman (2011) studied the challenges related to acquiring practical skills for graduates in technical institute in upper East Region of Ghana. In this study, the bottlenecks included inadequate facilities and resources for teaching in the institute and poor connections between the institute and the industry, particularly, field attachment for teachers to learn what was happening in the industry. This study is a revelation to implementers of education plans in that the availability of resources and facilities alone is not a panacea to problems related to the implementation science in education.

In addition, Jabbour (2013) conducted a study in Lebanon that aimed at investigating why teachers were fond of behaviouristic model instead of Competence-Based model. The study claimed that teachers used Traditional Model (behaviouristic model) because of scarce resources, overcrowded classrooms, standard curriculum and examinations, low motivation of school leadership, and lack of continuous professional development among teachers. It seems the teachers were unable to implement the Competence-Based Model because of the imbalance in a number of aspects relating to effective implementation of the Competence-Based Model.

Furthermore, Rahman, Hanafi, Mukhtar and Ahmad (2013) conducted a study on the assessment practices for competence-based education and training in vocational

colleges in Malaysia. The study revealed, variations in the assessment process, resulting from lack of familiarity on the CBM among teachers. From this, teachers used traditional assessment instead of authentic assessment recommended by the ministry responsible for educational matters. Teachers had blurred understanding of concepts, authentic assessment, and competence-based education and training. This study provides a useful insight to innovation initiators that before embarking on the implementation of an educational innovation. It is important to provide an appropriate orientation to teachers for effective implementation of an educational innovation. However, having an appropriate understanding from orientation is not the only determinant for effective implementation of an education innovation, but there could be other determinants to be considered.

Besides the above studies, Brennan *et al.* (2014) in their study on innovation in higher education identified factors affecting scaling of innovations in higher education. The scholars categorised the factors into two groups, namely macro-level and institutional level factors. Macro-level factors are common when an innovation has a broad scope; for example, when the innovation is nationwide or region wide. Institutional level factors count when an innovation has a narrow scope; for example, when the innovation is at the level of an institution or individual entity. Most importantly, Brennan and colleagues (2014) add that autonomy of an institution affects the pace of implementation of an innovation. For instance, less autonomous institutions have state-driven innovations while the more autonomous institutions have institutional-driven innovations. Usually, state-initiated innovations are expected to have uniform adoption and implementation and the scaling which is wider. It is unlike the institutional initiated innovation where the scaling is gradual and narrow. This shows that the degree of implementation of an innovation lies on whether the innovation is state driven or individual/institutional driven. Again, the view that state driven innovations have a wider scaling holds true; however, the uptake of an innovation depends on other important factors as well, for example, political will and support.

In some instances, teachers go for one instructional model over the other because of its effectiveness. For example, Sanchez and Hoyos (2014) conducted a study in Mexico and revealed that, the CBM allows students to learn pragmatic skills, and helping them use the skills acquired in really life situations. However, these scholars argue that the CBM is more suitable for teaching some subjects, but less useful for others. Similarly, Austin, *et al.*, (2001) claim that TM is effective in developing some skills learnt through cramming and practice. In contrast, the CBM is effective in learning complex processes and higher order thinking skills (Austin, *et al.*, 2001). In respect to these scholars, none of the instructional models is superior over the other since each instructional model seems to be more effective in developing specific skills. In this regard, the application of instructional models is skill specific at times.

In Finland, teachers avoided sharing teaching methods, thus impeding effective implementation of the CBM (Nissila, Karjalainen, Koukkari & Kepanen, 2015). This implies that promoting a culture of cooperation among teachers is critical for successful implementation of innovations in some education systems or cultures.

2.3.3 Instructional models and development of lifelong learning attitude as a learning outcome

In central Asia students, teachers, and institutions agree that the CBM culminates in better learning outcomes (Sablonnier, Taylor, & Sadykora, 2018). Yet, for some reason, the instructional model was not applied in classes. This implies that there are a number of factors impeding the implementation of the CBM in Asia.

Besides, Greemers (2005) believes in combining methods from the CBM and the TM give rise to quality learning outcomes. However, the scholar does not articulate the extent to which combining the models leads to quality learning outcomes. Furthermore, the CBM increases performance in foreign language learning (Pai & Mallya, 2016) among other learning outcomes. Based on Bekele (2016) who assessed learning through learner-centred methods in teacher training colleges in Ethiopia, combining the CBM and the TM supplemented each other, thus, resulting

in the above average performance among engineering students. Therefore, Bekele's study recommends combining the two instructional models for best results. The weakness of Bekele's study is that the methods of the study were not articulated. However, the literature suggests that combining the two instructional models result in an improved academic achievement among students. Further, it seems the instructional models have equal importance in creating a desired society.

Abner, Bartosh, Ungerleider, and Tiffin, (2014) show that the TM and CBM have similar outcomes in terms of developing communication, analytical skills, and the ability to handle different situations. Furthermore, scholars (Asup & Springer in Solso, 2009) report that the CBM and TM culminate in the same results when a teacher uses them to teach statistics. This study is a mind blowing for researchers. This is because it contradicts the claim by most scholars that the CBM is more effective in developing learning outcomes and in preparing a student to handle different situations. This implies that the two instructional models have similar learning outcomes in terms of creativity and/or developing problem-solving abilities, and thus probably they have similar results in developing LLLA.

In contrast, scholars such as Flores and Kaylor in Solso (2009) claim that TM yields better results than CBM when used to teach mathematics. In the same way, Hung (in Solso, 2009) believes that the CBM results in better achievement in mathematics. Other scholars (Khalid & Azeen, 2012) argue that CBM is more likely to improve the performance of students than the TM. Khalid and Azeen (2012) claim that teachers prepared under CBM have better English teaching proficiency than those prepared under TM. Moreover, scholars Ilyas, Rawat, Bhatti and Malik, (2013) claim that CBM had better results to the majority of learners as opposed to the TM which shows skewed results. Similarly, Prince and Felder (2006) report that CBM methods were more effective in a number of learning outcomes in engineering when compared with TM teaching methods. Evidence from literature has indicated that there are contradictory claims about whether the CBM is more effective in academic achievement than the TM. Despite the prevailing debate on the effectiveness of the two instructional models in academic achievement, this debate is outside the scope of

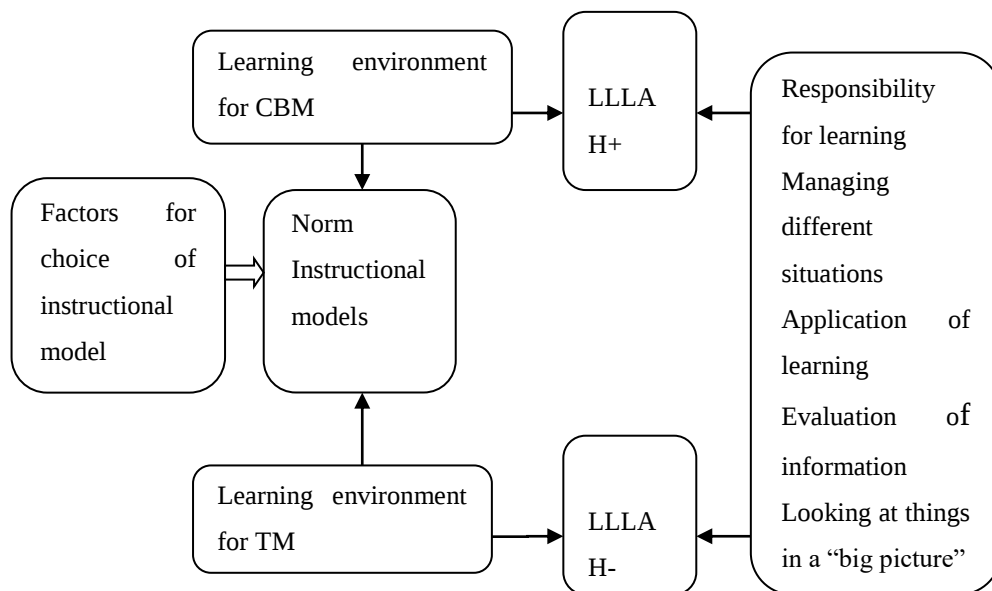
this study. This is because the present study intends to establish whether the norm instructional models culminate in the development of lifelong learning attitude among higher education students. Nevertheless, the debate is useful in understanding the scope of scholarship on the efficacy of the instruction models.

The above reviewed studies are outside Tanzania. In Tanzania, educators grapple with executing educational innovations without relevant support (Meena, 2009). This implies that educational innovations go without creating supportive environment. Teachers interpret and implement innovations without orientation. In this regard, the implementation of curriculum cannot amount to the expected standards. In another study, Meena (2009) recommends for continuous professional development of teachers. In view of Meena (2009), lack of orientation on educational innovations is a setback towards the implementation of curricular innovations in the country. Similarly, Paulo (2014) conducted a study on pre-service teachers' preparedness for implementation of competence-based curriculum in secondary schools in Tanzania; the pre-service teachers had good foundational competence. Nevertheless, they grossly lacked practical competence. This literature from Tanzania indicates that having appropriate knowledge on how to execute a particular innovation is not a panacea of an ineffective implementation of educational innovations.

To synthesise previous literature, most of the prior studies focused on comparing the CBM and the TM in academic achievement, and whose findings are inconclusive. For example, some studies concluded that the CBM is better in promoting academic achievement whereas others indicate that the TM is better in some respects. Importantly, some studies indicate that the two instructional models result in the same academic achievement. The present study therefore seeks to understand the application of the two instructional models and their efficacy in developing lifelong learning attitude as a learning outcome. In Tanzania, a few intensive studies (Mwaikokesya, 2014) focused on the development of lifelong learning in higher education institutions.

Furthermore, the CBM methods appear to have an upper hand in the education systems, and therefore have been adopted in education systems of a number of countries, particularly in teacher-education. Education policy makers, teachers and students advocated for the instructional model because it is assumed to develop higher-order thinking. Despite the advocacy of the instructional model, teachers tend to be more inclined toward TM methods. There is a popular belief that combining the two instructional models attracts better academic achievement at non-degree conferring institutions. However, literature addressing *professors'* practices in classroom settings is scarce in Tanzania.

From the reviewed literature, a number of conclusions can be drawn. Teachers do not apply adequately the norm instructional model, the CBM to the expected standards. The teachers' practices in classes contradict their own beliefs about teaching. Most of the studies are not from Tanzania, specifically, higher education institutions. Therefore, the present study strives to determine the actions (decisions) of *professors* in teaching and learning processes and the degree to which their decisions inform the development of LLLA among students. Moreover, the study intends to establish factors that explain the actions of *professors* in teaching and learning processes. Understanding the decisions of *professors* is important because the Tanzania education policy of 2014 appears to capitalise on competence-based teaching and learning in the education system in Tanzania (URT, 2014). Further, the NACTE and the TCU push institutions under their jurisdictions to design their curricula based on Competence Based Curriculum (Rutayuga & Kondo, 2006; Cross, Khossa Person & Sesabo, 2015). Recently, the TCU required programmes and course outlines in Universities to be designed based on the CBM. Consequently, Figure 2.1 presents a research model for this study.



H+ Means higher

H- Means lower

Figure 2.1: Research Model

Source: Developed from literature, 2020

Figure 2.1 assumes that there are factors that may influence the choice of instructional model, and whose details are described in this text. For example, one of the most important factors determining the choice of an instructional model is the philosophy of education, which can be essentialism, perennialism, progressivism, or existentialism. Apart from the philosophy, there are other factors such as the objective of learning, theories, differences in understanding between a teacher and a student, traditions, experience, and teacher's freedom to choose teaching and learning principles. Others include the nature of content, the nature of the subject; infrastructure, teachers' will, time, training, facilities, and resources. Other factors include interpretation of instructional model, institutional behaviour, scope of innovation, institutional autonomy, and sharing of teaching methods. All these influence positively or negatively the application of norm instructional model in an educational institution or a norm instructional model of an individual *professor*.

The figure assumes further that learning environment is an important aspect for effective application of a particular norm instructional model. The instructional

model can be biased toward the CBM or TM. The figure shows further that each instructional model has its learning environment that comprises the main principles of teaching, curriculum design, and methods (teaching and assessment methods). Other aspects forming the learning environment include students sitting in rows/circle, the use of various texts or one text, noisy/passive classes, task-oriented movements/no movements in classes. The figure shows two forms of learning environment, namely CBM and TM learning environment. The figure shows that the CBM learning environment culminates in higher development of LLLA whereas the TM learning environment culminates in Lower LLLA development. Finally, the figure identifies the dimensions of LLLA, responsibility for learning; managing different situations; applying learning; evaluation of information and looking at things in a “big picture.”

CHAPTER THREE

RESEARCH METHODS

3.1 Introduction

The previous chapter is on study's related literature review. The present chapter provides a description of research methodology to fill in the research gaps identified in the last chapter. The chapter presents research processes and the assumptions behind the processes. The chapter covers on ethical considerations among others. More importantly, this chapter presents research methods, namely sampling techniques, data collection and data analysis.

3.2 Research approach

The research approach for this study is mixed method. A mixed approach was adopted because of complexity of the problem. The problem required qualitative data for the understanding of the process, which students had gone through, and it required quantitative data to understand how far the process informed the development of LLLA toward a positive or negative direction among students. Thus, the main objective of the study determined the research approach. Moreover, the choice of the approach was dictated by the need to complement the qualitative approach, which was the dominant. The qualitative approach techniques were unable to measure the development of LLLA.

3.3 Research Design

This study employed exploratory sequential design (Cresswell, 2003; Andrew & Halcomb, 2009). The design was considered suitable to the complexity of the problem of the study. In this regard, the researcher collected qualitative and quantitative data in sequence. Traditionally, the sequential exploratory design requires the researcher to start collecting qualitative data which are followed by the collection of quantitative data. The researcher started to collect LLLA quantitative data with the closed questionnaire from year one students, because this would yield more valid and sound results, since it was collected before the students were influenced by higher education training culture. Having collected quantitative data,

the researcher collected qualitative data through class observations and interview sessions with *professors*, conducted after class observations. This was expected to help controlling the Hawthorne effect because the *professors* would be unable to guess what exactly the researcher observed in classes. Finally, documents were collected for review. The qualitative data were collected to understand the processes (learning environment) which a student went through during their training, and which were assumed to contribute to the development of LLLA. The Phase I of data collection happened at the beginning of Semester I in November 2017. In Phase II, the researcher collected quantitative data through student questionnaire on LLLA at the end of Semester II, end of May 2018. The data were collected from the same student respondents. Accordingly, the qualitative and quantitative data were collected separately. Although the quantitative and qualitative data were collected and analysed separately, the results were integrated in interpreting and discussing the findings.

3.4 Study area and inclusion of institutions, respondents and programmes

The study was conducted in Dar es Salaam region and included two higher education institutions, the Mwalimu Nyerere Memorial Academy (MNMA) and the University of Dar es Salaam (UDSM). The MNMA was included in this study on the assumption that it implemented the CBM to specified standards. This is because the institution was under the NACTE the organ that advocated for the implementation of the CBM. The UDSM was included because most of its programmes were assumed to operate under the Traditional Model. Moreover, it had post-graduate programmes run based on CBM. With respect to graduate programmes, one programme was from the School of Education (SoED) under TM whereas the other programme was from the College of Humanities (CoHU) under the CBM. The programme under the CBM was housed in the Department of History. The UDSM was selected because it had a long-standing history in teaching and learning, and therefore, the greatest experience in offering bachelor and graduate programmes under TM. In this respect, the MNMA learning environment and the development of LLLA were compared against similar programmes, bachelor and graduate programmes at the UDSM.

The comparison mainly based on the mode of delivery and the development of LLLA as a learning outcome. It was important comparing the learning outcomes of programmes offered in these institutions, because Tanzania universities have recently adopted the CBM; thus, the study could act as a compass in improving the application of the instructional model in Tanzania higher education. From the explanation, the study area was selected through purposive sampling, specifically typical case sampling. These institutions in the finding chapters and elsewhere in this thesis are presented using pseudonyms, M and D to maintain confidentiality.

To show detailed selection processes of institutions, respondents and programmes, in the first place, the researcher prepared a list of all higher education institutions offering education programmes at bachelor level. The second step was to identify institutions whose bachelor education programmes operated under the CBM and institutions programmes, which appeared to be offered under TM. The inclusion of the institution was based on their experience in offering programmes using one of the two models. From the process of selection of institutions, the M and the D were included in the study. Third, the researcher visited the institutions to hear from the heads of departments on how the programmes were run, especially at institution M, such a visit was not important at institution D because the researcher had enough experience about how programmes were run in the institution. In the visit at institution M, one of *professors* claimed that their programmes were run based on the CBM precepts since their inception. Therefore, the selection of the institutions was based on purposive sampling.

Institution M was included because it was the only higher education institution, which offered CBM programme in education programmes, and institution D was selected because it was assumed that it offered training using the traditional model, the instructional model that moved from lecture to seminar sessions. In addition, it was selected because it had a graduate programme, MA.HI that applied the CBM. Further, institution D was included because of its history and experience in offering bachelor and graduate programmes using the TM. Therefore, in bid for determining

the development of LLLA from the two instructional models, the institutions were assumed appropriate.

The study intended to include thirty-three (33) participants from the two (2) selected institutions. According to Adler and Adler (2012), a sample of 6 – 12 participants is enough for elites and deviant participants when a researcher wants to collect qualitative data through interviews. In this situation, 33 participants were assumed reasonable given that the participants were heterogeneous (see Table 3.1). However, for reasons such as reluctance to participate in the study and too tight schedule 19 participants out of 33 three were reached. The participants included 12 *professors*, 3 Quality Assurance Officials, 3 Heads of Departments, and 1 Teaching Practice (TP) coordinator. Table 3.1 provides the details of the distribution of the selected and accessed participants in categories, programmes, and institutions.

The researcher included all (over seven hundred) students who were willing to respond to the questionnaire, which was collected as quantitative data in two phases of the study. The assumption was that the number of respondents would decrease along with data collection phases. Another reason was that some of the programmes included in this study had very small classes. This sampling procedure is known as whole population sampling. From this sampling technique, 236 students filled in the questionnaire in Phase I of data collection. The 217 (92%) of those who filled in questionnaires were analysed. Eighteen questionnaires were not analysed because the respondents seemed not to have provided reliable information during their completion. These were identified through Blank Cell Technique.

In view of the technique, the researcher devised it after observing the manner in which student respondents completed questionnaire during pilot study. In collecting pilot study data, the researcher observed students completing the questionnaire without reading; they were just ticking against the Likert scales and statements. This practice made the researcher believe that including Blank Cells in the questionnaire during actual study was a panacea of the problem. In this technique, the researcher included blank cells to identify respondents who did not complete the questionnaires

sincerely. In the technique, if a respondent completed the cells without Likert statements, they were considered insincere. Thus, 18 (7.6%) of completed questionnaires were not analysed because cells without Likert statements were filled in. In addition, the researcher excluded from the analysis questionnaires whose respondents (0.4%) spent too short time to complete, for example, using less than two minutes to complete. Therefore, Phase I had a sample of 236 of whom 217 completed the questionnaire sincerely and 19 were in-depth interview participants.

In Phase II, 174 students completed the questionnaire in both institutions, M and D. Out of 174, 88 (50.6%) completed the questionnaire sincerely and 86 (49.4%) were not sincere in completing the questionnaire; thus, the questionnaire completed by the latter were not analysed. With respect to this, 23 (40.3%) out of 57 student respondents in institution M completed the questionnaire sincerely whereas 34(59.7%) out of 57 in the same institution did not complete the questionnaire sincerely. Unlike in institution D whereby 47(52.8%) out of 89 BA Ed student respondents completed the question sincerely whereas 42(47.2%) out of 89 did not complete the questionnaire sincerely. Accordingly, 15(60%) out of 25 MEMA student respondents completed the questionnaire sincerely whereas 10(40%) out of 25 did not complete the questionnaire sincerely. Surprisingly, three (3), MA.HI student respondents completed the questionnaire sincerely. Seemingly, respondents in institution M were less sincere in completing the questionnaire than their counterparts in institution D. Further, graduate respondents appeared to be more sincere than undergraduates were. Table 3.1 shows the phases, categories of informants, participating institutions, expected and reached respondents, and the percentage of reached informants.

Table 3.1: Participating institutions, expected and reached participants and respondents

Phases	Category	Programme & Institution	Expected participants	Respondents	Reached participants	Respondents	Reached percent
I	<i>Professors</i>	Institution M	6		4		66.7
	QAO		1		1		100
	HoD		1		1		100
	TPC		1		-		0
	Students	B Ed	Phase I	100		80	79
	Students	B Ed	Phase II	80		23	29
	<i>Professors</i>	Institution D	18		8		
I	QAOs		2		2		
	HoDs		3		2		66.7
	TPC		1		1		100
I	Students	BA Ed		300		103	33.33
II		BA Ed		103		47	45.6
I		MEMA		33		29	87
II		MEMA		29		15	52
I		MA.HI		6		5	100
II		MA.HI		5		3	60
Total			33	406	19	≈152	47 respondents

Key: QAO = Quality assurance Official

HoD= Head of Department

TPC= Teaching Practice Coordinator

QAOs= Quality Assurance Officials

HoDs= Head of Departments

BA. Ed= Bachelor of Arts in Education

B. Ed = Bachelor of Education

MEMA = Master of Education Management and Administration

MA.HI = Master of Arts in History

3.5 Study population and unit of analysis

The study included the institutions with the longest experience in offering degree education programmes using the CBM or TM. The target population in the institutions were *professors*, quality assurance officials, Heads of Departments, Teaching Practice Coordinators and first year students. The unit of analysis for this study is institutions because the qualitative data analysis moved from individual level

responses to a holistic (group level) synthesis and interpretation of information. Moreover, for quantitative data were analysed based on calculating averages to draw a holistic understanding of the views of the studied group of students in a programme belonging to a particular department.

3.6 Selection of study participants

This section describes the theory behind the selection of each category of participants for this study, presented in Table 3.1.

The category of *professors* was included because it was assumed that they had rich information on teaching in classes and about they mostly used teaching methods. Therefore, it was assumed that *professors* could provide relevant information on why particular teaching methods were the most common in classes. Furthermore, the HoDs were included in the study because it was assumed that they could provide pertinent information about teaching and assessment in their departments. In addition, the quality assurance officials were included assuming that they had rich information about quality of teaching and learning processes in their respective institutions. Finally, the TPCs were included in this study because they dealt with coordination of work-based learning as one of the teaching methods in the selected institutions. The assumption was that they had rich information about work-based learning. The method was assumed to contribute to LLLA development among students.

Further, students who studied B Ed (Geography & Kiswahili) and BA Ed (Geography & Kiswahili) programmes were included in this study because the two programmes were related in terms of teaching subjects. The teaching subjects and other related courses offered in these programmes were assumed familiar to the researcher, and therefore, it could be easier for the researcher to follow what *professors* taught in classes and the contents in course outlines for these programmes than it could be in other programmes. The course familiarity could help the researcher to provide relevant interpretation of findings from observation and documentary review. The MA.HI programme was selected because it used the

CBM in teaching. The programme focused on continuous assessment without any final university examinations. There was no likelihood for other graduate programmes to have continuous assessment and final university examinations in institution D. In addition, a *professor* who introduced the instructional model in the department taught this programme. Thus, it was assumed that this *professor* would be able to provide rich data on the programme and the instructional model. Moreover, the study included students to obtain reliable information on the development of LLLA. This is because including graduates external to formal learning environment would have been difficult to determine whether the development of LLLA was solely due to learning environment.

As for MEMA programme, its selection like other programmes was purposively done. This programme was included in the study because it was assumed that the researcher would be more conversant with most of the courses offered in the programme. The assumption was that it would be easy to follow what happened in classes. On the other hand, this programme had a bigger number of *professors* teaching. Therefore, given that *professors* are busy category of subjects, from their number, it was assumed that it could be easier to get enough number of *professors* to participate in the study than when the researcher would opt to choose other programmes with smaller number of *professors*. Despite that, the researcher used different criteria for the selection of various programmes; the aim was to obtain valid and reliable data for the intended purpose.

3.7 Type and sources of data: methods and instruments

This study used two types of data, primary and secondary data. Primary data were obtained through observation, interviews and questionnaires. Observation was the main method of data collection for research questions one and two. Interviews and documentary review complemented it. The study used unobtrusive and participant observation. Observation was done in lecture and seminar contact hours. This study used interviews, specifically semi-structured interviews. The interviews were used to collect data for research question one and two. Semi-structure interviews were used with the assumption that the researcher would have a room to solicit more

information when necessary do so. The researcher used techniques such as tape recording in interview sessions. Further, the researcher took some notes, and created follow up questions when the interviewee answered questions. The researcher also used documentary review to collect data for research question one. The details of each of the methods are explained under:

3.7.1 Observation

The researcher used unobtrusive and participant observation in classes to determine common teaching methods *professors* used in classes. The researcher used observation schedule to observe *professors* in classes in selected programmes and other programmes related to target programmes, for example, second and third year programmes (see App. IA & IB). The purpose of observing programmes not included in the study was to check out whether the teaching was the same for year one students and other years of studies. In this study, this technique is referred to as “*foreshadowing research technique*¹.” This technique served two purposes. First, to predict the teaching and learning that would happen in semester II. Second, to predict the level of development of the Yeh’s lifelong learning attitude Index of Perception (YLLAIP) maximum score after students completed their undergraduate education cycle. To do this precisely, the researcher accessed master timetables from the heads of departments. The researcher visited classes based on the master timetable. The researcher used unobtrusive observation for undergraduate programmes and participant observation for graduate programmes and undergraduate seminar sessions.

Unobtrusive observation was used to observe undergraduate lecture sessions because classes were big such that the researcher would collect data without *professors* being aware about the presence of the researcher in a class. In unobtrusive observation, the

¹ Foreshadowing research technique involves studying all related segments of a population to predict what is likely to look like in target segment of population after changing its status, e.g. studying all programmes related to a target programme to predict the teaching and learning processes would look like when the target programme changes its status. For instance, the change of status from year one students to year two does it affect the teaching and learning strategies professors use.

researcher entered in a lecture or seminar session in time and sat at the back of the class to see what was happening in the whole class. The researcher listened and observed the behaviours of *professors* and students. The researcher wrote down in a notebook everything in class processes and whatever statements uttered in the session provided they were connected to teaching and learning. Recording everything apart from what was in the observation checklist was important to capture explanatory data.

Participant observation was used to collect data from graduate classes and undergraduate seminar sessions. This is because the number of students was small. It was between six and over thirty in graduate student classes, and it was between twenty-five and thirty students in undergraduate seminar sessions. In observation, *professors* were not told what the researcher observed. The purpose was to decrease the Hawthorne effect. The observation helped in relating what happened in classes with the information from interview sessions. The researcher observed teaching methods applied in classes; activities assigned to students; classroom management and organisation; and degree of student-student interaction in classes. The observation took place in the entire lecture or seminar session.

Observation also involved how the participants used their body language in relation to what they said. Paying attention to body language was important because it contributes to understanding of what the encoder communicates to the decoder. In this way, the study made the data more valid and reliable. Moreover, the researcher was able to determine the instructional model that *professors* used in classes. The researcher used observation checklist as an instrument for collecting data.

3.7.2 In-depth interview

The study mainly used face-to-face interview to collect data from all interviewees. The purpose was to capture properly interviewees' feelings and subtle messages the interviewees would deliver through facial expression and/or actions. The questions asked depended on the role of the respective categories of the participants (see App. IIA, IIB, IIC and IID). In addition, the questions varied based on the psychological

standing of an interviewee. Some of the interviewees seemed to be so busy such that the researcher avoided some of follow up questions, and asked only items that appeared to draw rich information. In this situation, the depth of the interview sometimes suffered. Similarly, some of the interviewees were not interviewed because they kept providing unfulfilled appointments to the researcher. In this study, the researcher intended to tape record all interview sessions; however, some of the interviewees were not ready to be tape-recorded. In this situation, the researcher took some notes as the interviewee answered questions. The notes were taken through notebooks. Immediately, after the interview, the researcher re-wrote the notes in an organised and sensible manner. This helped the researcher not to lose important messages from the data, and it helped to collect data in a more effective way. The researcher checked for completeness and consistency of data.

Interviews sought to understand the belief of a *professor* on how students learn; the teaching method that a *professor* used most; whether the *professor* was happy with the teaching method they used most; why the *professor* was (not) happy with the teaching method they used and whether the learning environment favoured the teaching method a *professor* preferred to use. The responses for the questions were probed based on the responses from the participant. As for quality assurance officials, they were asked to outline their responsibilities, and about teaching and assessment methods *professors* used most. Additional questions were asked based on the responses. The TPCs were asked on the purpose of TP and the challenges about TP and other additional questions. As for heads of departments, the researcher asked about their beliefs on how students learn, the methods (teaching and assessment methods) *professors* used most, the challenges they faced in applying the teaching and assessment methods and other additional questions based on their responses.

The duration for in-depth interview sessions varied depending on the category of the interviewee or participant, for example, in-depth interview for *professors* took from thirty minutes to two and a half hours. The length of interview session depended on time available for an interviewee. Some interviewees had very tight schedules such

that they could not give many details or rather they cautioned the researcher that they had only twenty minutes for interview session. In such interviewees, the researcher had to rearrange for another interview session to complete the interview session. As for quality assurers, the interview session took between fifteen and thirty minutes while for Teaching Practice Coordinators, the interview took thirty minutes. The interview for heads of departments took about twenty to thirty minutes. In this case, interview guide was used as an instrument for data collection.

3.7.3 Documentary review

Documents review as a method of data collection was used to collect data for research question one, documents collected included programme document, timetables, syllabi (course outlines) and visit of university websites. These documents were accessed from the heads of department in which the studied programmes belonged, but university websites. The documents were reviewed for some courses to see whether the documents reflect CBM or TM. In some instances, the documentary review supplemented data collected from observations and interviews. In this case, the list of documents to be reviewed was used to collect data in this study (See App. III).

3.7.4 Questionnaire

Questionnaire was used to collect data from year one students. The questionnaire was adopted from scholars (Kirby, Knapper, Lamon & Egnatoff, 2010) who developed the scale for measuring LLLA in formal education setting. The scholars confirmed that the questionnaire was good for measuring LLLA development in formal education setting despite LLLA having many windows for its development outside the school system (Kerby, *et al.*, 2010). Lifelong learning attitude was measured using closed-ended items with five-point Likert scale. More specifically, the questionnaire measured LLLA attained broadly by each selected year one student programme. The questionnaire had fourteen Likert item, whose contents were the ability to plan for one's own learning, the ability to solve problems as they arise, the ability to tackle different situations, and the ability to find out one's own meaning in tense situations. Other contents were the ability to assess one's own learning to

improve it, the ability to learn independently and the ability to evaluate one's own learning. Finally, other contents were the ability to demonstrate instrumental learning, the ability to apply what one learns, the ability to transfer learning, the ability to use prior learning to learn new things, the ability to shoulder one's own responsibility for learning, and the ability to see things in overall perspective.

The above contents of questionnaire were in the form of Likert items for student respondents to complete after having read them. The researcher created blank cells of identifying the respondents who completed the Likert items without reading them. In relation to this, the respondents who filled in the blank cells (cells without Likert items) were assumed to have had not read the questionnaire. Accordingly, some questionnaires were not analysed because the respondents were assumed to have completed the questionnaire without reading the Likert items. From experience, insincerity happened because data were collected at the end of the semester, when students are usually preoccupied with presentations, attending seminar sessions, preparing for tests and preparing for final examinations; thus, making them unable to concentrate on research agenda.

Because the data were collected after every specific period, the number of respondents was expected to decrease over time and that fewer questionnaires would be analysed. Therefore, the five point Likert scale was reduced to three point Likert scale to give a clear picture of the distribution of the responses. Having created tables showing percentile distribution of responses, the results were subjected to Yeh's Index of Perception (YIP), which was used to interpret the findings. Then, the researcher compared the YLLAIP scores on similar studied programmes to determine the programmes that had higher scores. This was done to understand whether LLLA was developed through training. The data from questionnaire were collected in two phases, at the beginning of Semester I in the year 2017 and at the end of Semester II in May 2018. The study aimed at understanding whether within this period there was any progress in terms of LLLA development among year one undergraduate and graduate students. This would help in ranking the YLLAIP in studied programmes and institutions. The ranking and decision rule was based on

the following categories from Yeh's (1972) and Yeh's (1975) (in Abdu, Hashimu, Samah & Salimu, 2014) who suggests less than 0.20 as Very low, 0.20 – 0.39 as Low, 0.40 – 0.59 as Medium (moderate), 0.60 – 0.79 as High and 0.80 and above as Very high.

3.8 Validity and reliability issues

Validity was ensured through piloting the instruments. The pilot study resulted in a number of insights ranging from excluding graduates from the study because it was assumed that their LLLA was more likely to be influenced by other factors than schooling environment. Also, the pilot study helped in doing a more precise analysis through identifying reversed Likert scales before the analysis of the Likert items. Therefore, the researcher was able enter these results in the analysis software accordingly to yield valid results.

In addition, pilot study helped the researcher devise a technique for identifying respondents who completed the questionnaires without sincerity. This study refers to this technique as "*Blank Cell Technique*". This technique was out of researcher's self-conscious method (See App. IV) where the researcher included blank cells in a questionnaire as a data collection instrument, and a respondent was asked to read every Likert item before completing it. From this, if a respondent ticked (filled in) even the blank cells the assumption was that a respondent had completed the questionnaire without reading it. Therefore, the pilot study was used to improve the whole study process to yield valid results. The pilot study involved one institution and one programme.

Also, experts in the field under study read and commented on the instruments. Moreover, the respondents were asked to asterisk against any Likert item they did not comprehend. The technique, which was devised by the researcher, is referred to as "*The Odd out Technique*". The assumption was that some items would not be clear to the respondents though this did not happen in all the phases of data collection. Importantly, the researcher observed even second and third year classes, with the aim of having a holistic understanding of the teaching process to predict

teaching in the second semester and to have explanatory data for the study. This technique, which is described in the preceding sections of this chapter, is referred to as *foreshadowing research technique*.

In addition, the questionnaire was not labelled a lifelong learning attitude, but rather the respondents were encouraged to fill in what they felt it was an appropriate response for them from their inner feelings for each statement. This was assumed to minimise bias from some of the respondents who would want to exaggerate their responses after knowing that the questionnaire measured their lifelong learning attitude.

Importantly, factor analysis and Cronbach Alpha were performed to attest validity and reliability of the questionnaire items. Factor analysis results showed that eleven items measuring LLLA were strongly associated with the concept of lifelong learning with Eigenvalues ranging from 0.678 to 1.766; whereas, three items with weak association to the concept had Eigenvalues ranging from 0.424 to 0.546. The weak association could be attributable to the differences in conceptualisation of the concepts used in the items.

The researcher tested the reliability of the items using Cronbach Alpha and the result was 0.5, which was below the recommended result of 0.7 or above. These extreme results of Cronbach Alpha are associated with respondents difference in conceptualisation of the concepts tested. Further, the different abilities in the English language proficiency of the respondents might have contributed to these results.

More importantly, in connection to qualitative data from interviews, to ensure trustworthiness of the findings, the researcher wrote down some notes from the field every day to ensure that the information provided on that particular day was well internalised and captured. This study used triangulation of data collection methods; accordingly, the study relied on different sources of data in making inferences of the collected data. In addition, the researcher presented the findings to some of the

participants to confirm the findings. Afterwards, the report was subjected to several critical reviewers as proposed by scholars (Creswell & Miller, 2000). The processes helped to improve the quality of the thesis in terms of validity of the findings, and noting key areas that needed more attention in the study.

Finally, the inner part of the researcher may have influenced the findings of this study at some point, particularly on the qualitative part of the findings. In this respect, the researcher's second nature rests on his beliefs about nature (the environment) that the continuous environmental interaction results in the nature self-creation or self-destruction. From the processes of self-creation or self-destruction of nature, humanity learning occurs. In this respect, it follows that learning is a continuous change of humanity mental model resulting from environment (nature) interaction. The beliefs at some point might have influenced the findings of this study.

3.9 Data analysis

The researcher used content analysis to analyse data from, observation, interviews and documentary review, specifically directed content analysis that was guided by research questions. The researcher used ATLAS.ti software to analyse the data. The researcher went through the following processes in data analysis based on the data collection method used.

As for the data from observation, first, the researcher entered the recorded data in the form of notes in a word programme. Second, the data in the word programme were subjected to ATLAS.ti software. Third, the researcher read the data in the form of text from ATLAS.ti software and created themes in the process of reading. Fourth, the researcher clustered the related themes into one category. Fifth, the researcher developed a concept representing the category of themes. Sixth, diagrams showing the relationships of concepts to help interpretation were generated.

As for interview data, first, the data in the form of sounds were transcribed and put in the form of text in the word programme. Second, the transcribed data in the word

programme were subjected to ATLAS.ti software. Third, the researcher read the data from ATLAS.ti software and created themes during reading. Fourth, the created themes were grouped into related themes to create categories. Fifth, broad concepts representing a group of themes (category) were developed. Sixth, tables or diagrams showing (relationships of) concepts to ease interpretation of data were generated. In analysing data from interview, data, which were not recorded in form of sounds, were analysed based on the process used in analysing data from observation.

With regard to data from documents, the first step was to enter notes from documents in a word programme. Second, the notes were subjected to ATLAS.ti software. Third, the researcher read the data in form of text in ATLAS.ti software and created themes in reading. Fourth, the categories of related themes were created. Fifth, the researcher conceptualised the created categories to form broad concepts representing the categories.

Further, the researcher linked the data to the research model through two techniques, namely pattern matching and cross-case analysis. About pattern matching, the researcher identified concepts that matched with those in the research model in order for the study to ensure that the data either refuted or supported the research model. In relation to cross-case analysis, the study focused on identifying the concepts that were consistent across cases, and whether confirming or disconfirming the assumptions of the research model. Finally, the criteria for interpretation relied on the available evidence from different sources and contexts, which seemed to give robust support toward a particular view.

As has been noted, the study used YIP to analyse and thus interpret data from research question number three to compare the scores of students from certain implemented instructional model (see Chap. VII). The YIP scores were cross-compared to all studied programmes from all institutions to determine the programme that appeared to have the highest rank of all studied programmes. The purpose was to specify programmes from their scores in terms of YLLLAIP in two-semester time of training processes across programmes. The questionnaire Likert

scales were reduced from five to three because some programmes had very small number of student respondents. The YIP appears to be a trustworthy perception index because is used by other scholars such as Abdu *et al.*, (2014).

3.10 Ethical considerations

The researcher sought permission to collect data from the relevant authorities (see App. IX). First, the researcher obtained a research permit from the Mzumbe University, and this was sent to the target institutions. The target institutions issued a letter, which was sent to a school, college, or department depending on the size of the institution (see App. X and XI). The schools and colleges wrote a permit for a researcher to the Heads of Departments who in turn wrote a letter that introduced the researcher to *professors* and students.

The researcher sought informed consent from participants and respondents. It was only those who were willing to participate in this study in all phases of data collection whom were included in the study. In addition, the participants and respondents were free to withdraw from the study if they wished to do so for whatsoever reasons. In this respect, one student respondent withdrew from participating in the study. Furthermore, the researcher made appointments with participants for them to schedule interview sessions at the time they felt most appropriate for them. In this sense, the researcher abode by the participants' schedules. Furthermore, recording through digital voice recorder was done to participants who were willing to be recorded. The researcher kept the information confidential throughout and after data collection activity.

CHAPTER FOUR

NORM INSTRUCTIONAL MODELS IN TANZANIA HIGHER EDUCATION INSTITUTIONS (HEIs)

4.1 Introduction

The previous chapter is about research processes and theories behind them. This chapter presents, interprets, and discusses findings for objective one: *to examine implementation of norm instructional models in selected Tanzania higher education institutions*. The chapter argues that Tanzania higher education institutions have explicit or implicit norm (standard) instructional models that are supposed to operate in the respective institutions.

4.2 Norm instructional models in HEIs

The data from documents of institution M (from Institutional website) indicated that the institution was under the NACTE, and therefore, its norm instructional model was the CBM. Besides, the programme document showed that the programme applied the competence-based teaching and learning (MNMA, 2014). However, the master timetable indicated that the institution applied the Traditional Model. Additionally, curriculum design was integrated. This is because they had a list of topics and subtopics without student activities. This implies that in institution M, the norm instructional models were the CBM and the TM, more precisely the MTM. The latter was visible in the master timetable, but the former was apparent in the institution curriculum document. Therefore, this institution at the time of this study had two norm instructional models, the CBM and the MTM.

In institution D, particularly for undergraduate programme reviewed was made for documents such as timetable, programme documents, course outlines, and websites. The master timetable indicated that teaching began with lectures followed by seminar sessions. In the literature, the instructional model is referred as traditional model; however, seminar as a teaching method does not fall under the typical traditional methods. The instructional model was used to an undergraduate programme, BA Education. In addition, the programme documents indicated that the institution had

already adopted the CBM at the time of data collection. The programme documents indicated the number of credits (notional learning time) for each course. Moreover, the number of expected hours for each activity assigned to students, for example, assignments, independent study, practical hours, lecture hours and seminar hours were indicated. Furthermore, the reviewed course outlines indicate that teacher-centred curriculum design; however, the practices suggest that the integrated curriculum design was in operation at the time of this study. The course outlines had main topics and sub-topics to be covered in a particular period. There were no activities indicated in the course outlines based on the topics. Despite that, the programme documents indicated that the institution adopted the CBM; largely the MTM appeared to be the norm instructional model in the institution.

Moreover, websites in institution D indicated that the institution was strived towards producing creative people. In view of this, the application of the CBM was in theory supposed to be the instructional model in operation. This is because it is said to develop creativity and/or LLLA when it is applied. However, course outlines for the Master of Education Management and Administration (MEMA) indicated that the programme applied the Typical Traditional Model (TTM), because the course outlines indicated all allocated hours were meant for lectures. Moreover, the same was indicated in the master timetable. In contrast, as for Master of Art in History (MA.HI) programme, the master timetable indicated indeterminable contact hours; there was no indication of lecture or seminar as a session (See APP. VIII). This form of timetable suggests a typical CBM orientation. From the data presented here, three norm instructional models for institution D are revealing, namely the Typical Traditional Model (TTM), MTM and the CBM. The TTM is evident from the master timetable and course outline of MEMA programme, the MTM is evident from the BA. Ed programme. However, the CBM is evident from the programme documents, which indicated that the programmes were designed to meet the CBM standards. From manner in which the activities are presented and organised, it is reasonable to assume that the programmes operated under the MTM as their norm instructional model.

Apart from inferences made from documents, data from in-depth interview indicated that the TM was the norm instructional model in institution M and D. One *professor* participant from institution M who said, “*Mostly, I use modified lectures and lectures* (P1M, 16.1.2018) corroborates this. Another *professor* from institution M said, “*I mostly use the modified lecture. This is a lecture allowing a student to contribute through their prior understanding about the target concept to be discussed in a class*” (P2M, 16.1.2018). In institution D, interview data indicated that the norm instruction model was the TM. For example, one *professor* participant said, “*a dominant method across decades, across schools, colleges, and departments at university level has been lecturing. So maybe that is why we are even called lecturers*” (P1 SoED, March 2018). One *professor* participant expressed a similar view. The *professor* had this to say: “*Principally, lecture method is the recommended method at university level. This is the university position about teaching since the universities were created or established*”. *The mostly used method is lecture method* (P1 SoED, March 2018). From these participants’ views, the norm instructional model for institution D is TM. Despite the data showing that the norm instructional model is the TM, it should be remembered that other teaching methods were used, namely group assignments, individual assignments; project based learning which make the norm instructional model seem to be MTM.

This study was also interested to understand the norm instructional model *professors* as individuals would have liked to use in teaching and learning in higher education. In both institutions, M and D the CBM was the norm instructional model for *professors*. The *professors* believed that the CBM was more relevant than the TM in higher education institutions, more specifically in Universities at the time of this study. As one of *professor* participants from institution M said,

Well, personally I would like to teach to develop competences among learners and my colleagues. So competence-based teaching is my preferred philosophy of teaching because at the end of the day we do not just teach. The teaching has to be geared toward achieving the intended learning outcomes from our practices. Therefore, personally, competence-based teaching is my philosophy of delivery (p2 M, 23.1.2018).

Furthermore, one *professor* participant was of the view that students learn best when they are engaged in the teaching and learning processes, and when there is an interaction with the environment. The *professor's* role is to help the learners whenever necessary. The *professor* said,

My philosophy of teaching is participatory or learner centred approach, and I believe that learning occurs when a learner is engaged and when there is scaffolding so that he or she can be able to construct his or her own meaning. This happens when the learner interacts with the external environment. That is my belief... (P2 D, January 2018)

More important, a *professor* in institution D averred that students were not *tabula rasa*, and therefore, the teaching methods had to be interactive. In so doing, students could come up with something different in the teaching-learning process. In addition, students could make their meaning in the teaching-learning process. To corroborate this, the *professor* said,

I would like to involve my students ...first, my target is developing creativity. Therefore, I use discussions, and here what I mean I engage students. Students should learn how to be creative so that is my standard instructional model. That is my own style of teaching to make students creative (P1 D2, 2018)

The cited extracts seem to suggest that the participants believe in the competence-based teaching and learning should be their standard way of teaching and learning for *professors* in higher education institutions. All the *professors* from all the institutions have confidence in the competence-based teaching and learning. This implies that the CBM is a norm instructional model for individual *professors* in the higher education institutions. As it happens, the CBM is not a norm instructional model for individual *professors* alone, but it is for the institutions too despite that some of *professors* lacked awareness of the existence of the CBM in their institutions. However, some *professors* acknowledged to have at least heard about the instructional model in informal situations.

To conclude, interviews, and observations indicate that the studied institutions had more than one norm instructional models. The CBM and the MTM were reasonably

the norm instructional models. If the two instructional models were executed in an adequate manner the likelihood is that, the lifelong learning orientation would foster. This is because the two instructional models have diverse teaching methods which if implemented based on their standards may result in the development of lifelong learning attitude.

4.3 Discussion

4.3.1 Norm instructional models in HEIs

In all the studied institutions, there was more than one presumed norm instructional model. This implies that the higher education institutions use several instructional models from specifications of the programmes and other motives. This suggests further that the higher education institutions have different quality of education offered in programmes, departments, colleges, or institutions. This depends on the decision and commitment of an institution and *professors* in implementing the norm instructional model. This finding agrees with Lo (2012) in Variation Theory, which assumes that teachers are free to choose teaching and learning principles from whatever teaching and learning theory to suit their purposes. This is what really happens in higher education institutions; some departments have chosen to use the CBM as their norm instructional model while the norm instructional model is TM, more specifically MTM. The Moderated Traditional Model offers equal chances for *professors* to use teaching methods from both CBM and TM. The MTM starts with lectures followed by seminar sessions. It seems to be a combination of different theories of learning, particularly, behaviourism (Britwun, 2014; Baulo & Nabua, 2019) and constructivism (Dagar & Yadav, 2016).

In addition, *professors* from studied institutions seemed to suggest that the CBM was their norm instructional model. This implies that *professors* from the higher education institutions prefer CBM over TM more specifically the MTM. This finding is similar to that of Archer (2016) who asserts that college teachers prefer the CBM because it creates effective learning settings. Similarly, the findings are concur with those of Wonaganaa and Boachie (2018) who observe that academics have a positive perception toward the CBM in Ghana. In contrast, the findings contradict

those of Kovacevi and Akbarov (2016) who assert that *professors* prefer to use TM over CBM. This contradiction is probably attributable to conditions in which the higher education institutions operate.

Despite the efforts made by the NACTE for more than three decades and the TCU in recent years urging universities to adopt the CBM, it is likely to take decades to have full swing into competence-based teaching and learning requirements. Although, the TCU has started to ensure that all courses and programmes are prepared based on CBM criteria, the teaching and learning processes in higher education institution has more or less remained the same. Mahoney and Thelen (2010) theorise that institutions normally change in a gradual way and in an unnoticeable manner. Therefore, it might be reasonable to assert that the implementation of the competence-based teaching and learning in higher education institutions commenced without noticing even before the NACTE and the TCU proclaimed to have adopted it.

For *professors* to prefer the CBM over the MTM may be attributed to their awareness of the usefulness of the instructional model, CBM. This view is consistent with the finding of scholars (Mbarushimana & Kuhoja, 2016) who claim that the competence-based curriculum has improved the lives of the youth in Rwanda. However, the finding contrasts to those of scholars (Sanchez & Hoyos, 2014) who argue that the CBM is useful for teaching some of the subjects. In Tanzania higher education institutions, it is surprising to find *professors* seem to be pro-CBM without really having the argument that the CBM is suitable for teaching specific skills or subjects.

For *professors* in Tanzania higher education institutions to support the CBM without the argument, could be attributable to the extent to which the *professors* are informed about the instructional model and the extent to which *professors* have applied the instructional model in different contexts and disciplines. Moreover, it could be attributable to their ability to operate as transformative learners. In situations where *professors* are transformative learners, they can find the best ways of responding to

challenges relating to the implementation of the competence-based teaching and learning and the moderated traditional model.

CHAPTER FIVE

IMPLEMENTED INSTRUCTIONAL MODELS IN TANZANIA HIGHER EDUCATION INSTITUTIONS

5.1 Introduction

The previous chapter is on the findings on norm instructional models. This chapter presents implemented instructional models. The chapter presents the second part of findings from objective one: *examine the implementation of norm instructional models in selected Tanzania higher education institutions*. The findings for the objective are presented in the previous chapter and this one to reduce the length of some chapters. This chapter argues that the implementation of the norm instructional models is largely inadequate; consequently, resulting in breeds of the norm instructional models.

5.2 Indicants and perceived implemented instructional models in HEIs

To understand the instructional model that was in operation at the time of this study, the study concentrated in understanding the indicants basis on main teaching principles and other teaching related aspects. These were information banking, student shouldering the responsibility for learning, methods (teaching and assessment methods), teaching and learning environment comprising sitting arrangement, textbooks, classes-quiet/noisy and student power in the direction of a lesson. The following sections present the findings from observations and interviews. The findings are presented based institutions, M and D.

5.2.1 Main teaching principles and methods

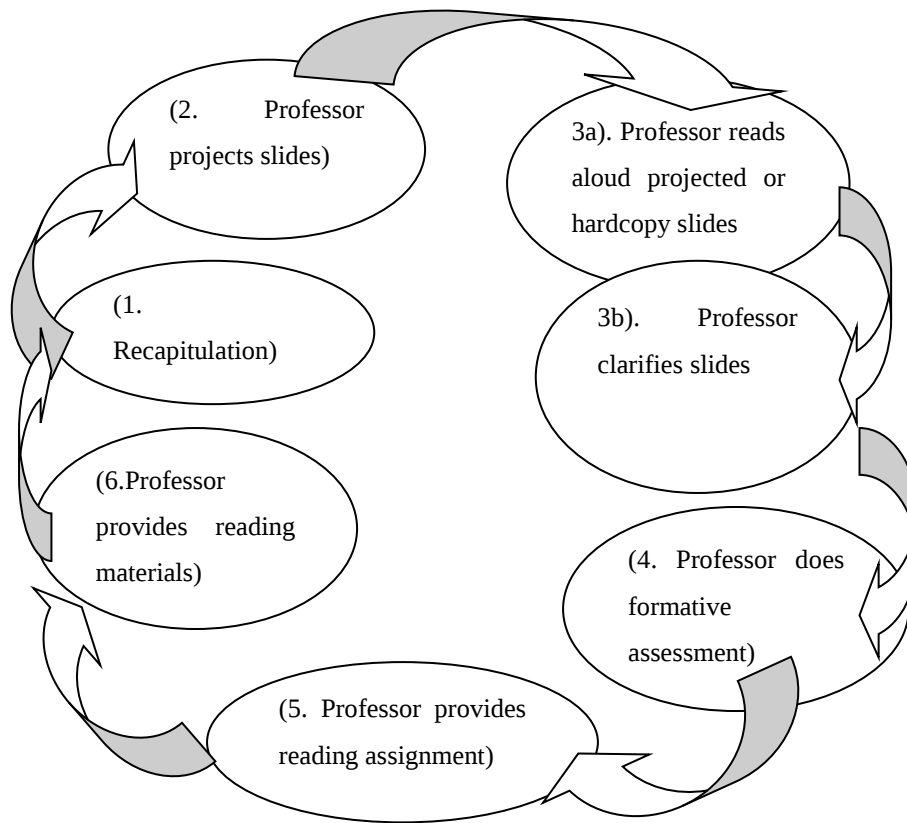
From observations in institutions, M and D especially the BED programme in M, findings indicate that *professors* used both information banking and student shouldering the responsibility for learning principles. The *professors* mainly used lecture method. In the lecture session, *professors* did a number of activities such as reading and clarifying what they prepared in a particular session. Eight out of nine cases read and clarified the contents whereas one case showed and explained to students computer parts. Three out of nine cases projected slides from which they

read the contents. Two out of nine cases brainstormed students. One case out of nine provided reading assignment for students to do after class. One out of nine cases did mundane assessment. Mundane assessment is an in-class form of formative assessment that does not involve giving feedback from student's responses. In institution M, seminar sessions were not conducted. However, students were occasionally heard talking about doing group assignments. This implies that the students did group assignments in institution M, but they did not present the assignments in seminar sessions. In institution D, BA Ed programme, the *professors* used lecture method, which was followed by seminar sessions in some courses. In the lecture sessions, ten out of ten read aloud and clarified what they prepared. Eight out of ten projected their slides from which they read the contents. Three *professors* did formative assessment in-class and they gave feedback to students. Two *professors* out of ten did mundane assessment. Two out of ten provided reading assignment for students to do after classes. The reading assignments were at two levels, students were asked to read a book/chapter or an article and were asked to search for incomplete information that a *professor* deliberately did not to provide. The findings presented are from undergraduate programmes from two institutions. The findings indicate that the implemented instructional model in was MTM, but the features of the model were presumably more biased toward traditional model.

As for MEMA a post-graduate programme in institution D, five out of six cases read and clarified the contents. Five out of six cases did in-class formative assessment. Three out of six cases provided reading assignment to students, which were to be done after classes. Despite this effort, students often did not read the book chapters or articles they were assigned to read. Moreover, a few students participated in responding to questions posed to them during group work presentations. Two out of six cases used Socratic Method. Two out of six cases used group work, which were presented in class. One out of six cases used peer teaching, and one out of six cases projected slides or contents. Concerning the MA.HI programme, the *professors* lectured for four or five sessions and the rest of the contact hours were used for listening to students' presentation. The *professors* in classes invited a presenter who

would speak for about half an hour and the rest of the class would contribute during the time meant for discussion in the same session. The presenter would send through email a draft of a presentation to colleagues a day or two before a contact hour. In this programme, all the target topics would be distributed among students for presentation. Thus, during contact hours, a *professor* would invite a presenter, and then they would invite students to comment on the presentation. After the planary discussion, a *professor* would provide general comments on students' opinions and on a presentation. From the activities in classes in the programmes, it is safer to assume that the instructional model in operation was MTM, but presumably with more features of traditional model.

This text provides a summary on teaching processes. A *professor* may or may not provide reading materials and in teaching, they may or may not recap the previous session. After that, they may or may not project slides. Furthermore, the *professor* reads aloud and clarifies from projected slides or hardcopies. Then, the *professor* may or may not do formative assessment and finally, the *professor* may or may not provide reading assignments. The cardinal function of *professors* across institutions and programmes is that of reading aloud and clarifying points. Moreover, in institution D, projection of slides seems to be a common practice, which signals that students in the institution are usually more engaged than are in institution M. Thus, if students in institutions D have more mental processes in classes, they have better chances of developing some of the lifelong learning attitudes. To add, activities such as reading assignments are optional. Given that the assignments have a better chance of developing lifelong learning, the classroom practices seem to narrow down the room for the development of lifelong learning attitude among students. Figure 5.1 illustrates this information.



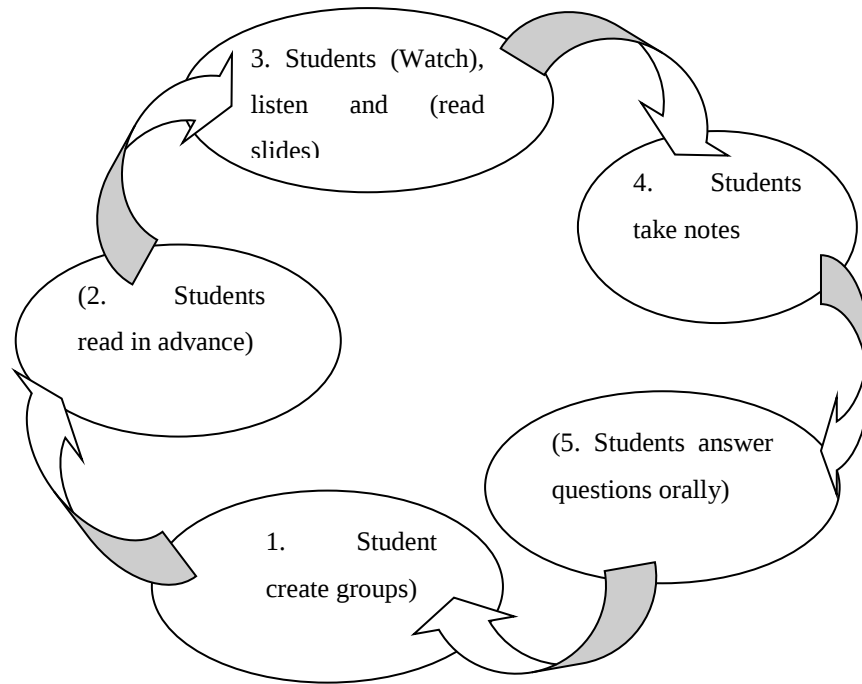
(x....) means optional activity in the teaching process

Figure 5.1: Professors' teaching process schema

Source: Synthesis of findings from observation, 2018

On the part of students, they may or may not form groups; also, they may or may not read in advance before lecture session. The next stage may or may not involve students watching video or reading slides, but they must listen to the *professor*. After listening, they take notes. Later, they may or may not be required to answer some questions orally when the *professor* wants to check their understanding on what they teach.

Figure 5.2 illustrates the information.



(x...) Means optional activity in learning process

Figure 5.2: Students' learning process schema

Source: Synthesis of findings from observation 2018

For courses, which had seminar sessions, the students were given seminar questions well in advance and were given topics to present this practice was common for post-graduate programmes. The students were supposed to work in groups to prepare a scholarly paper and present it in front of seminar members (peers). The presentations had two main patterns that led to the creation of seminar models that operated in institution D. The first pattern involved the presenters delivering information whereas the rest of the class and a *professor* listened attentively. Thereafter, the seminar participants were allowed to ask questions and to provide comments on the presentation. The *professor* provided general comments on the presentation when the seminar participants exhausted commenting on the same or when the time for the session was too little to proceed with the session. The seminar model that followed this pattern is referred to as passive-active seminar model. This seminar model has two subtypes, namely presenter-participant centred seminar model and presenter-*professor* centred seminar model. In the presenter-participant

centred seminar model, the presentation is made while participants listen attentively. Then, the seminar participants ask questions and comment on the presentation. At the same time, the presenters respond to questions, receive comments, and/or argue for or against the comments. This implies that there is an interaction between the presenters and seminar participants. This seminar model was used also in the MA.HI one of post-graduate programmes hosted in the department of History. Figure 5.3 shows the information presented.

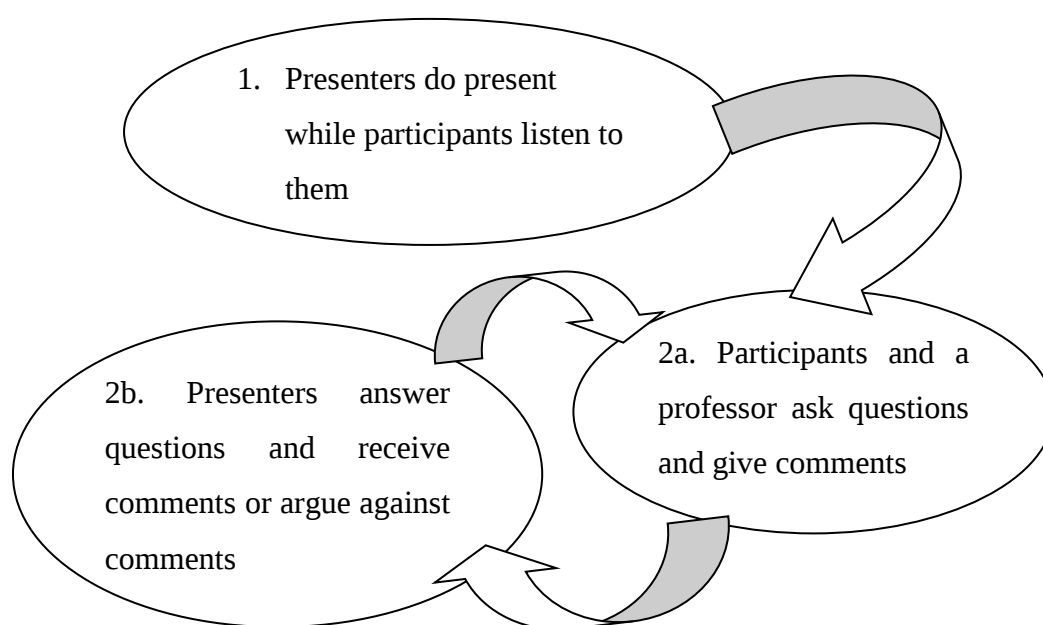


Figure 5.3: Passive-active seminar model: presenter-participant-centred seminar model

Source: Observation findings analysis, 2018

The presenter-*professor* centred seminar model involves presenters having a heated debate with their *professor* while the rest of the class watch and listen attentively through the session. In this seminar model, a *professor* uses a Socratic Method to tease the presenters or rather to test their knowledge on a topic in question. The seminar model was used in MEMA programme, one of post-graduate programmes in institution D. Figure 5.4 illustrates this information.

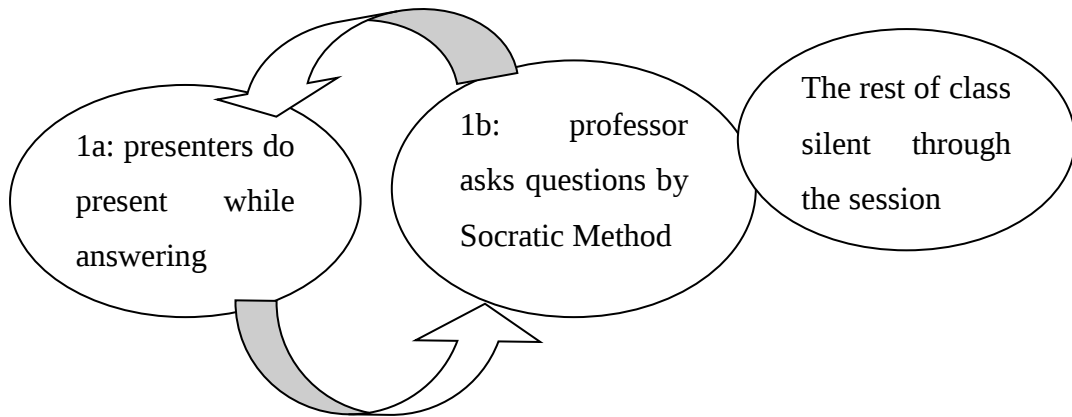


Figure 5.4: Passive-active seminar model: presenter-professor centred seminar model

Source: Observation findings analysis, 2018

The second pattern involves a *professor* and seminar participants chipping in the presentation at any point in time. A *professor* or a seminar participant (student) can ask a question when the presentation is in progress. In most cases, the *professors* use the Socratic Method to help the presenters discover their weaknesses and improve accordingly. Therefore, the presenters are asked questions as they respond until they realise that they are wrong. Having realised their misconception, they change their conception and proceed with the presentation until participants or the *professor* intervene through systematic questions. However, a few *professors* use Socratic Method during seminar sessions. Second, a *professor* allows the rest of the seminar members. The seminar model that follows this pattern is referred to as active seminar model. This seminar model was used in the undergraduate programme in institution D. Figure 5.5 shows the active seminar model.

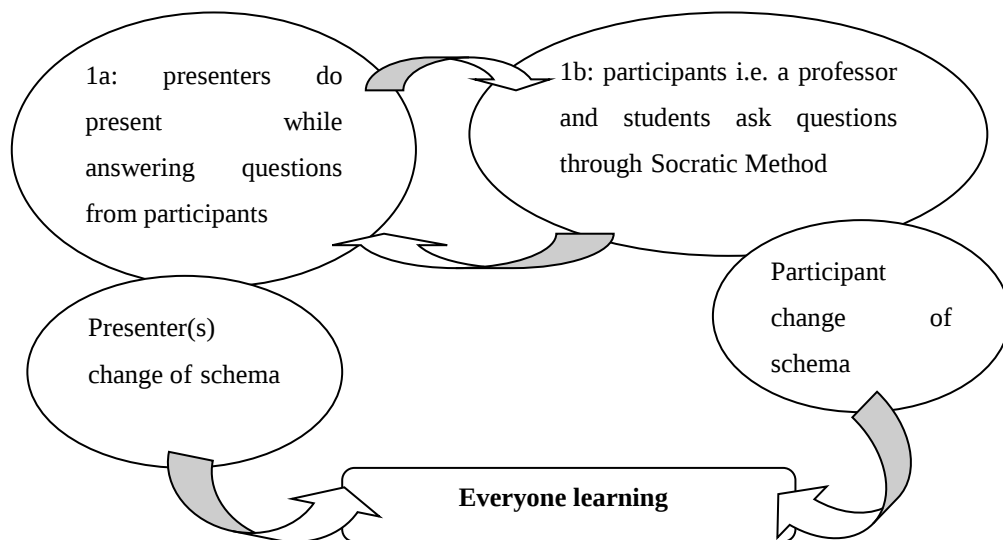


Figure 5.5: Active seminar model
Source: Observation findings analysis, 2018

Figure 5.5 shows the presenters responding to questions from seminar participants during their delivery. The seminar participants ask questions through Socratic Method to help the presenters correct the wrong information presented. The figure also shows the perceived effect of the intensive interaction as a change of schema of the presenters or seminar participants, which ultimately results in everyone learning.

5.2.2 Recurring utterances in classes

During observation a researcher does not only see things, but also they hear things that are related to the focus of the studies. These things heard cannot be ignored because sometimes they act as explanatory data. In principle, whatever a *professor* does or says in class has certain effect(s) to the learners (students). The effects can be negative or positive to students. In the eye of the researcher, the utterances were directly connected to the hidden curriculum, which means the students learnt from them (utterances). It appears sometimes *professors* were obliged to say things that they did not planned to observe in classes, but it happened because of their personal observations and interpretations. For example, a *professor* would say “*I want someone to volunteer to read a book chapter; I will award them some marks.*” “*Work hard to pass the examination.*” The statements reasonably reflect the TM. Such statements in classes, on one hand motivated the students to volunteer or work harder

in their studies. On the other hand, the statements eroded the development of lifelong learning attitude. This is because from the utterances the subtle message is that studying has to be rewarded. Therefore, some of recurred utterances had negative effect to the development of lifelong learning attitude in higher education institutions. The voices and the negative effects of the same will be presented in the next chapter of this thesis on the section relating to reading culture. Since the recurring utterance seem to have negative effects to the development of lifelong learning attitude, it is reasonable to assert that the *professors* have to be wary of what they do and say in classes. This could help in mitigating the negative effects of what *professors* do and say in classes.

5.2.3 Assessment methods

In both institutions, M and D, the assessment moved from formative to summative assessment. The students did group and individual assignments as part of formative assessment. Further, students did tests the results of which were combined with those of group and individual assignments. For undergraduates and for a post-graduate programme, MEMA in institution D, the formative assessment was followed by summative assessment, university final examinations. Moreover, it seems in the both institutions the *professors* used authentic assessment. This was the assessment that involved doing really tasks to produce a product. In essence, the authentic assessment stood a better chance to develop lifelong learning attitude. For example, students were asked to write standard academic papers as individuals or in groups. These activities by no means developed some of lifelong learning attitudes such as ability to learn independently and ability to evaluate information. In contrast in a post-graduate programme, MA.HI the students had formative assessment without final university examinations. In the formative assessment, the students were required to write publishable papers on chosen topics, and then the papers were submitted to the course instructor. Then, two *professors*, an instructor and an appointed *professor* evaluated the papers. The grades from the two *professors* determined whether a student failed or passed the course. This form of assessment is authentic, and it is typical of Competence-Based model. However, the idea of fail or pass would erode the development of lifelong learning because students would tend

to concentrate on passing exams rather than developing the real interest in knowledge. To add, the students in the programme appeared to be all the time pre-occupied with a pile of assignments. The students complained that they did too much in the programmes, and they were of the view that they needed more time to accomplish the programme.

5.2.4 Curriculum designs

In both institutions and in all programmes, the curriculum designs seemed to be integrated curriculum design. This is because most of what happened in the institutions was affiliated to the features of integrated curriculum design. The features include decisions from a *professor* and those from students. In this respect, a *professor* provided questions for group presentation; this was an initiative from a *professor*, but students had their own initiatives to work on the assignment to meet submission deadlines. Additionally, *professors* taught whole classes; for example, in lecture sessions, used individual assignments and group assignments, for example in seminar presentations. This curriculum design signal the use of MTM in the institutions. Moreover, if students effectively implemented the assignments provided, they would result in the creation of critical and creative thinkers. Critical and creative thinkers are likely to be developed because the process of writing and organising papers involves a lot of analysis, synthesis, evaluation and creation. Some of these competencies are lifelong learners' competencies and thus the design stand a better chance of developing lifelong learning if implemented properly.

5.2.5 Sitting arrangement

In both institutions, the students sat in rows perhaps because the traditional model came first as an authentic instructional model in the institutions. In view of this, one would assume that the implemented instructional model in the institutions was TM. However, in institution D, the sitting arrangement was in the circle in the post-graduate MA.HI. The *professors* used this sitting arrangement probably because the students were very few in class. Because of this, *professors* conducted classes in offices because the seminar rooms had seats fixed and which were in rows. Some *professors* who used these seminar rooms with fixed chairs and tables in rows,

attempted to use interactive methods, such as discussion. This was possible because students would discuss in groups. This might be because having fixed chairs in rows is not a big barrier in using interactive methods. Therefore, the MA.HI sitting arrangement was typical of the competence-based teaching and learning. In some situations, students would discuss for as long as half an hour, but they would be reluctant to give feedback. This happened in the MEMA programme though the same programme was active when asked information, which is already taught, but the same were not proactive in providing information not presented to them by a *professor*. This implies that even if there are moveable chairs and tables it is not always possible to have students interactive in classes.

5.2.6 Textbooks

In both institutions and in all programmes, students used a variety of textbooks. However, it is said the books were too old and few; thus this was a challenge. In view of this, students were exposed to a variety of books in both institutions. This was a feature of Competence-Based Model.

5.2.7 Classes: noisy or passive

In institution M, one case allowed students to discuss in less than five minutes and the students were asked to provide responses. In view of this, the class was noisy for five minutes and in the rest of the remaining time of one-hour session, the students listened attentively to a *professor*. This indicates that the instructional model was TM. In institution D in an undergraduate programme, specifically BA Ed programme all lecture sessions were “passive,” whereas most of seminar sessions were passive-active. The passive-active sessions involves students listening attentively to presenters and ask questions or comment after a presentation. In MEMA programme, some classes were “passive” while others were passive-active. In contrast in the MA.HI programme, the classes were mostly passive-active. In passive-active classes, a student presented for about half an hour and then the rest of the class would ask questions and comment on the presentation made. Thus, in institution D, the indicative instructional model is MTM in classes.

5.2.8 Lesson direction

In both institutions and in all programmes, the lesson direction was determined by a *professor* who had powers to decide what the students should learn and how. The students had little room to determine a lesson direction though it scarcely happened in seminar sessions for some courses with the sessions. Again, given the presence of seminar session, the indicative instructional model is MTM. Further analysis of data from interviews and synthesis of data from all methods of data collection is needed to affirmatively conclude on the implemented instructional models in the institutions. The text below presents data from interviews.

Interviews revealed that *professors* in institutions M used modified lectures, lectures and peer teaching. It seems *professors* in the institution used traditional and non-traditional teaching methods. In the same way, in institution D, the main teaching method was lecture method. To support this, *professor* participants had the following to say:

Mostly, I use modified lectures and lectures as we have seen these are different.... Sometimes we use peer teaching; I think it is important as it involves one student presenting to others. Students have the opportunity to ask about the areas of difficulties, and in peer teaching, the professor becomes a facilitator, a listener, and a learner in that particular area. I normally use peer teaching and project related methods (P1M, 16, 1.2018).

Another *professor* from institution M said,

I mostly use the modified lecture. This is a kind of lecture that involves pre-assessment of the concepts to be discussed in class. It is typically different from the traditional lecturing whereby a teacher enters in a class and talks about what they have prepared from the beginning to the end without allowing a student to say anything. In a modified lecture, we do some sort of facilitation; you pose a question you allow students to discuss in small groups. And then within one minute or two minutes you receive the responses; this gives you the understanding of the learner, the schema of the learner - the structure the learners have in relation to things that you teach. This is the dominant method that I always use (P3M, 16.1.2018).

Furthermore, a *professor* from institution D believed that interactive methods were possible to apply in small classes, but not in large ones. Using interactive method in large classes was ineffective. The *professor* had this to say:

...usually, in a small group it is possible to use interactive methods, or a combination of methods such as lecture, discussions, questions and answers and so on. For large classes, lecturing dominates. Some of classes have more than a hundred students, which is a bit manageable using interactive teaching methods. However, it is impossible to use the methods in a class of four hundred and above students. In such a class, if you attempt to use the methods you waste a lot of time and the participation rate in class activities will be low; thus not effective (p4 SoED, 2018)

Further, another *professor* from the School of Education was of the view that the teaching and learning environment was not suitable for the CBM. However, she believed that the instructional model was the best to apply in higher education institutions, but large classes were a setback in applying learner-centred methods in higher education institutions. This is supported by the explanation she provided:

The teaching and learning environment does not favour much using the instructional model, really, because I am teaching at the university, and you find that it is hard to implement learner-centred approach to teaching and learning. First, it is because classes are too big. I have a class of about 1600 students. From this number, you can see how difficult it is. I cannot practice all things that can be practiced in the learner-centred approach to teaching and learning. Moreover, I cannot successfully implement the competence-based assessment. Also, when I teach, I cannot reach many students; I can only reach a few of them. Therefore, too big classes are one of the constraints. Given that in universities, we are time bound in whatever we do, for example, ten weeks to ensure that you provide assignments. In ten-week time, you have to provide, mark, and return the assignments. The assignment help students see their progress and move forward. Additionally, we do not have many resources, for example, the library. Despite having a new library, it is not completed. We believe when it is completed, students will have access to library facilities such as e-books and Information Communication Technology (ICT) facilities. Through it, students will be able to do independent study. Currently, students depend a lot on lecturers as sources information (P2 SoED, February 2018)

The extracts cited above reveal that *professors* in institution M appear to use mostly modified lectures in classes while those in institution D have the view that it is difficult to apply interactive methods in large classes such as those found in universities. Importantly, it is difficult to carry out authentic assessment in large

classes as well. Though *professors* used authentic assessment, the quality is unlikely to be guaranteed. Nevertheless, *professors* seem to have a positive attitude toward the CBM methods (interactive model).

The findings from in-depth interview indicate that the instructional model that was applied in the MA.HI programme was as old as the studied institution. The instructional model was Traditional Model that moved from lectures to seminar sessions. One retired *professor* who worked on contract basis had this to say,

The mode of teaching in this university is not new. It has been taught in the same way since when I was a student in this university. As such, the teaching of this programme starts with lectures in the early days, and followed by seminars. The only changes that have come up maybe they include the use of Information Technology (IT) (P4 HI, COHU, and March 2018).

Before seminar, the presenter has to circulate his or her paper one or two days before a seminar day. In which case, each student has to read a paper and write a response paper. The readings we use are on a specific topic. The purpose of doing so is to develop skills on: fast reading, ability to search information, presentation skills and speaking skills. With regard to information search, students develop skills in searching oral and archival information. In my class, actually they are given a task to search oral information, and then, create a historical account from the same (p1 HI, 06.2.2018).

Another *professor* was of the view that in MA.HI programme there was no lecturing or teaching, but rather there was learning. Normally four or five lectures are conducted at the beginning of the semester, and this is followed by a series of presentations from students in the presence of their *professors*. The *professor* had this to say:

If you want to see teaching and learning in this programme, you cannot see it is because we offer lectures in the first five sessions. After there, we do not lecture. We meet with students for presentations and discussions. So there is no teaching in this programme, but rather there is learning. The instructional model we are using is a learning model (P2 HI, COHU March 2018).

Furthermore, the main assumptions underlying the teaching in the graduate programmes are at three levels. These levels are: students have prior knowledge;

students differ in terms of knowledge; and the last assumption is that instructors are facilitators. He pinpointed three levels assumptions in operation in teaching graduate students in the department. In this respect, the *professor* said,

The first level assumption is that students have prior learning that is to say they have competences. They are not empty headed. As such, they can learn on their own. Second level assumption is that students are different in terms of knowledge, skills and experiences. Therefore, they can help each other when they learn through interaction. That is learning from each other. Third level assumption, instructors play a facilitator's role. The role of instructor is scaffolding after having identified the zone of proximal development (HoD DHI, 06.2 2018).

In addition, the programme MA.HI used formative assessment. This assessment was in contrast to the university standard ways of assessing students, which is use of formative and summative modes of assessment. Instead, the *professors* used authentic and formative assessments. To recite, students had to write papers at publishable standards in a journal. Two *professors* from the department graded the papers after collegial review. As one *professor* said,

Students write publishable works which at the end of the day will be assessed from their works; we actually violate the university examination regulations because students write papers and they are assessed based on their papers. The students write the papers, which we review and do the grading. We are very demanding to promote quality; we do not want to compromise quality (P3 HI COHU, March 2018).

Based on the comments from the above *professors'* extracts, it is apparent that there are mixed views on the implemented instructional model in the programme. Some *professors* think that the instructional model has not changed, but the use of information technology is something new. However, since the *professor* who holds this view agrees that a few lectures are usually conducted, followed by a series of seminars, this claim does not seem to hold true. Some *professors*, think that the instructional model has changed because a few lectures, at least four or five are conducted followed by a series of seminars. Moreover, some of the *professors* hold a constructivist view about how people learn; thus, they do not lecture because they

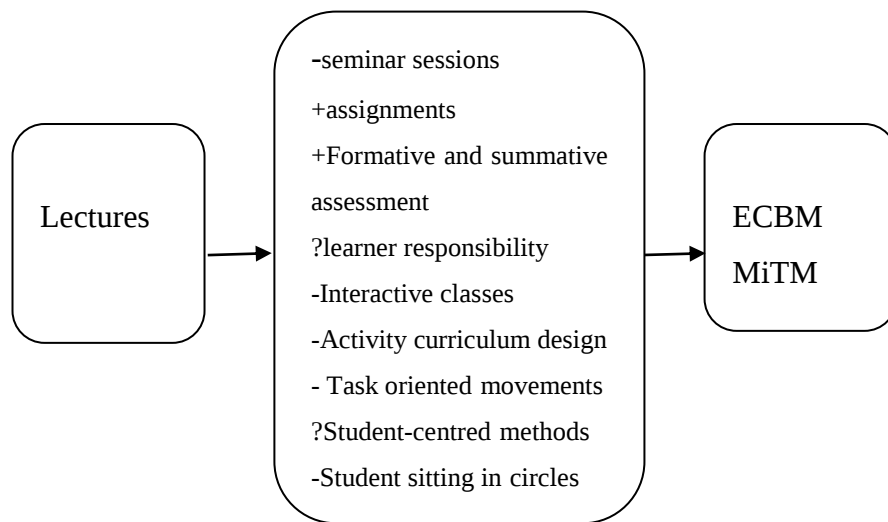
believe that students have experience and they can learn independently and through peer review (teaching).

In addition, it is revealed that the mode of assessment does not follow the university examinations by-laws. The studied programme used authentic and formative assessments to assess student learning to promote quality of education offered in the department. In view of the comments, the instructional model that was in operation in this institution was the CBM, more specifically CCBM. The next section provides an overview on the implemented instructional models as drawn from the understanding of learning environment.

From a synthesis of the findings of this study, it appears that the core function of *professors* in higher education institutions in classes is to read aloud and clarify. This suggests that the main principle of teaching is information banking. Furthermore, *professors* provide reading assignments to students for presentation or for creating ability to learn independently. In view of this, *professors* knowingly or unknowingly use strategies for promoting lifelong learning in higher education through providing reading assignments. Nevertheless, students appear to be not keen with reading academic texts. From this, it is reasonable to assert that to develop lifelong learning in higher education institutions it is important to cultivate the reading culture among students. Importantly, *professors* have to be aware that some of their deeds or utterances in classes erode the culture of reading. At this point, it is important to note that because the lecture to seminar mode of delivery involves the use of lecture method followed by other methods such as group and individual assignments. It is reasonable to conclude that the instructional model is MTM.

In summary, the teaching process in institution M in theory moves from lecture to a stage characterised by absence of seminar sessions in all courses, interactive classes, activity curriculum design, task-oriented movements, and sitting in circles. The teaching process is also characterised by very rare student taking responsibility for learning and very rare use of student-centred methods. Further, the learning environment is characterised by the presence of formative and summative

assessments. This learning environment culminates in the instructional model referred to as Elusive Competence-Based Model (ECBM) or Mild Traditional Model (MiTM). Figure 5.6 illustrates this information.



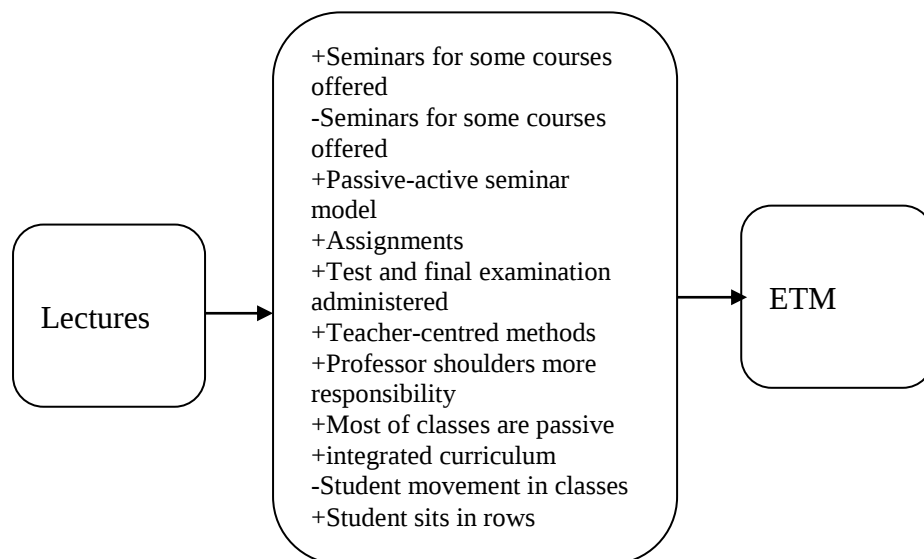
- + means presence of
- means absence of
- ? Means very rare

Figure 5.6: Implemented instructional model in institution M

Source: Observation and interview findings analysis 2018

In institution D, three programmes were studied, namely BA. Ed, undergraduate programme. The MEMA and MA.HI were post-graduate programmes. In summary, in the BA Ed programme, the teaching moved from lecture and later it was characterised by the presence of seminar sessions for some courses; the use of passive-active seminar model and the use of assignments, namely individual and group assignments. Other characteristics included the use of formative and summative assessment; the use of teacher-centred methods; the *professors* retaining all the authority in the class; passive students' participation; the use of subject matter curriculum design and students sitting in rows. Further, no movements of students in the class; *professors* at some point shouldered more responsibility in the teaching-learning process; most of the classes were passive and students sat in rows.

Moreover, in some courses, seminars were not conducted. The characteristics seemed reasonable term the instructional model implemented as the Elevated Traditional Model (ETM). Figure 5.7 illustrates this information.

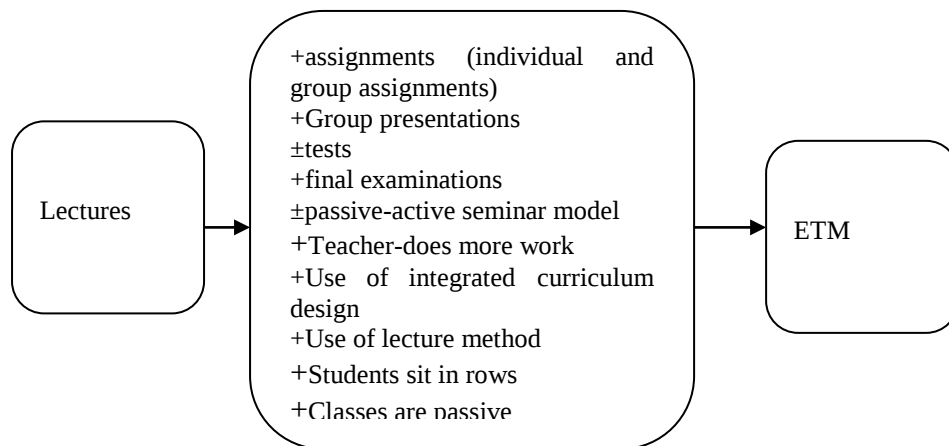


- Means absence of
- + means presence of

Figure 5.7: Implemented instructional model in institution D: BA Ed programme

Source: Observation and interview findings analysis, 2018

In the MEMA programme, teaching moved from lectures to other teaching methods that created enabling learning environment. The learning environment was characterised by providing assignments (individual and group presentations), assignments which may or may not be accompanied with tests and the use of summative assessment (final university examinations). Other characteristics include the presence or absence of passive-active seminar model, the teacher commanding more powers in the learning process, the use of integrated curriculum design, the use of lecture method, students sitting in rows and having passive classes. The features make it reasonable to assume that the implemented instructional model is ETM. Figure 5.8 illustrates the information.



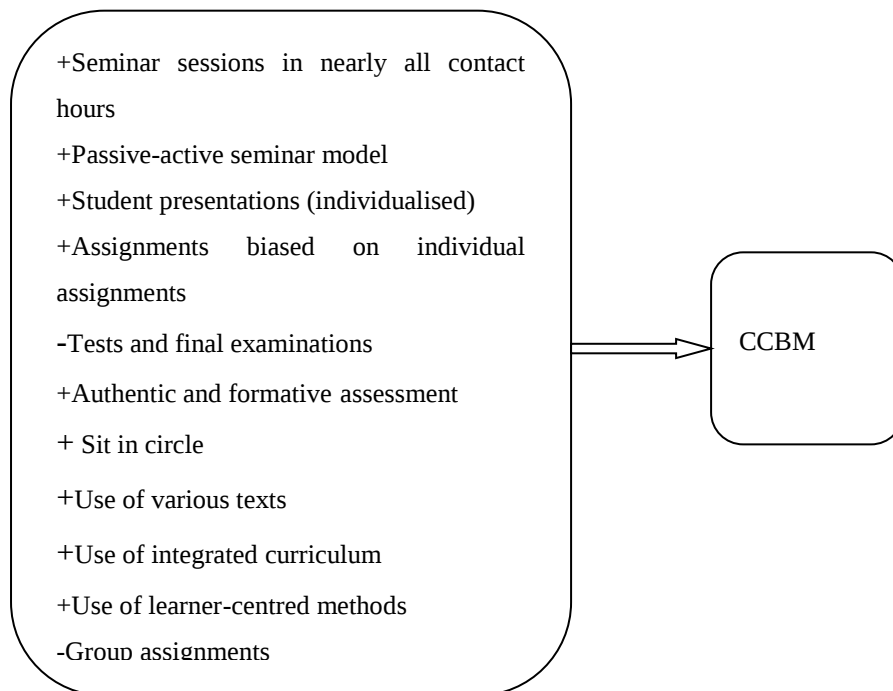
+ Means presence of

± Presence or absence of

Figure 5.8: Implemented instructional model in institution D: MEMA programme

Source: Observation, document and interview findings analysis, 2018

This text presents the implemented instructional model for the MA.HI programme in institution D. The implemented instructional model was characterised by the use of seminar sessions for learning; the use of student presentations as a dominant way of teaching and learning, focused on individual assignments as a way of learning among students and the absence of tests and final examinations, but the presence of authentic assessment and formative assessments. Further, students sit in circles; the use of various resources; the use of integrated curriculum design; and the use of learner-centred methods. The characteristics culminated in the implemented instructional model referred to as CCBM. Figure 5.9 illustrates this information.



- Means absence of
- + Means presence of

Figure 5.9: Implemented Instructional model in institution D: MA.HI
 Source: Observation and interview findings analysis, 2018

5.3 Discussion

5.3.1 Implemented instructional models in HEIs

Most of programmes in the institutions did not apply the norm instructional models to the expected standards. This implies that there is a gap between theory and practice at institutional and individual *professor* levels in implementing norm instructional models. This finding is similar to those of other scholars (e.g. Major & Mangope, 2012; Jabbour, 2013; Kavindi, 2014; Luambano, 2014; Mtitu, 2014; Torres, Brett & Cox 2015; Plessis, 2016; Kazen & Soleimani, 2016; Kovacevic & Akbarov, 2016; Nzima, 2016) who opine that teachers use TM instead of the CBM. Further, the findings are consistent with Lindgren's (1959) in the teaching and learning theory propound that teacher usually use traditional method because of values they have about teaching. The finding implies further that humankind own set standards are not always realised to the already established standards. For example,

professors in the context of Tanzania know that they would provide quality education if they use the CBM, but most do not do so. This implies that the intended educational outcomes such as developing lifelong learning attitude among graduates from higher education in Tanzania may not be achieved. The findings in Chapter Six of this thesis corroborate this observation. Surprisingly, the findings cited are disagree with those of De Guzman (2016) who reports that teachers in Philippines implemented the CBM adequately as a standard (norm) instructional model. This implies that several factors culminate in the theory practice gap in implementing the CBM which in some contexts is non-existent. De Guzman's study findings are similar to those in the MA.HI graduate programme in this thesis which show that *professors* by-and-large implemented the CBM in the studied programme. This implies further that political will and commitment are some of the most important aspects in the implementation of educational innovation. Further, if most of the programmes did not implement the instructional models as expected, this means lifelong learning attitude did not develop to the due degree for a particular instructional model.

Indeed, the generation of implemented instructional models is based on lack of some of the features that are in the norm instructional models. This implies that from these circumstances, *professors* do not real implement some of the aspects of the norm instructional model. Importantly, the ECBM is biased toward information banking and rarely on shouldering responsibility for learning among students. This implies that there is an application of different principles of learning from different theories of learning. This finding is similar to the assertion by Lo (2012) that no single theory can explain all the learning situations in a classroom setting. In view of the application of the ECBM, the development of lifelong learning attitude among students under the ECBM is gradual as shown in Chapter Seven of this thesis.

The curriculum design for studied Tanzania higher education institutions was integrated curriculum. This implies that the curriculum design aligns with the norm instructional models for institutions and for the *professors*, which are CBM and the MTM. However, the curriculum was too loaded with contents to cover if one used

active methods. Entwistle (2007) cites content as one of the factors influencing teaching and learning in higher education. This lack of balance between the curriculum design and the instructional model in operation might result in gradual or deterioration of lifelong learning attitude in the higher educations in Tanzania as shown in Chapter Seven of this thesis. This is likely to happen because *professors* are likely to avoid using active method in teaching and learning to cover the contents in the course outlines.

Lecture and group assignments were the mainstream teaching methods in the ECBM. However, group assignments were not presented in the seminar sessions. This implies that any other teaching methods apart from these are optional and rarely used. However, the group assignments are strongly recommended in developing lifelong learning attitude among students. From this method, students learn from each other through interaction in the process of paper preparation in-group discussions. This method seems to be effective when every group member is active in searching for relevant (needed) information and is highly motivated to learn, otherwise the method would leave behind many learners. Thus, when learners are not committed and motivated to participate effectively in-group assignments; the learners would go through the higher education institutions with less developed knowledge, skills, and lifelong learning attitude. This is the case in the studied institutions, most students do not participant in group assignments; thus most likely lifelong learning grows gradually or deteriorates (as support in Chapter Seven).

In this ECBM instructional model, the assessment methods are formative and summative coupled with authentic assessment whose rigour is however questioned. This instructional model may be referred to as MTM because it does not solely use formative assessment as recommended in the CBM, but in varied degree, it combines the forms of assessment from both instructional models. In addition, students have no room to present their works to colleagues and receive inputs to learn from them and improve their works. The findings are similar to those of other scholars (Rahman, Hanafi, Mukhtar & Ahmad, 2013) who report that teachers used traditional assessment because they were unfamiliar with the CBM and had multiple

interpretations about it. Since authentic assessment is questionable and since it is assumed to develop lifelong learning attitude, the likelihood is that lifelong learning attitude does not develop through authentic assessment in studied institutions.

Moreover, in this instruction model, students sat in rows, classes were quiet most of the time and the *professor* determined the direction of a lesson. Baula and Nabua (2019) in explicating behaviourism indicate that students listen to the teacher attentively in classes. This further implies that the ECBM has some features that are typical of the TM. This finding is in contrast with the MNMA (2014) curriculum draft, which shows that institution M has fully adopted the CBM. This implies further that most of the CBM features lack in the selected institution; thus, making the implemented instructional to be the ECBM. This implies further that the instructional model may not result in the development of lifelong learning attitude since the CBM is not implemented in an adequate manner.

As for ETM, it is a TM breed, which in this thesis is referred to as MTM. The generation of the ETM was based on some courses lacking seminar sessions and running passive-active seminar sessions; instead of conducting active seminar session. Beyond that, the ETM used both information banking system and shouldering responsibility for learning principles. This implies that the ETM has some characteristics drawn from both the TM and the CBM. These findings are in line with the findings in a study by Lo (2012) who asserts that teachers are free to choose teaching and learning principles from any teaching and learning theories. In view of theories of learning, the ETM appears to borrow much from behaviourism (Baula & Nabua, 2019) rather than from constructivism (Dagar & Yadav, 2016) theory of learning principles. This is because some courses had no seminars sessions and other courses had seminar sessions. The seminars were inclined towards behaviourism principles of learning such as students being attentive (less time for interaction) and *professors* punishing learners who misbehaved.

In this instructional model, the curriculum design was integrated. This implies that passive and active learning strategies are in operation. The curriculum design

matched the instructional model applied in the programme. This curriculum design is appropriate for developing some of lifelong learning attitude if implemented in adequate manner. In addition, the lecture to seminar mode of teaching and learning has been assumed to be a TM (McLan & Kenny, 2015). However, in this thesis, the mode of teaching and learning is referred to as MTM. This is because the methods used in the instructional model are not traditional methods *per se*; the methods are a combination of instructional models.

In the ETM, the methods that were applied include the lecture method, individual assignments, group assignments and project based learning, the latter was very rarely used. This implies that various teaching methods are used in the instructional model. However, the rigour of group assignments is highly questioned despite being assumed to develop LLLA. Again, this implies that the *professors* borrow principles of teaching and learning from both instructional models and theories of learning, behaviourism and constructivism.

Furthermore, two out of eight or four student presenters were active in responding to questions in the presentations. This implies that the participation rate among students in-group assignment is very low. This in turn deprives students the opportunity to learn informally from peers in informal educational settings. In this way, the lifelong learning orientation development is restrained. Additionally, the project-based learning is very rare, and therefore, the development of lifelong learning attitude has little room.

This instructional model used authentic assessment whose rigour was highly questionable because of large numbers of students in class. This implies that *professors* assess students' assignments superficially and thus the likelihood is that the quality of feedback to students is affected. In a situation whereby, the rigour of authentic assessment is questionable, contradicts the research model, which assumes that it (authentic assessment) contributes in developing lifelong learning attitude. This means that if the authentic assessment is weak; then, the likelihood that there is poor development of lifelong learning attitude among students.

Moreover, formative and summative assessments were used sequentially in this instructional model. This implies that the instructional model uses a combination of assessment modalities from two different models CBM and TM. This finding is in agreement with Lo's (2012) assertion that teachers are free to choose principles of teaching from whatever theory provided they are effective. While both reflective teaching and heavy investment in teaching technologies in Tanzania higher education institutions can make interactive classes possible in large classes, authentic assessment might need adequate number of *professors* to make it a reality. In that regard, commitment and high motivation to job alone may not be a feasible strategy towards implementing authentic assessment. Because of this plain truth, partly shadow assistant to *professors*² run higher education in Tanzania, especially in formative and summative assessments, which are always characterised by tight deadlines, which some *professors* may not be able to meet without the help of shadow assistant to *professors*.

In relation to learning environment, students sat in rows, classes were not noisy and the lessons were not based on students' interaction, but on the *professor's* decision. However, students used various books to learn. This implies that the learning environment is more biased toward TM. This further may suggest that *professors* used more behaviourism principles of learning (Baulo & Nabua, 2019). From the features of learning environment, the constructivism was less used (Dagar & Yadav, 2016). Thus, the CBM aspects largely lack in the ETM. The learning environment reflects the MTM because there are huge lecture theatres for lecture sessions and small rooms for seminar sessions to facilitate interactive learning after lectures. Despite this, the behavioural model seems to dominate and thus the development of lifelong learning is likely to be at stake.

The CCBM was a breed from CBM, which tasked students to do as many individual assignments as possible through the semester. This implies that students have no

² Shadow assistants to professors are people in professors' families or people trusted by a professor to help them with marking tests and examinations without the notice of the institution in which the professors are employed on permanent or on contract terms.

time to learn from each other in informal settings through group discussion because they are too busy with individual assignments. Therefore, they suffer from shortage of time to discuss academic matters in groups. Though all contact hours are meant for seminars, the seminar model used in the instructional model is passive-active seminar model, more specifically presenter-participant-centred seminar model. This implies that students meet in formal settings to discuss academic matters. The finding agrees with that of other scholars (Xing-ju, Lin & Gui-feng, 2013) who contend that seminar method is better than the use of typical traditional lecture method. However, to yield better results in test scores and in developing ability to plan for one's learning and creativity, the combination of the two methods is recommended. According to Xing-ju *et al.*, (2013), the instructional model does not develop some of the attitudes of lifelong learning, and thus, it is likely that this instructional model does not develop some of the lifelong learning attitudes as shown in Chapter Seven of this thesis.

In addition, *professors* in all programmes emphasised on passing examinations in classes. This implies that in the education context whereby students concentrate more on earning grades, the message is that studying is useful when there is examination. In this situation, development of lifelong learning attitude suffers because deep inside the students' subconscious mind, the seated message is that learning is for passing examination and not for obtaining knowledge and solving problems in their personal and community life. In this situation, it is likely that as a nation we create a society and individuals who learn only when they have examination to do. This is contrary to the Tanzania 2025 vision of creating an educated and learning society.

In this instructional model, the principles used were two, namely information banking and student shouldering the responsibility for learning. However, shouldering the responsibility for learning to a student was dominant. This implies that in the CCBM, students learn independently and they give information to each other during contact hours through presentations instead of depending upon the *professor*. This instructional model is similar to the learning model reported by other

scholars (Rogoff, Matusov & White, 1996) who talk about child-run instructional model. In this instructional model, a child is at the driver's seat in the learning process. The instructional model links schooling to community activities. The CCBM prepared students to write publishable papers for their grading. The skills made the learners develop strong communication skills, which are important in providing and disseminating information in society and in their future jobs. The instructional model could be effective in developing lifelong learning attitude; however, its efficacy is likely to suffer from students' mission to survive in the education system.

Ironically, in the instructional model the curriculum design was integrated. This implies that the curriculum design does not align with the norm instructional model in operation favouring the use of learner-centred methods. The imbalance between the curriculum design and the instructional model in operation is likely to affect its implementation. At times, because of the imbalance, the students in this programme appeared to be stressed all the time with loads of presenting topics. The tendency of students of being hectic with presentations dilutes deep learning and correct interpretations of the philosophy behind the instructional model, which is developing lifelong learning orientation among learners. Jabour (2013) avers that one of the drawbacks in implementing CBM in Lebanon was the use of standard curriculum and examinations. Moreover, this implies that lack of alignment of some aspects impedes realising the intended learning outcomes in the education system.

In the instructional model, project-based learning and individual assignments presentations were the commonest teaching methods. Other methods were study tour, guest speaker, and lecture method; the latter was rarely used. This implies that most of the methods used in this instructional model are active methods. Under normal circumstances, the methods are expected to develop LLLA. As Cropley and Knapper (1983) assert, project work and the use of students as learning resources promote LLLA. Indeed, the use of seminar method, which is coupled with student presentations, agrees with other scholars (Xing, Lin & Gui-feng, 2013) who assert that the seminar method is better than the traditional lecture method in teaching

graduate students. However, the instructional model used active methods including the seminar method; the development of lifelong learning attitude for this programme seemed to be deteriorating over time (see Chap. VII of this thesis). Despite the deterioration, the programme that applied the instructional model seemed to have the highest overall average score of lifelong learning attitude.

In this instructional model, CCBM, *professors* used authentic assessment and formative assessment to evaluate students without final university examinations (summative assessment). This implies that the implemented instructional model uses typical CBM form of assessment. This implies further that *professors* in this programme have will, commitment, and motivation to apply CBM. This finding is in line with the finding of a group of scholars (Benveniste & McEwan (2000) who assert that will was the most important aspect in implementing multi-stage teaching. Without doubt, the main weakness in this instructional model appears to be that of dropping from the education system students who do not do well in the formative assessment. The likely impact of this tendency is that students may not be able to develop lifelong learning attitude because they associate learning with passing; instead of associating it with knowledge and skills acquisition. Knowledge acquisition is a core object in humankind life.

In a fascinating way, other graduate programmes in the institutions, the MEMA programme not different, used formative assessment and final examinations to evaluate students; This implies that circumstances, will, motivation, and commitment are important in implementing the CBM or any other educational innovation. Nkhukhu-Orlando, Brown, Wilson, Forncheh, Linn and Fako (2019) opine that success of any industry requires effective commitment. This further implies that instructional model used in MEMA programme stands a better chance of developing lifelong learning attitude since it uses active methods in teaching and learning at some point.

The same institution used different instructional models. The finding is similar to those by other scholars (Struvven & Mevst, 2010) who revealed that, there was

variation in the adoption of CBM among teachers. This is true with the present study where a few graduate programmes use authentic and formative assessment whereas other graduate programmes use both formative and summative assessments in the same institution. Venezky (n.d) reports further that in adopting ICT in schools, teachers with infrastructure, skills, and resources did not adopt the ICT whereas teachers without infrastructure and skills adopted the use of ICT. This finding is similar to the finding in the present study because *professors* teaching MA.HI are not teachers by profession, and they are not from the school of education; however, they are the only in the institution who use the CBM by-and-large. In contrast, *professors* teaching MEMA programme in the School of Education do not use the CBM despite having competences and understanding about it as teachers by profession.

Reading from slides or hardcopies and clarifying the read texts were cardinal functions of a *professor* in classes; whereas listening and taking some notes were cardinal functions of students. None of the cardinal activities of *professors* and students have been established as promoting LLLA in the reviewed literature. This implies that the learning process in the higher education institutions do not favour much the development of LLLA. This is because the functions of *professors* and students, which are assumed to promote student LLLA seem to be very rarely initiated and accordingly applied. For example, providing reading assignments has been linked with the development of LLLA (Cropley & Knapper, 1983); however, it is rarely seen in classes. Nevertheless, this is not the case with MA.HI programme, which has a lot of reading and writing of assignments, but the LLLA for this programme deteriorates in a dramatic way (see Chap. VII) of this thesis. Nonetheless, the overall average score of the YLLLAIP remains the highest of all programmes.

The dramatic deterioration in lifelong learning attitude development in the programme under the CCBM contrasts the view that reading assignments among students develops lifelong learning attitude. Probably, the question of context in which the reading happens matters a lot. This implies that if the context in which reading happens is highly associated with passing examinations, then, the learners do

not develop LLLA. This is the case in the context of studied programme (see Chap. VIII) of this thesis.

In the seminar sessions presenters recorded low participation in answering questions. This implies that students record low participation in-group assignments, which are assumed to develop cooperation or a sense of living together among students. Cooperation and living together are lifelong learner competences developed from CBM (Garcia-Serna, *et al.*, 2014). This implies there is little room for the implemented instructional models to develop LLLA among students because the instructional models lack precepts, which are critical for developing LLLA. These findings seem to contradict the assertions by scholars (Cropley & Knapper, 1983) that LLLA is developed through teachers involving students in planning for learning objectives; peer assessment, self-assessment, placing students in the workplaces and students providing workplace reports. Moreover, the findings contradict the expected practice for developing LLLA through schooling as proposed by a scholar (McCollough, 2014) who claims that flipped classrooms, problem-based learning and studying grand problem promote lifelong learning. Further, the findings disagree with an assertion by a scholar (Clamans, 2015) who puts it that the use of collaborative learning develops lifelong learning inclination. This implies that for LLLA to develop among students *professors* have to change the way they teach and assess their students in higher education institutions.

From this study, typical traditional and modified lecture models were in operation in higher education institutions. This implies that lectures have different interfaces, which have varied degrees of engaging learners mentally; the least engaging lecture model is the typical traditional lecture model. The remaining forms of lecture models seem to engage students more in teaching and learning processes. This is because they are coupled with the use of digital technologies, diagrams, or tables in the analogy and the use of questions and answers in lecture sessions. All these are lecture models different from the typical traditional model, which involves reading from the text and commenting on the text, and no questions or projection of the text. However, it is not clear whether the modified lectures have a room to develop

lifelong learning attitude at marginal level. Since the application of modified lecture models is dominant in the higher education institutions, and there is gradual development of LLLA over time as clearly presented in Chapter VII. The gradual development of lifelong learning attitude is particularly revealing in terms of some of the dimensions of lifelong learning attitude.

Finally, *professors* used various classroom level instructional models. This implies that there are different theories that guide teaching among *professors*. Lindgren (1959) asserts that educators have different arrangements on the way they teach in classes. The arrangements emanate from traditional values, experience of an individual and research based theories. Moreover, Lo (2012) propounds that teachers are free to use whatever teaching principles in any theory of learning.

CHAPTER SIX

FACTORS FOR THE DOMINANCE OF IMPLEMENTED INSTRUCTIONAL MODELS

6.1 Introduction

The previous chapter is about the implemented instructional models. This chapter presents, interprets, and discusses data and findings for objective three: *to analyse factors for the dominance of implemented instructional models in selected Tanzania higher education institutions*. Themes, institutions, and data collection methods present the findings in this chapter. Each theme commences with the presentation of data from interviews, followed by data from observation. The mode of data presentation is adopted to provide compact information on one theme to reduce repetition of themes. This pattern of presentation avoids monotony of themes because one theme can occur in more than one institution or in more than one data collection method. Therefore, factors leading to implemented instructional models are presented under.

6.2. Factors for the dominance of implemented instructional models

This section provides a description of factors culminating in the implemented instructional models. Three broad categories of factors are revealed and their sub-factors (effects). The section presents broad categories of factors that are explicated and supported through voices of interviewed *professors*. The summary and synthesis of findings for the objective are subsequently presented.

6.2.1 Poor economic conditions

Good economic conditions are critical for the development all spheres of life in any nation, institution, or individual. From this, this section shows sub-factors that are directly or indirectly linked to poor economic conditions that hindered the application of the norm instructional models, the CBM, and MTM. The data on the sub-factors and their supporting voices are presented in the text that follows.

Interviews revealed that the implementation of the instructional models, CBM and MTM, particularly the CBM is costly since it requires adequate time, enough classrooms, financial and human resources to make it a reality. Doubt is casted on whether Tanzania can have economic powers to address the problem of shortage of professors and classrooms in higher education. Professor participants had the following to say: One professor had this to say:

Yes, it needs devotion in terms of time. A professor has to spend not less than twelve hours a day for preparation. Thus, to introduce it in a government institution, it will be impossible because some of professors will want to go back home after working hours; some of them will demand a lot of money for working overtime so it is very costly this is a problem with competence-based approach to teaching and learning (P4 SOED, April 2018)

Another professor participant was of the view that the CBM requires heavy investment in terms of money. The professor further opined that the idea was not a problem, but he was skeptical about the availability of financial resources to support the implementation of the instructional model. The professor had this to say:

The other challenge of these new methods of teaching and assessment is that they need monitory investment. However, I am not worried; the idea is to change. Changes require investment of money, right. If resources are available, you can change why not. Instead of saying, I am going to lecture this on Monday; you say read this we will discuss it on Monday. Given that everyone has a reading, then everyone reads and each one will have to contribute during the session instead of depending on one person, the lecturer. However, the approach requires resources. You cannot say students should buy computers through which they can access sources of knowledge, library (P1 SoED, March 2018).

Another professor said,

...of course in order to use student-centred methods higher learning institutions must first of all increase the resources, especially, the classrooms and the professors. The number of professors needs to reach a ratio that can make CBM a practical endeavour. For example, instead of having a class of two thousand students per professor; you may have at least one hundred students per professor. Of course, at least at this ratio, we can do that with the increase of resources (P2 SOED, March 2018).

Further, there was inadequate infrastructure, especially classrooms. This made lecture theatres and halls congested with students during classes. The inadequate infrastructure is an indication of shortage of financial resources in an institution or a country. In such a situation, it was difficult to implement the CBM and the MTM in institution M. As some of participants said,

Sometimes the environment favours the use of competence-based teaching and learning, and sometimes there are challenges. The environment favours when you have a small class. This is because the institution has adopted the competence-based approach to teaching and learning. The approach requires a small number of students in a class. Surprisingly, it happens that one has a class of 1200 students. In a class like this, applying Competence-Based Education and Training (CBET) is not practicable. I cannot practice competence-based teaching and learning. I apply competence-based teaching and learning when I have small class (P3M, 16.1.2018).

Another professor said:

Currently, I teach students Education Media and Technology course. This is one of the compulsory courses in the department of education. This class has about 1200 students. I do not share teaching this course with anybody. It is difficult to reach every student in a big class like this to make sure they develop competences expected. If you ask the management, why do you enrol too many students? They tell you “we are also ordered to receive these students,” and you studied in the same situation. Therefore, do what you can to help your young sisters and brothers to attain higher education (P3M, 16.12.2018).

In addition, a Quality Assurance Bureau official from institution D remarked:

Sometimes supportive environment is missing to apply competence-based teaching and learning. For instance, you have a class of one thousand students; the only method to use in such a big class is lecture method. It is very hard to teach using learner-centred approach in such a big class. In such situation, the teacher-centred methods dominate. A teacher speaks more, and a student speaks less (QAB SoED, March 2018).

The cited participants' views suggest that CBM requires heavy investment in terms of resources and classrooms. It is important to employ enough number of *professors* in the institutions to reduce the heavy workload. In so doing, *professors* with optimal workload will be able to raise the quality of authentic assessment used in higher education in Tanzania. However, higher education can only have enough

professors if the economy of a country or an institution is good. Importantly, heavy investment is needed for classroom construction to create enough space for seminar sessions to be conducted after lecture sessions. Without investing heavily in employing more *professors* and constructing more classrooms, the quality of higher education will continue to be at stake especially because the number of students increases geometrically whereas the number of *professors* increases arithmetically. Despite the frustrating environment in implementing the CBM and/or the MTM, some *professors* are committed and creative enough to do this. Nevertheless, the efficacy of the job of *professors* in such environment remains to be a subject of discussion, especially, in applying authentic assessment. Therefore, *professors* use the TM methods (teaching and assessment methods) in the higher education institutions because classes are too large for a *professor* without assistants to handle them.

Professors in higher education institutions seem to suffer from poor economic conditions,³ which compel them to devise copying strategies to survive economically. Some of the copying survival strategies include though may not be limited to engagement in research projects some of which do not fall under their professionalism boundaries, and engagement in part-time teaching in other higher education institutions. They do the latter despite being overloaded in their mainstream institutions. In addition, *professors* seem to be not handsomely paid as per the energy and commitment they invest in servicing students and the society in general. This de-motivates them from doing their job appropriately. These findings are further corroborated with the field data. For example, on *professors'* engaging in research projects not within the realm of their professionalism more than they do in teaching, one *professor* said,

In primary schools, teachers do not teach because they spend much of their time selling pastries in their schools; the practice though in a different form it is also found here! Some professors do not teach at all. They are always busy with

³ Poor economic conditions is situation in which a country, institution or an individual person does not have sufficient funds to meet all his or her needs or a situation in which an entity applies extra mile efforts in bid for escaping poor economic conditions

research projects in order to earn money. Nevertheless, those of us who spend more time in teaching than in research projects often our efforts are not appreciated. There is nobody who sees us as doing a good job, but those who are always doing research without teaching (P4 SoED, March 2018).

Moreover, another professor had this to say:

We have a lot to do to contribute financially in our society. For example, you have the extended family you need to service; you need to offer for weddings and send offs; you need to have time to participate in burial ceremonies; you need to take care of your own family. Most of these things are not in European countries. Therefore, these activities take a lot of our time and financial resources. So, what you do if you find a research project on worms, you just ask the lead researcher to include you in the research project team so that you earn money. I once did it though I am not an expert in worms (P1 SOED, March, 2018).

In addition, some professors worked as part-timers in other higher education institutions. They did this despite being overloaded in their mainstream institutions. The following participant substantiates this claim:

I am in charge of the department, and therefore, I have very limited time. From the responsibilities in the department, but also, I look for other income generating activities that can make me economically strong. For example, we do part-time teaching somewhere else. We teach in other institutions as well (P4M, 3.1.2018).

Furthermore, payment is perceived as low when compared to the actual job professors do in studied Tanzania higher education institutions. This situation makes many graduates from higher education institutions hesitate from taking up teaching jobs in higher education institutions. This is because they feel that they will do a lot of work while poorly paid. This does not attract right and competent candidates in the teaching career in higher education institutions in Tanzania. As one professor said,

Today the teaching career at the university is no more attractive as it used to be before. This is because one has to do too much work in the career but little pay. Today even students who do well in their studies if you tell them to remain here and teach, they refuse because the career is no more attractive in terms of payment. Even when a professor is appointed to hold a political post is congratulated because it is as if they have taken the load off their shoulders (P2 SoED, March 2018).

The findings indicate that despite having heavy workload in the mainstream institutions, *professors* tend to look for some part-time teaching jobs in other educational institutions. This tendency contributes to their failure to implement their own norm instructional model, the CBM. Moreover, some of the *professors* seem to be fond of concentrating more on research projects from which they earn money than they concentrate in teaching. Equally important, it seems the teaching career in higher education is increasingly losing the attraction to some people because there is more to do in the career than one earns. Thus, these are the factors that stand out as setbacks in implementing the CBM.

Data from observation and from in-depth interview give the inference that big classes are a notable setback in applying competence-based model methods. Large classes affect even the institutions under the NACTE, the organ that advocates for competence-based teaching and learning. This is because there are no joint efforts between *professors* and the management in making sure that the competence-based teaching and learning is implemented in accordance with policy documents. One reason for this is enrolment of larger number of students compared to available number of *professors* and the carrying capacity of the institution. Additionally, findings indicate that the CBM methods are feasible for small classes of around forty to the maximum of a hundred students in a class. It is further implied that big classes in higher education is a policy issue, higher education institutions are directed to enrol as many students as possible despite the shortage of classrooms. The Ministry responsible for education and management of higher education institutions push higher education institutions into enrolling large number of students despite the shortage of classrooms and *professors*. This is despite that the Ministry and the higher education institutions have no funds to use in redressing the situation immediately. Literally, the poor economic conditions of the country, the public institutions and of the *professors* result in *professors* having limited time to do their job properly.

In addition, the poor economic conditions have negative effects on the aspect of time on the part of *professors*. Time is a lifetime concept; we hear about it from the time

we are born to the time we die. There is approximate time for any being to live (lifespan). There is approximate time for one to complete a bachelor degree; there is approximate time for one to complete PhD studies. In addition, *professors* need time to implement effectively the CBM, their norm instructional model. *Professors* need time to prepare and apply the CBM methods. *Professors* are responsible for developing students' critical thinking, writing, and research skills among others; therefore, they need adequate time for the preparation to develop the skills. To produce graduates with such skills, *professors* have to abide by all principles and requirements of the CBM, which needs ample time to implement.

Despite the importance of time in implementing the CBM, for a number of reasons, *professors* claim not to have time to implement it. However, meta-analysis indicates that inadequate time is a function of poor economic conditions of a country, higher education institutions, and individual *professors*. For example, lack of time to service each student adequately because classes are large has to do with the economy, which is poor. Again, having too many administrative responsibilities and having part-time teaching in other educational institutions is closely connected to having too many students in the department than the available *professors* (human resource). Equally, the shortage of *professors* in higher education institutions opens the market for part-time teaching jobs resulting in sustained heavy workload among *professors* leading to the lack of time of doing their job properly. This situation has to do with inability of the government or higher education institutions to employ enough *professors*. This is also connected to poor economic conditions of the institutions and of the *professors* as well.

Sometimes *professors* engage more in research projects than they do in teaching; and they do so in order to survive economically. This situation makes them provide imbalanced services. Thus, poor economic conditions result in *professors* lacking time to teach based on the CBM precepts. In summary, inadequate time to implement the CBM is a result of poor economic conditions of a country, of higher education institutions, and of an individual *professor*. Though the *professor* participants in this study cited time as one of the factors hindering them from

teaching in an effective way, the analysis suggests that inadequate time is a result of poor economic conditions. The frequencies for each sub-factor were established through looking into how often each factor was mentioned by the participants. The frequencies were established manually through tallying the occurrence of a sub-theme in the data. Table 6.1 is the summary of economic conditions, sub-factors (effects), and their frequencies.

Table 6.1: Poor economic conditions sub-factors and frequencies

Main factor	Sub-factors (effects)	Frequency(n)
Poor economic conditions	Shortage of <i>professors</i>	4
	Inadequate infrastructure-classrooms	6
	Some <i>professors</i> do part-time teaching	3
	Engage in inappropriate research projects	2
	Inadequate time	5
	Lack of training	4
Frequency Total		24

Source: Field data analysis, 2018

Table 6.1 indicates that inadequate infrastructure, especially classrooms is a leading sub-factor affecting the application of the CBM. Furthermore, the table shows that inadequate time is the second leading sub-factor affecting the application of the CBM. Third, shortage of *professors* and lack of training equally affect the application of the CBM. Fifth, some of *professors* do part-time teaching in other institutions apart from mainstream institutions. Finally, some *professors* engage in research project not related to their specialisation in order to earn money. This study tells us that poor economic conditions hold back *professors* from applying the CBM.

6.2.2 Poor instructional culture

Though culture is an abstract concept, its implications in humanity cannot be ignored. Culture influences the way people think, speak in different situations, behave, dress, and relate to others and so on. Since culture has some influence in many dimensions of life, it also influences the way *professors* decide about how to

execute teaching and learning processes. Experience shows that most *professors* working in higher education institutions were recruited as junior *professors* (tutorial assistants). In the post, one learns from senior *professors* about teaching, assessing, and research. Thus, a young scholar emulates what senior *professors* do. Findings relating to instructional culture in the studied Tanzania higher education institutions are presented below.

During in-depth interview in institution M, some of the *professors* pointed fingers to the language of instruction as a setback in teaching and learning process in higher education. The *professors* were of the view that the problem of language of instruction was not only visible among students, but among *professors* as well. As such, students spent much time to grapple with English language as a Medium of instruction instead of concentrating on learning the contents in their disciplines. A good number of students in institution M were not good at English language as a Medium of instruction. As a result, this impeded effective communication among students in class task-oriented interaction. This implies that the language of instruction is a setback in implementing the CBM to a satisfying level. The voices from participant *professors* can confirm these claims. As one participant *professor* said,

The competence-based teaching and learning requires interaction in classes. However, we have a problem with the language of instruction. Students are not conversant with English as a medium of instruction. As such, when they are required to make a presentation, the language of instruction is a great barrier. Even at this level, students continue to learn the language of instruction. Instead of interacting in classes to learn contents, a student continues to learn language.... (P1M, April, 2018)

In additional, in institution D, it was revealed that proficiency in the language of instruction, as a vehicle for knowledge dissemination was important for *professors* and students. This is because *professors* were of the view that the CBM had to be applied in classes. However, since students in higher education institutions were not good at the language of instruction, *professors* went for lecture method. These claims are corroborated by voices from *professors*, who said,

Language is one of the main factors influencing the type of method you use; for example, it is a problem if you want to use discussion method for undergraduate first year students. However, for graduate students, it is not a problem because they have experience. For undergraduate programmes, students have very poor language, and it is a big barrier. The students can share learning experiences in English language, but inwardly they would prefer to use Kiswahili. I think this attitude is not right. Sometimes students do not understand English language. Therefore, language is an issue... I had a student who answered an essay type question in Kiswahili. That is the failure I cannot mark Kiswahili. Look here, if I award her or him some marks the external examiner will not understand Kiswahili. It is better that one writes in French or other languages, but not in Kiswahili because not all external examiners are from Swahili background. Nevertheless, I stress that it is important to know both languages well enough to use them. I think there is a problem where we come from, and the first problem is attitude (P4 SoED, Aril 2018)

In some instances, continuing to use English language, as a Medium of instruction in higher education institutions really does not result in learning. Some *professors* may continue to hold that English language should continue to be used as a medium of instruction because in the past students studied in English language and yet they were good. The promising performance in English language in the past decades among students was a result of extra mile efforts. For higher education institutions to continue using English language as a medium of instruction, deprives students from developing some of twenty-first century skills such as creativity and innovation. This is because most of the students learn through rote learning. They have to cram what *professors* teach them and reproduce it later during examinations. Therefore, in order for higher education institutions to produce creative and innovative graduates in the higher education institutions, it is important to use the language, which is familiar to students. However, the mechanisms of ensuring that the students do also understand the English language very well should be put in place. Therefore, on the one hand, we have to use the language that we are familiar with as a medium of instruction; on the other hand, we have to ensure that we learn English language very well as a nation. To support these claims one *professor* had this to say,

I am talking as a person from Kiswahili institute, and what I want to say has been my argument all along. It is absurd to continue teaching using a foreign language. Really, it is not only absurd, but it is cheating because we know this has never worked. Even if we think that in the 70's and 80's we had some good

students, but they worked extra miles to be what they became. Therefore, you kind of torturing them because instead of using the language that you are familiar with and they are also familiar with, which is friendly and spoken everywhere, you teach in the language so as to promote creativity and innovation. Now, there are signs that we have no innovation; we have no creativity at all; we have no new ideas. Therefore, this should come to a stop where we should say well having English does not align with being intelligent that has been very wrong idea. People think that so long as you know English that means you are intelligent. Therefore, we should really face the reality. We should teach good English for students to understand it. They have to understand it very well, but use we have to use the language, which they are familiar with so that knowledge is created. You do not have to pour information in their brains for them to cram, but rather you have to make them innovative to create knowledge. Therefore, this has been my position all along and we should change. Not only me, but there are some other people think that this is the wrong approach. So those two things I think we are wasting our time. We think we create the best brains, but it is not true (P1CoHU, March 2018).

The findings show that the language of instruction is one of factors that influence some *professors* to prefer traditional teaching and learning. Moreover, students prefer using Kiswahili in-group discussions in classes. This is because they are familiar with the language, and that they are not proficient in English language so they learn their other subjects through rote learning. Accordingly, the use of English language as a medium of instruction is one of bottlenecks for *professors* against using competence-based teaching and learning in the studied institutions of higher education. Some *professors* avoid the CBM because it results in wastage of time especially when students do not want to cooperate. Generally, data from observations and interviews suggest that the use of English language as a medium of instruction in higher education in Tanzania partly affects students' active participation in teaching and learning processes.

About poor reading culture, during class observations *professors* signalled that students were not keen with reading. For example, in one of the observed cases in MEMA programme, the *professor* asked students whether they had read the chapter assigned to them for reading, but only two students out of thirty-three had read the chapter. In addition, one *professor* who taught MEMA programme students told the students “*read now when you are here as students after here you want have time to*

read.” The *professor* gave this remark when only two out of eight group presenters in the session were able to answer questions from him. From this, the *professor* seemed to have the assumption that the group members who did not answer the questions he posed did not read. In institution D, one student told the *professor* that he was unable to follow the lecture, the *professor* said, “*I gave you a book to read before coming to class, but you have not read it that is why you cannot follow.*” This remark indicates that whoever reads the book before entering the session would be able to follow the lecture. In addition, during class observation one student was heard saying: “*this programme is very difficult; there is a lot of reading.*” This remark suggests that this student was not happy with reading books and articles. Therefore, reading is not orchestrated among students.

During interview, *professors* indicated that students lacked reading culture. For example one *professor* said, “*The reading culture among students has gone; they just want grades and certificates, but not reading. They would always want to read the slides, but not books in hardcopies; they want electronic materials* (P4 SoED, March, 2018).” Another *professor* said, “*Reading is not a black man’s culture; students do not read when you give them books or articles they do not read.*” (P1 SoED, March 2018). Moreover, another *professor* said, “*These days university students do not read; really, even professors do not want to read, and because of this in our department we have set examination rules for undergraduate programmes that in every examination paper there must be one question from a book to make them read books*” (CoHU, HoD, April, 2018). Apart from the problem of culture of reading, seemingly there was another drawback relating to the teaching tradition in higher education. It is well known that in higher education lecture method is a common practical method.

The cited extracts revealed that students and *professors* were not interested in reading. In such a situation, it is difficult to create an educated and a learning society in Tanzania as envisaged in the Tanzania vision 2025. This is because students are not ready to read books and articles assigned to them by their *professors*. The educational setting where students are not ready to read signals that in the outside

classroom setting students' interaction relating to academic matters is low. Thus, the development of lifelong learning attitude from outside classroom activities suffers.

Four *professors* used a Typical Traditional Lecture Model (TTLM); that is, two cases from institution M and two cases from institution D. In TTLM, the *professors* read from what they prepared in the hardcopy notes. In the end, they gave comments on what they have had read and no more stories, except leaving the stage. Apart from the TTLM, there were modified lectures. Most of the modified lectures referred here are those, which were projected on the slides. Other observations include the sitting arrangement, which was based on sitting in rows. Moreover, the TTLM in some instances unfolded through some of *professors* refusing to answer questions from students. For example, when one *professor* was asked a question in class, the *professor* said,

This is not a place for questions; questions will be asked during seminar sessions, do not ask questions here; there are those who understand quickly and there are those who do not understand no matter how long you teach them they will never understand. You can repeat thirty times yet they do not understand. So do not ask questions here (P CoHU, January 2018).

These observations made during classes seem to suggest that the studied *professors* were confined in higher education institutions teaching tradition though in many respects the TTLM appeared to phase out in studied Tanzania institutions. Since lectures were coupled with other multimedia technologies, this made them not typical traditional lectures. This is because such lectures seemed to be more engaging than the typical traditional lectures. Furthermore, the teaching in higher education institutions involved a hybrid of teaching strategies. The strategies included those biased toward cognitive thinking about how human learn, good examples are the use of group works and individual assignments. These teaching strategies are not under traditional thinking about how humanity learns. As discussed in Chapter Four of this thesis, though some scholars categorise lecture-seminar model as TM; in this thesis, we refer to it as the MTM.

As has been the case with data from observation, the findings from interviews show that some *professors* have conservative thinking about how students learn. This conservative thinking deprives students from the opportunity to demonstrating their talents. In a situation whereby a *professor* thinks that they are the only ones who know and students know nothing, it is difficult to implement the CBM. The instructional model requires a great deal of interaction among students and between students and the *professor*. For example, in institution M, it was revealed that sometimes-personal beliefs impeded the application of recommended methods, which are considered useful for developing potential professionals. This can be attributed to the *professor* being too indulged in traditional thinking about how a human being learns. The belief that students know nothing results in *professors* lacking interest in listening to students. This view is supported by explanation from one *professor* participant hereunder:

You see, there is this we call conservative thinking; the belief that professors have a complete knowledge, and therefore they cannot change. You see! Therefore, they are not ready even to improve the methods of teaching. They cannot receive new ideas, and sometimes they consider learners as people who are tabula rasa...they are conservative. The conservative orientation has been infringing the right of a learner to show out their potentials. We have this ...they say you are just an undergraduate student ...you have not conducted any study or any research what can you offer. But remember, these students can contribute in a certain phenomenon or concept. You might boast yourself that you conducted research, and that you know something, and sometimes you got wrong data. You have a document with wrong information, and you think you have the right information. In reality, there are people who have the right information. Therefore, I suggest to professors not to be conservative; you should change according to environment; change according to learners that you meet; allow interaction to learners; allow learners to speak out. Give a room to learners to show their work; to show their potentials and abilities through their work. In addition, with the ideas and skills from research sharpen them; mentor them; groom their skills. That is what I believe, in this way; we can get influential and potential professionals from universities (P3M, 16.12018).

Similar findings were revealed in institution D whereby one *professor* was of the opinion that universities should change from TM to CBM. In her comments, she believed there were instances whereby *professors* thought that students did not know anything, but in reality students sometimes knew about things *professors* taught and

they would sometimes lack interest in them because they knew what *professors* taught them. This is supported by her comments below:

I think the universities need to change the way they teach for sure. They should go to the competence-based teaching and learning because this is the one, which will help learners to learn. You can find most of the lecturers in universities either read to students, or they tell to students, and they really do not teach. This instructional model will make them teach, and teaching will take place where there is that triangle, the teacher, the material and resources. You allow them to interact if you embrace learner-centred approach to teaching and learning. There are things students can learn without the presence of a professor. We should provide them with the environment to learn. Sometimes learners are not interested, you go there, and you say blah blah... they have something about that give them the opportunity to offer what they have, and then, build on that; do scaffolding move them to the next level. That is my concern (P2 SoED, 5 April 2018).

Further, a few *professors* worked hard toward applying the CBM in the higher education institutions. However, the dominant method remained to be lecture method. As one official from the Quality Assurance Bureau (QAB) said, ‘*there are some professors who try to apply competence-based teaching and learning. They do try, but the dominant method is lecture.*’ (QAB SoED, April, 2018).

Based on the *professor*’s extracts, the inference is that there are *professors* who would want to fall back to traditional thinking about teaching. They look at learners as people who have nothing in their heads. From that prejudice, students should listen to them all the time to receive information because they know nothing. In this situation, the individual *professor* is reluctant to change. A *professor* with such conservative thinking happens to be a setback in implementing the competence-based teaching and learning in the studied institutions in Tanzania.

Observations in institution M showed that students were active and proactive in responding to questions the *professor* posed. However, observations in a similar undergraduate programme in institution D indicated that students were reluctant to respond to questions in classes. When the *professor* posed a question, students did not readily volunteer to answer. Under such circumstances, some *professors* would

just tell the students go and read about this, and not giving answers to the questions they posed. This implies that students from institution M had had a different understanding about their role as students in classes when compared to their counterparts in institution D.

That was the case with undergraduate programmes, but for MEMA, a graduate programme in institution D, data indicated that students were proactive in answering questions which were posed for in-class continuous assessment. However, the same students were reluctant in answering questions posed to them before they were taught. In this case, if a *professor* developed questions to discuss with students during the session, the students would discuss even for half an hour, but when they were asked to give feedback, they would choose to keep quiet. Probably, this tendency is linked to the culture inculcated by the traditional model of right and wrong answers; wrong answers are punishable while right answers are positively rewarded. From this culture, students are afraid of giving “wrong answers” because they know that they are punishable though not directly, but indirectly they feel embarrassed when they give wrong responses. Therefore, the only way to avoid embarrassment is to keep quiet; after all, they know that by no means the *professor* will clarify answers for them to understand the concepts.

In view of the above explanations about reluctance to cooperate, one *professor* created groups to discuss the question she posed. The question required students to identify features of quantitative study articles. The *professor* wanted them to discuss and explain, why they thought the articles they downloaded were quantitative study articles. The students discussed for about half an hour. When the *professor* required them to provide responses from their discussions, the students kept quiet. The *professor* tried to encourage them to speak but in vain. Then the *professor* said, “*let us go back to lecturing,*” then she projected the slides and read to clarify about them. This implies that when students are not proactive in answering questions posed to them in classes the *professors* may fall back to lecture method.

During interviews, the theme on reluctance to cooperate did not come up in institution M; however, the theme on background of students was highlighted, as one professor said, *“Especially in international schools; students wait for a teacher to give them everything. Teachers do a lot of spoon-feeding resulting in inability of students from the schools to learn independently; they want professors to give them some notes.”* This remark implies that students from spoon feeding background may not be able to read books and write their own notes nor participate actively in the teaching and learning processes of.

In some instances, students’ reluctance to cooperate was a result of a widely held belief among professors and students that a professor is the one who knows. Thus, students keep quiet when asked questions to engage them in the learning process. This tendency de-motivates professors using competence-based teaching and learning. For example, some professors tried to use competence-based teaching and learning, but students did not cooperate. In relation to this, one professor explained,

Sometimes you combine lecture method with questions and answers. However, as I said students appear to be new in everything even in things that they have learnt at lower levels of education. First, the student must be able to say what economics is because they have been studying for the past two years. I do not know maybe because of the way they learn at lower levels the participation probably is very weak. In addition, participation is compromised by the students’ ideology. This is the view that a professor is the one who knows. Therefore, they have that ideology that is why they do not interact, and they write down whatever they hear from the professor (P1 SoED, February 2018).

From the participants’ extract above, it appears that professors would like to use the CBM as their norm instructional model. However, students’ reluctance to take part in the active learning process is one of drawbacks in applying competence-based teaching and learning in the studied institutions of higher education.

Furthermore, on the background of students in institution D, the findings show that for students to cope with the CBM methods in higher education institutions; they also need to have a similar background in teaching and learning. This is to say if the CBM is used effectively at lower levels of education; it would make it easy for

students to cope with learning based on the CBM in higher levels of education. The levels referred herein are primary and secondary education cycles. For instance, students are likely to have trouble in coping with competence-based teaching and learning in higher education institutions because the instructional model is not applied in the lower levels of education. Despite the poor background on the instructional model, students can be accustomed to the application of the CBM teaching methods provided *professors* stand firm to holding their belief about how humanity learn. These claims are substantiated by voices from participant *professors*. One *professor* had this to comment:

The methods I use are from my preference, I keep on learning. I have taught in other universities; they have many techniques. So I learn from them. I use the techniques that I have learnt; initially, the students fail. Nevertheless, later they pass because they know. ...they come with the minds that are rotten if I can say so. I tell them that I am not teaching you to write my exam; I teach you to have knowledge. I do not mind if you get zero, but I will mind if you get 100%, but you do not know anything. So slowly, they understand what they ought to do in the right way (P1 CoHU, 2018).

Furthermore, one *professor* observed that many of the students joining higher education institutions did not come from schools that used interactive methods in teaching and learning. Therefore, it was difficult for students from such background to follow lessons when a *professor* used interactive methods. In this respect, the *professor* said, “*The background of the students for example when you have undergraduate students a lot of them come from the background where teaching-learning process is not interactive...a lot of them come from lecturing background so you try to involve them and talk*” (P4 SoED, 2018).

The *professor's* extract reveals that experience through which students have gone at lower levels of education matters a lot when it comes to learning in higher education institutions. Previous experience in education system develops mental model for one during learning, for both a student as well as a teacher. This mental model may affect positively or negatively the way students learn in higher education institutions through competence-based teaching and learning or through any instructional model

in operation. However, if a *professor* is determined to stand on their belief about how students learn, students change about their thinking and cope with the present belief about what it takes to be a student and what it takes to be a *professor*. Generally, data from observation and those from interview appear to agree that students' background contributes to shaping student participation in teaching-learning process in higher education institutions.

During documentary review, the course outlines for undergraduates indicated the number of lectures and the number of seminar sessions. In addition, in the MEMA graduate programme course outlines indicated that all forty-five sessions in a semester were meant for lectures. This mode of preparing the course outlines was more biased toward traditional teaching and learning approach. This implies that *professors* are more likely to abide by the pre-determined teaching and learning methods. Table 6.2 presents the summary of sub-factors relating to poor instructional culture and their frequencies.

Table 6.2: Poor instructional culture sub-factors and frequencies

Main factor	Sub-factors (effects)	Frequency (n)
poor instructional culture	Poor reading culture (student & <i>professors</i>)	5
	Low proficiency in the language of instruction	6
	University teaching tradition	6
	Student reluctance to cooperate	2
	Background of students	5
Frequency Total		24

Source: Field data analysis, 2018

Table 6.2 indicates that low proficiency in the language of instruction and university teaching tradition as leading setbacks in implementing the CBM under poor instructional culture. Second, poor reading culture for some *professors* and students and background of students constrain *professors* against implementing the CBM. Finally, reluctance of students to cooperate during teaching and learning process makes *professors* go for traditional instructional model. The table tells us that poor

instructional culture appears as an important factor hindering *professors* in implementing the CBM.

6.2.3 Professor's professional intuitions and qualities

There are sub-factors under in/appropriate *professor's* professional intuitions and qualities which influence professional decisions in teaching among *professors*. These sub-factors are nature of content, learning object, availability of quality teaching materials, assumed effectiveness of a teaching method, and will, commitment, and motivation to implement the available educational innovation, such as the instructional model. These aspects are expounded in the texts below, and supported by the voices of participants.

In relation to the nature of content, it was revealed that content determined the decisions *professors* made about methods to use in class. Most contents in hard science subjects and mathematics, required students to learn through doing. On the contrary, most contents in soft science subjects required the use of lecture method. For example, when a *professor* taught about theories and concepts more often, they were likely to use lecture method to explain the theories or concepts. One *professor* participant had this to say about the claims:

Again, the nature of the subject matter or course, for example, the course I teach, Education Media and Technology; it is meant to teach some audio-visual, visual media, printed media to mention a few. Why do you teach them these? They must practise them! Therefore, as a professor, you have to see how students can be involved on everything you teach. You tell them in this group make sure your work abides by certain specifications, for instance, you tell them make sure the font size is of certain size; make sure your work is double spaced. Through these specifications, you actually integrate the application of technology. In this way, you help them apply the knowledge they obtain by practising... so, the norm instructional model influences the choice of methods (P1M, 16.1.2018).

The choice of the methods will depend first on the nature of the content; the level of understanding of the learner, this is because if you have been using particular methods when teaching them; then, it will not be difficult for you to decide what you will do (P2 SoED, 5 April 2018).

The above extracts reveal that the nature of content determines teaching methods (model) *professors* use in classes. For contents that suit learning by doing, *professors* tend to create the learning environment that facilitates learning by doing. They do this by encouraging students to learn by doing through setting the expected standards in the assignments as a way of making them apply the skills they have acquired.

In addition, *professors* contemplated about and choice of the teaching methods based on the objective of learning and learning outcomes. This claim can be substantiated through voices from one of *professor* participants who said, “*When I choose a teaching method, I consider the learning objectives and expected learning outcomes*” (P1M, 16.1.2018).

In view of the above participant comment, the object of learning is one of the determinants for the choice of the teaching method or instructional model. However, this is not the sole force determining the way *professors* choose their teaching method. This is the case despite higher education institutions having predefined modes of delivery and assessment. Implicitly, *professors* need to go beyond the predetermined methods.

Furthermore, *professors* consider the quality of the available teaching and learning materials before deciding on the method to use in particular class. The CBM requires a lot of reading materials in order to develop lifelong learning orientation among students. Because of this, the instructional model requires current varieties of resources to implement it in an effective way. As one *professor* said, “*In addition, the availability of the resources and materials determine the choice of instructional model. “This is because if you wanted them to read books which are not available, you will have to change the method”* (P2 SoED, 5 April 2018).

This comment implies that quality-teaching materials motivate *professors* to execute the CBM. In contrast, inadequate quality teaching and learning materials make

professors go for other methods that may not be biased toward the CBM. Therefore, the intended educational goals may not be achieved.

In addition, the *professors* needed the will, commitment, and motivation necessary for them to apply the CBM based on its precepts. This is being professional in their job. Below, there are supporting voices on these propositions. One *professor* said,

Yes, you need to devote your time not less than twelve hours a day. So when you introduce Competence Based Model in a government institution; this will be impossible because some of them (professors) will not be able to work after 15.30 pm because they think they are supposed to be back, or some of them may demand a lot of money for over time. Therefore, it is very costly. This is a big problem with competence-based approach (P2 SoED, March 2018).

The extract implies that one has to commit their time, which is a scarce resource to prepare oneself for a class. There is a concern however that some *professors* may not be able to work extra mile hard without additional payment. In this situation, the implementation of the CBM is put into question, particularly in public institutions. However, experience has shown that most *professors* in public institutions stay longer time in public offices than they do stay in their homes. Nevertheless, it is not well known what the *professors* normally do in public offices that long.

Further, for *professors* to apply the competence-based teaching and learning, they required training or collegial support in institutions. The collegial support could help them have a gist on the application of the CBM. It was also important to inform them about the teaching paradigm shift. To support these claims the extracts below substantiate:

... Nevertheless, some of professors are a little bit incompetent when it comes to the issue of conducting seminar sessions. However, they have no problem with lecture method. Therefore, we need to emphasise to them that we have shifted from traditional approach to teaching and learning to competence-based teaching and learning. We need to direct them what they should do in classes. To do this, sometimes we may need to have peer review sessions. For example, when I have a lecture, I invite other professors to come in my lectures to listen, and

later on, they come with their comments, they tell me, okay improve this, improve that... (P3 SoED, March, 2018)

The extract above infers that in-house seminars are important when it comes to implementing the CBM in the studied higher education institutions. *Professors* need to work together to support each other's performance in classes. Table 6.3 gives sub-factors for inappropriate *professor's* professional intuitions and qualities.

Table 6.3: *Professor's* professional intuitions and qualities

Main factor	Sub-factor	Frequency (n)
<i>Professor's</i> professional intuitions and qualities	Nature of content	3
	Learning objective	2
	Will, commitment & motivation	5
	Assumed effectiveness of the instructional model	8
	Quality of teaching materials	4
Frequency Total		22

Table 6.3 shows that the assumed effectiveness of the instructional model is a leading factor that makes a *professor* go for certain instructional model, but this happens only if a *professor* is competent in applying the instructional model. Again, lack of will, commitment, and motivation is a setback against implementing the CBM. Furthermore, the table shows that poor quality of teaching and learning materials hinder in the uptake of the CBM. Importantly, the nature of content; if the *professor* is not keen enough on deciding about the activities and strategies of facilitating effective learning; then, this may affect the application of the CBM. Finally, the learning objective may prevent the *professor* from using the CBM methods. The table tell us that inappropriate *professor's* professional intuitions and qualities affect the application of the CBM. Figure 6.1 shows the summary of factors impeding adequate implementation of norm instructional models.

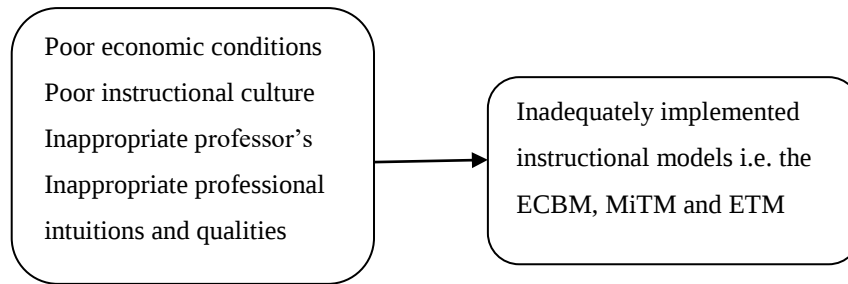


Figure 6.1: Factors impeding adequate implementation of norm instructional models

Figure 6.1 shows that when there are poor economic conditions, bad instruction culture, or inappropriate *professor's* professional intuitions and qualities; then, there is inadequate implementation of norm instructional models. Figure 6.2 shows another possibility of implementation process based on this study.

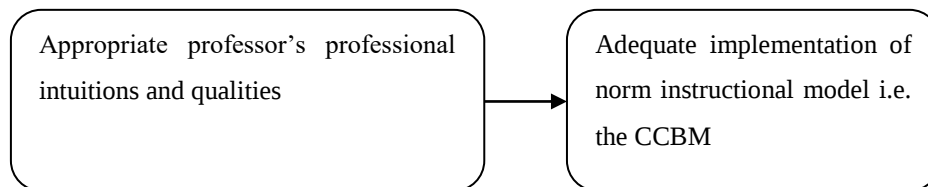


Figure 6.2: Most important factor resulting in adequate implementation of instructional model

Figure 6.2 shows that appropriate *professor's* professional intuitions and qualities are the most important factor for adequate implementation of a norm instructional model. For example, the CBM has been implemented at the level of CCBM because of the presence of appropriate professional intuition and qualities among *professors*, which culminate in commitment to implement it. Further, Table 6.4 provides the summary of all major (broad) factors that determine the implementation of norm instructional models.

Table 6.4: Factors culminating in implemented instructional models from related and present study literature

Factors from previous related literature	Factors from current study
A: Factors from theories	Poor economic conditions
Factors according to Variation Theory (VT), Lo (2012)	➤ Macro-meso-level
Freedom to choose teaching principles from theories	➤ Macro-meso-level
Object of learning	Shortage of <i>professors</i>
Experience	Shortage of classrooms
Difference in understanding between a teacher and a student	Lack of training of <i>professors</i>
	➤ Micro-level
	* <i>Professors</i> engage in part-time jobs
Factors from Lindgren theory of teaching and learning (Lindgren, 1959)	* <i>Professors</i> engage in inappropriate projects
Tradition	<i>Professors</i> lack time
Theories i.e. implicit and research-based theories	Poor instructional culture
Experience	*Poor reading culture;
Factors from theories of perception	Low proficiency in language of instruction
Experience, cognition and environment	Dominating teaching tradition
B: Factors from related research literature	Reluctance of students to cooperate
Will, time, facilities, interpretation, class size, infrastructure, content	*Background of students
Innovation scope, institutional autonomy, nature of subject, sharing of teaching methods, shortage of human resource, lack of training, overcrowded classes, lack of time, language as a barrier; reluctance of students to cooperate, nature of content, learning objective, will, commitment, motivation, effectiveness of teaching method, teaching materials	<i>Professor's</i> professional intuitions and qualities
	Nature of content
	Learning objective
	Will, commitment & motivation
	Assumed effectiveness of teaching methods
	Quality teaching materials

* *New sub-factor from current study*

Table 6.4 shows factors influencing the choice of teaching and learning methods or rather instructional models. The factors range from those in Variation Theory, Lindgren theory of teaching and learning, theories of perception, related research literature and those from the present study. Furthermore, the table shows the factors generated from the present study on the right column of the table. New sub-factors are in asterisk.

6.3 Discussion

6.3.1 Factors for the dominance of implemented instructional models

In higher education institutions, some *professors* had teaching and assessment training. This implies that some *professors* do not implement the CBM because they have no idea about the instructional model. This finding is similar to the one reported by Penuel and Means (2004) that post-training in Science Inquiry Programme culminated in consistent reporting. In addition, the findings agree with those of Shao and Brueining (2005) who report that lack of training was a big setback in implementing the competence-based teaching and learning.

In the studied institutions of higher education, there were inadequate classrooms with necessary facilities that were commensurate with the number of students in the institutions. This implies that to implement the competence-based teaching and learning requires heavy investment in infrastructure such as classrooms with facilities and current resources. Similarly, this implies that MTM requires enough small rooms for conducting seminar sessions. This finding is similar to that of Venezky (n.d) who reports that computer rooms, shortage of resources, lack of equipment, and poor internet connectivity were barriers against the adoption of ICT in schools. On the one hand, classrooms are needed; on the other hand, one can argue that today we do not need to invest in classrooms because of the information technology advancement. However, we still have a long way to go to get rid of face-to-face sessions in Tanzania before making learning through digital technologies a success story. Experience has shown that digital education requires strong internet connectivity for downloading electronic materials; however, internet connectivity in poor economies is a persistent setback against the application of digital education. Thus, classrooms remain important in higher education institutions in Tanzania. Experience has shown that entrants in many higher education institutions have been increasing geometrically while the classrooms have been increasing arithmetically, or sometimes there was no any increase. These findings are in line with those in as study by Ishengoma (2017) who found that one of the factors that hindered the implementation of the competence-based teaching and learning at the University of Dar es Salaam was inadequate funds.

Inadequate classrooms led to overcrowded classes the studied institutions of higher education in Tanzania. Large classes impede the application of the CBM. This implies that in the context where classes are small, *professors* are more likely to apply the CBM than is the case in large classes. This finding is similar to that of a scholar (Jabbour, 2013) who asserts that big classes, made teachers use behaviourist instructional model in Lebanon. Also, Tambwe (2017) cites overcrowded classes as one of the barriers of implementing the CBM in technical institutions in Tanzania. Accordingly, Wonaganaa and Boachie (2018) see big classes as a big bottleneck in implementing the CBM (use of learner-centred methods) in higher education in Ghana. Consequently, large classes seem to be a big setback in implementing the CBM in some other countries as well. This finding contradicts the Variation Theory by Marton as improved by Lo (2012) which does not consider class size as one of factors that influence the choice of teaching methods. This further implies that forces behind the choice of teaching methods are not universal. The imbalance between student enrolment, classrooms and recruitment of *professors* has culminated in large and overcrowded classes in higher education in Tanzania. Based on this observation, the Variation theory needs to be reviewed to include the economic conditions of the country, the institution, or individual *professor* as one of major factors that may influence the choice of teaching methods, or instructional models.

Since classes are large, it is important to have enough *professors* and their assistants to service the enormous number of students. As it is, in poor economies such as Tanzania sometimes it is difficult to employ enough *professors* to service entrants of higher education institutions. As a result, *professors* feel that they are overloaded with large classes to teach and assess. The methods such as lecture method and the use of objective items in assessment are common phenomena in large classes in the studied institutions of higher education. This implies that *professors* choose teaching and assessment methods that can help them manage large classes. These methods of teaching and assessment are common when there are inadequate *professors*. If *professors* choose teaching and assessments methods that enable them manage their work, the likelihood that *professors* use methods that develop lifelong learning attitude is a distant dream.

Despite being overloaded with large classes, *professors* worked as part-timers in other higher education institutions. This implies that the shortage of *professors* in higher education institutions makes the situation worse in the source and in the destination institutions. This is because some *professors* always do a wearing teaching job in more than one institution, do administrative activities, and mark assignments. The number of students the *professors* service does not really align with their energy. This suggests that the shortage of *professors* in some higher education institutions culminate in some *professors* working in other higher education institutions despite being overloaded in their mainstream institutions. In turn, this affects the implementation of the CBM and the MTM, or the way these *professors* choose the teaching and assessment methods. *Professors* work as part-timers because they want to earn extra income, and some universities or the government inability to employ enough *professors* creates the part-time teaching jobs. The findings are agree with those of scholars (Materu, 2007; Sawamo, 2015; Walters, 2015; Ishengoma, 2017; Kinyaduka, 2018) who show that shortage of funds as a barrier in implementing educational innovations. Again, sometimes it might not be a question of shortage of funds, but rather a question of misplaced priorities in the ministry responsible for education matters. In other words, political will has a pivot role in effecting educational innovations as scholars (Nkyabonaki, 2013; Torres, Brett, Cox, 2018) establish, politics affect curriculum implementation activities. With political will, it is possible to create learning environment favouring the application of the CBM or the MTM.

Moreover, inadequate quality teaching and learning materials impeded the implementation of the CBM. This implies that *professors* can apply the CBM or the MTM in a situation where there is enough and diverse current books. With inadequate reference materials in a higher education institution, the likelihood is that *professors* will go for lecture method and will provide less for students to learn. In any case, adequate and quality materials have a connection with economic conditions of higher education institutions or a country. These findings are similar to those of a scholar (Makunja, 2015) who claims that the purpose of introducing the CBM in Tanzania was to improve the quality of education in the country.

In addition, *professors* have inadequate time to apply the CBM or the MTM precepts in the studied institutions of higher education in Tanzania higher education institutions. This implies that some *professors* do not apply effectively the CBM or the MTM because they have limited time. This finding is similar to that of Penuel and Means (2004) who opine that reporting practice in Science Inquiry Programme was not consistent because of inadequate infrastructure and resources.

Consideration of the aspects discussed above culminates in the implementation of the intended instructional models recommended for application in Tanzania higher education institutions. In this way, the intended educational outcomes can be achieved. Otherwise, we should expect graduates of low quality. This is because we increase students without increasing the number of *professors* who in turn cannot ensure quality. From too big number of students, *professors* set examinations that will make them manage assessment in large classes; thus, the forms of assessment are likely to compromise quality as the use of objective items. In many respects, the objective items do not measure higher-order thinking. Additionally, we are likely to have shadow assistants to *professors*⁴ in higher education institutions and whose quality we are not guaranteed. Such tendencies are a result of overloaded or overworked *professors*. Therefore, the increase of number of higher education institution entrants without the increase of infrastructures, *professors*, and resources jeopardises the quality of graduates from higher education institutions. There is a need of reviewing priorities in education in the Tanzanian context to see to it that quality education is provided for the good of the nation.

Lecture method in the studied institutions of higher education dominated because it was a university tradition to use the method. This implies that *professors* have been trained through lecture method, and they teach using the same method because it is ingrained deep inside their sub-conscious minds. This implies further that teaching reform needs adequate time and strategies to make success stories in teaching and

⁴ Shadow assistants to professors are people in professors' families or people trusted by a professor to help them with marking tests and examinations without the notice of the institution in which the professors are employed on permanent or on contract terms.

learning innovations in higher education institutions. Lindgren (1959) assumes that research-based theories of learning are not applied because of ingrained values (tradition) about teaching and learning. On the contrary, teachers use implicit theories that are based on experience instead of using research-based theories. For example, for decades it has been believed that children are *tabula rasa*, when *professors* have such a belief it influences their practices in teaching and assessment methods. The long-standing values about teaching and learning among *professors*, and which have been passed on from one generation to another may influence the way *professors* perceive and react to innovations on teaching and learning in higher education institutions.

Furthermore, it is speculated that though lecture method is professionally recognised, it was an effective method at the time printing, photocopying and computer or information related technologies were none existent or rather crude. In that context, only *professors* had books or managed to have one; therefore, lecturing was the best way of passing on knowledge to students. However, in the present-day world, proliferation of digital technologies, which have resulted in massive information on various disciplines and life, spheres, it is important for *professors* to rethink the way they teach their students. Nowadays, *professors* need to teach students on how to learn from the massive digital information available from different sources. *Professors* can at best do this through the CBM.

Moreover, some *professors* were conservative despite the streamlining of the new instructional model in the curricula of higher education institutions. This implies that the MTM methods continue to be applied because some *professors* do not want to change. To add, it seems the use of MTM is fuelled by the so called CBM curriculum guideline from the TCU which requires *professors* to use several hours for lecture despite emphasising the model that underscore on the application of active methods. This finding is in agreement with the finding in a study by Mahoney and Thelen (2010) who reveal that institutions always change gradually. Though *professors* have confidence in the CBM methods, they are not likely to swing into competence-based teaching and learning principles smoothly and quickly.

In connection to instructional culture, most of students were not proficient in the language of instruction. This implies that when *professors* want to use interactive methods students get difficulties in expressing their ideas, and therefore, *professors* go for lecture method that does not require student-student and *professor*-student interaction. It is speculated that the reluctance of students to speak on task-oriented interaction in classes could be partly attributable to students' incompetence in the language of instruction. This implies further that the chances of applying learner-centred methods are greater when a *professor* and students are proficient in the language of instruction. The learner-centred methods give an upper hand to interaction among students and between students and the *professors*. Indeed, the opposite is true. In that, using the language *professors* and students are not familiar with makes them (*professors*) take a lot of time to teach a small aspect of the subject matter. Thus, choosing to go for teacher-centred methods such as lecture method or modified lectures. Nzima (2016) sees that the language of instruction as a barrier against applying the CBM in teacher colleges.

Again, students and some *professors* lost the culture of reading in higher education institutions. This implies that in a situation where students and *professors* have poor culture of reading the teaching and assessment methods are likely to be affiliated to TM. This implies further that when students do not read task-oriented classroom interaction is likely to be ineffective and this may force a *professor* to fall back to traditional methods of teaching and learning, including the use of lecture method. In a situation where students and *professors* have the culture of reading, the use of the CBM is likely to happen in an appropriate and in a productive way.

As it relates to instructional culture, poor background of students on the CBM hindered the implementation of the CBM in the studied institutions of higher education in Tanzania. This implies that effective competence-based teaching and learning can happen in higher education institutions if students have gone through the same instructional model at lower levels of education. This implies further that students are sometimes reluctant to cooperate when competence-based teaching and learning is used in classes because the instructional model applied at lower levels of

education has shaped them to wait for a teacher to deliver; and that students' role is to listen and store information to be reproduced later in examinations.

This implies further that students are not informed about the developments in teaching reforms in higher education institutions in Tanzania to make them understand their role in the teaching reforms. The findings are in line with those of Tambwe (2017) who reveals that low cooperation from students resulted in superficial implementation of the CBM. In addition, students are reluctant to participate in the learning process because they believe a *professor* is the one who is knowledgeable, and therefore, they have to deliver for them to know. Mwaikokesya (2014) reports that lifelong learning attributes did not develop because of the belief among students that a *professor* is the only knowledgeable person in their midst.

Based on professional decisions, *professors* used the object of learning and content to choose different methods of teaching and assessment. This implies that a given learning objective influences the choice of teaching and assessment methods; consequently, the choice of instructional model. This finding is in line with the finding is a study by Variation Theory by Marton as improved by Lo (2012) which assumes that the object of learning determines what methods a teacher uses in class. From this understanding, it implies that *professors* think about what to achieve in their classes and decide on how to achieve their teaching objectives.

As hinted above, the nature of content influenced *professor's* way of choosing their teaching methods. This implies that the nature of content determines the methods *professors* use. Similarly, Sanchez and Hoyos (2014) claim that the CBM is suitable for teaching some of subjects. However, it is inappropriate for teaching other subjects. Similarly, Bruner in Austin *et al.*, (2001) puts it that the nature of content determines the way students learn and the way they are taught. Equally important, Entwistle (2007) contends that in higher education, content influences the way *professors* design the teaching and learning processes. This implies that each instructional model is important or useful for teaching a particular subject or content.

In addition, in some instances, *professors* did not want to apply competence-based teaching and learning because the syllabi were overloaded with contents. This implies that the syllabi in higher education institutions are in a traditional mode, and therefore, *professors* find it difficult to apply the CBM. In that regard, when *professors* have several courses or institutions to teach, there is a likelihood that they would go for teacher-centred approach to teaching and learning in all courses or institutions, the source and destination institutions. The purpose of using teacher-centred methods is to cover the loaded contents in time.

In the higher education institutions, various documented teaching and assessment methods were used. This implies that higher education institutions in Tanzania use various teaching and assessment methods from different teaching and learning theories. This is probably because there are various contents, objects of learning, values, knowledge, situations and skills to be communicated to the learners. Thus, institutions are obliged to go for eclectic approach of teaching and assessment. Lo (2012) in the Variation Theory propounds that teachers are free to choose teaching principles from any teaching and learning theory provided it serves that purpose. However, the finding at the same time contradicts the Variation Theory by Marton as improved by Lo (2012) which requires free will in applying teaching methods. On the contrary, the higher education institutions have a number of pre-determined teaching methods to be applied in teaching and assessing students; thus, depriving *professors* the freedom of using creative methods to teach and assess students.

Again, *professors* were more biased to one of the theories of learning. This implies that an institution or a *professor* who is a believer of a particular theory of learning is more likely to use methods affiliated to the assumptions of the theory. Furthermore, *professors* may be biased toward a particular theory of learning because of circumstances and conditions. This finding is consistent with the finding in a study by Lo (2012) that assumes that teachers are free to choose teaching principles from whatever theory of learning. Additionally, the finding is in line with that of Lindgren (1959) who observes that any action of a human being is guided by a theory which can be research-based or implicit. In this respect, humankind actions

are external manifestations of theories embedded within the entity doing a given action.

The implementation of the CBM required will, motivation and double commitment among *professors*. This implies that to implement sufficiently the CBM *professors* must have will, motivation, and commitment to do so. This implies further that it is possible to have everything in place, for example, small classes, mobile tables and chairs, skilled *professors* to apply the instructional model, enough *professors*, and a variety of current books. However, in a situation where there is no *professor's* will, no political will, no motivation, or no double commitment, the norm instructional model (CBM or MTM) cannot be implemented adequately. This finding aligns with that of Benveniste and McEwan (2000) who found the will of a teacher was the most important factor in implementing multi-stage teaching. Furthermore, as noted by Nkyabonaki (2013) politics affect curriculum processes in Tanzania. This implies that *professors* may have will, motivation, and commitment to implement the CBM, but they may continue to use the MTM because there is no political will to reform teaching in the education system in a country.

In some instances, students had low motivation to learn, especially reading books. This implies that when motivation to learn is low among students a *professor* may choose a method that does not require much reading among students. However, when students' motivation to learn is intrinsic and high a *professor* can use learner-centred methods. In addition, some of the *professors* were not duly provided with their rights relating to jobs they did. This tendency de-motivates *professors* from doing their job in an appropriate way. This implies further that motivation for both students and *professors* is an important ingredient in implementing the norm instructional models, the CBM and the MTM.

Importantly, the perceived effectiveness of an instructional model influenced *professors* in using it. This implies that sometimes a professor uses a particular teaching method or instructional model because they have confidence in its possibility of achieving the intended learning outcomes. For example, if a *professor*

intends to produce graduates who are creative, and independent and lifelong learners they would use methods that promote creativity, independent learning, and lifelong learning attitude. Makunja, (2015) contends that Tanzania adopted the CBM to improve the quality of education. Similarly, Dlamini, Bhebhe and Dlamini (2018) report that the World Bank advised Swaziland to apply the CBM to boost her collapsing economy in 2010-2017. Higher education institutions grappled with the adoption of the CBM for students to develop necessary skills to apply when they are on studies, particularly through apprenticeship (Katundu & Gabagambi, 2016).

Based on the foregoing discussion the factors influencing the choice of an instructional model, it seems the factors are not to be universal, but rather context based. This finding disagrees with the Variation Theory by Marton as improved by Lo (2012) which opines that factors influencing the choice of instructional model (teaching methods) are confined to *professor's* professional intuitions and qualities, freedom to choose principles of teaching and learning from theories, past experience, differences in understanding between a student and a teacher and objective of learning. Probably, the difference in findings is associated to the economic status of the country, institutions, and individual *professors* in which Lo conducted a study to improve the Variation Theory. It seems Lo (2012) did his study in developed economies; thus, poor economic conditions did not come up as an important factor influencing the choice of teaching methods, and/or instructional models. Further, the findings are not in line with Lindgren (1959) who assumes that tradition, experience and theories, research-based and implicit theories guide humanity actions, which includes teaching. This is because the present study has factors beyond the three major factors from Lindgren (1959) who does not reflect on poor economic conditions. Moreover, the findings are not in agreement with other previous related research literature which presented many factors some of which are in the present study but others are not. The factors that are in the present study but not in the previous studies include reading culture; *professors'* engagement in part-time jobs, *professors'* engagement in research projects, which are sometimes not in the boundaries of their specialisation and the background of students. This implies that

factors influencing the choice of instructional models are not the same in all places, institutions, or countries.

In this regard, an overall analysis of findings from previous and the present study suggest that there is absence of multiple-aspect-alignment. This is apparent from the previous and the present studies regarding the implementation of instructional models, which is the CBM at all levels of education and the MTM in higher education in Tanzania. This implies that to implement the CBM or the MTM in an effective way there must be multiple-aspect-alignment based on educational innovation. For example, the philosophy of education in the country has to align with theories of learning, which have to align with the type of the curriculum design in place. In addition, the curriculum design must align with the available instructional models. Further, the instructional models have to align with the nature of content, and so do the teaching and assessment methods. In this thesis, this alignment is referred to as ***vertical alignment in education***. The ***vertical alignment in education*** is not final; we also need ***horizontal alignment in education***, which includes the learning environment aspects that have to balance too. The learning environment has to align with the educational philosophy and the instructional model. For the case of the CBM, it requires enough classrooms, enough and qualified *professors* and the language of instruction should be familiar to both *professors* and students. Additionally, *professors* should be committed and motivated to work for the good of students, *professors'* specialisations should align contents they are supposed to teach and the tables and chairs should be movable. There should be high degree of interaction in classes, diverse and current readings, and there should be small classes of about forty students. Importantly, students should sit in circles or semi-circles when *professors* use learner-centred methods (active methods) to list but a few aspects. Therefore, the moment there is vertical and horizontal alignment in education, there is likelihood that adequate implementation of the CBM or the MTM can be realised, so do the intended learning outcomes.

In this regard, the presence of everything in imbalanced manner culminates in inadequate implementation of an educational innovation and low achievement of intended educational outcomes. For example, it is widely held that the CBM develops LLLA; however, this thesis shows that its development is gradual for undergraduates and it dramatically deteriorates for graduate students. This implies that there is the imbalance between multiple aspects that have to align in implementing the CBM and the MTM. The CBM sounds an eclectic instructional model. Mkonongwa (2018) contends that, under the CBM in practice educational processes in classes are personalised and are community-based educational processes. In practice, even the MTM has similar establishments; the main difference is on the degree of emphasis on active methods, the CBM puts much emphasis on active methods in classes whereas the MTM offers a more balanced form of assessment and teaching methods. This is to say, it draws from both instructional models.

In summary, poor economic conditions in a country, in the higher education institutions and among the *professors* culminate in inadequate time of implementing the norm instructional models for studied institutions and *professors*. Under poor economic conditions, the implementation of the mainstream innovations, including the norm instructional models in higher education institutions in Tanzania education system lag behind.

The sub-factors under poor economic conditions impeding the implementation of the norm instructional models are at two broad levels, namely at macro-meso-level and at micro-level. Sub-factors at macro-meso-level include overcrowded classes; shortage of *professors* and lack of training on innovations among *professors*.

Sub-factors at micro-level include *professors* working as part-timers in other higher education institutions. *Professors* engaging in research projects more than doing teaching. Therefore, poor economic conditions result in *professors* lacking time to implement the norm instructional models, the CBM and the MTM.

Furthermore, some students and *professors* lack proficiency in the language of instruction. In this situation, the application of the CBM or the MTM suffers because the students and sometimes the *professors* are not proficient in the language of instructional.

Moreover, *professors* and students alike lacked the reading culture. Probably, this is the case especially when one is groomed in a context where reading is meant for passing examinations. This examination tradition kills the reading culture because examinations syndrome implicitly tells students that reading is only useful when one is a student (on studies). In higher education institutions, most students were not keen with reading books or articles provided for them to read. This issue was revealed in undergraduate and graduate students. In some instances, students were reluctant to contribute when *professors* required them to do so. The reluctance to cooperate may be because of poor reading culture or because of lack of proficiency in the language of instruction.

Moreover, the teaching tradition at lower levels of education might influence the way students participate in the teaching and learning processes in higher education institutions. For example, if students come from schools in which teachers provide some notes and students' role is to reproduce the notes in examinations, it might be difficult for them to understand articles or books they read. Students from such a background are likely to keep quiet when asked to contribute in higher educational context.

Finally, the *professors* have to know the object of teaching before deciding on how to teach it. In addition, *professors* need to have will and commitment to do their job in a professional way. The nature of the content determines the method a *professor* uses. To add, the availability of a variety, current, and quality resources equally influence the way the *professor* chooses the teaching method or instructional model.

CHAPTER SEVEN

IMPLEMENTED INSTRUCTIONAL MODELS AND THEIR EFFICACY IN DEVELOPING LIFELONG LEARNING ATTITUDE

7.1 Introduction

The previous chapter is about the factors, which resulted in the dominance of implemented instructional models. The present chapter presents, interprets and discusses findings for research objective three. The objective is; *to determine how far the implemented instructional models inform the development of lifelong learning attitude in studied Tanzania higher education institutions*. The chapter argues that the implemented instructional models culminate in the gradual development of LLLA for year one undergraduate students and they result in deterioration in LLLA for year one graduate students.

7.2 Efficacy of implemented instructional models in developing LLLA in the institutions

This section presents various implemented instructional models by institutions and programmes. The presentation of findings is based on the higher education institutions, the implemented instructional models and development of each LLLA dimension. This section presents the findings based on two perspectives, namely the narrow view and the broad view of understanding the findings. The narrow view looks at the findings based on lifelong learning attitudes (LLAs) and its dimensions. The narrow view of understanding the findings is useful for readers to understand the attitudes and dimensions of LLLA, which are developed or not developed for action. The broad view looks at findings on the basis of YLLAIP that is obtained through calculating the average scores of all LLLA dimensions. The study uses the broad view of understanding of the findings to make conclusions on whether or not an implemented instructional model operating in a programme develops LLLA. Before presenting the findings, the section provides information on the analysis of data for the research objective and the criteria for the interpretation of data at a glance.

In this study, LLLAs for each dimension were measured through a three-point Likert scale. The study generated the percentages for Likert scales, and then, the generated data were subjected to YIP the results of which were used to interpret each selected LLLA dimension. Thereafter, the overall YIP average score for all dimensions was calculated to determine LLLA development from each implemented instructional model and for each studied programme. In that regard, the first stage for the YIP was calculated as follows:

$$\frac{A - D}{N}$$

Whereby:

A is number of responses in Agree Likert scale, *D* is number of responses in Disagree Likert scale and *N* is number of all responses in a programme. In this way, the YIP was calculated for each dimension and attitude as indicated in Appendices 6.1: 6.2: 6.3: and 6.4. The calculated YIP for Phases I and II of data collection is indicated in the tables. The development of LLLA in Phase I is compared against that of Phase II to see whether there was development (growth), stagnation, or deterioration in LLLA in a given LLLA dimension for one academic year of studying several courses. The development of LLLA in a dimension was determined through calculating the YIP average score of a given dimension for both phases. The YIP scores are between -1 and 1. The interpretation of results is thus based on the YIP. The decision rule is that the YIP score, which is mathematically larger than that recorded in Phase I the presupposition, is that there is positive development in a dimension of LLLA. If the YIP is mathematically smaller in Phase II than in Phase I, the presupposition is that there is deterioration in a dimension of LLLA. In the same way, if the YIP is mathematically the same in Phases I and II; the presupposition is that there is stagnation of a dimension of LLLA. Since we are now familiar with the decision rule, the paragraphs below present the findings on the LLLA dimensions, namely shouldering responsibility for learning, managing different situations, application of learning, evaluation of information and looking at things in overall perspective. This is a narrow view of understanding the findings, which is presented before the broad view of understanding the same.

7.2.1 Shouldering responsibility for learning

As seen in chapter five, the implemented instructional models for institution M were the ECBM and the MiTM. The instructional models were implemented in the B. Education programme. From the implemented instructional models, the results show that on the dimension of taking responsibility for learning the first Likert item measuring it was *I prefer to have others plan my learning* respondents deteriorated in this attitude in phase II from Very high YIP to High (see App. 7.1). This implies that the respondents had Very high ability to plan for their own learning before they joined the undergraduate programme and the ability gradually deteriorated after joining the programme. Importantly, this implies that the implemented instructional model in institution M, ECBM culminates in deterioration in planning for their own learning as one of attitudes of LLLA.

In institution D, the implemented instructional model was ETM for BA Education programme. This implemented instructional model showed that respondents had a Very high ability to plan for their own learning in phase I, and the ability solidly stagnated in phase II (see App. 7.2.). This implies that respondents join the higher education institution when they have a Very high ability to plan for their own learning, and the ability remains solid Very high after attending course in two semesters. This further implies that the implemented instructional model does not have any effect on the development of ability to plan for own learning. In another programme in institution D, Master of Art in Educational Management and Administration (MEMA) under the ETM shows that respondents had Low ability to plan for their own learning in phase I, and the ability slightly developed to Medium in phase II (see App. 7.3). This implies respondents join the graduate programme with low sense of planning for their own learning. It further implies that the implemented instructional model developed ability to plan for one's learning.

Furthermore, in institution D, in the Master of Art in History (MA.HI) programme under the CCBM, the respondents had Very low ability to plan for their own learning in phase I, and the ability slightly deteriorated in phase II (see App. 7.4). This implies that respondents join the degree programme in the higher education

institution with Very low ability to plan for their own learning. This further implies that the implemented instructional model results in gradual deterioration in ability to plan for own learning.

The second Likert item measuring responsibility for learning was *I seldom think about my own learning and how to improve it*. In the ECBM implemented in institution M, results indicate that respondents had High ability to think about their own learning in phase I, and it dramatically developed to High in phase II (App. 7.1). This implies that the students join the programme with High ability to think about their own learning. This further implies that ECBM results in the development of ability to assess one's learning and improve it. In institution D, in the BA Education programme under the ETM, respondents had High ability to think about their own learning and improve it in phase I, and it developed toward a positive direction to High in phase II (see App 6.2). This implies that respondents join the higher education institution with High ability to think about their own learning and to improve it. This further implies that the implemented instructional model culminates in the development of one's ability to reflect and review own learning.

Again, in institution D that implemented the ETM in MEMA programme, the results show that respondents had Medium ability to review their own learning and improve it in phase I, and it developed toward a positive direction to a High in phase II (see App. 7.3.). This implies that respondents join the degree programme with Medium ability to evaluate about their own learning. It further implies that the implemented instructional model results in the development of ability to do self-evaluation in learning. In the same institution in the MA.HI, a graduate programme, under the CCBM, results show that respondents had High ability to review their own learning in phase I, and it dramatically deteriorated to Very low in phase II (see App. 7.4). This implies that respondents join the degree programme with High ability to make self-evaluation and improving their own learning process. It also implies that the implemented instructional model results in dramatic deterioration of ability to make self-evaluation.

The third Likert item measuring ability to take responsibility for learning was *I feel I am a self-directed learner*. In institution M, the implemented instructional model was ECBM. In this regard, results show that respondents had Medium sense of self-directedness in phase I, and it dramatically deteriorated, but it remained High in phase II (see App 7.1). This implies that respondents join the degree programme with Medium ability to demonstrate self-directedness. This further implies that the implemented instructional model results in deterioration in self-directedness in learning. In institution D, BA Education programme under ETM, results from this instructional model show that respondents had Medium ability in demonstrating self-directedness in learning in phase I, and it dramatically developed toward a positive direction to Medium in phase II (see App. 7.2). This implies respondents join the degree programme with Medium ability on self-directedness in learning. This further implies that the implemented instructional model culminates in the development of a sense of self-directedness in learning.

In institution D, MEMA programme under the ETM, results from this instructional model show that respondents had Medium ability on self-directedness in phase I, and the ability drastically deteriorated to Low in phase II (see App 7.3). This implies that respondents join the graduate programme when they have Medium ability on self-directedness, and the ability dramatically deteriorate as they proceeded with their studies. This further implies that the implemented instructional model in this programme culminate in the deterioration in self-directedness in learning. In the same way, in institution D, MA.HI, a graduate programme under the CCBM, results show that respondents had Very high sense of self-directedness in learning in phase I, and it showed solid stagnation in phase II (see App 7.4). This implies that respondents join the degree programme with Very high sense of self-directedness, and they remain Very high in sense of self-directedness. This implies that the implemented instructional model in the programme in institution D does not affect a sense of self-directedness among learners.

Additionally, ability to do self-assessment for a student was one of measurements for one's responsibility for learning, and the Likert item for this attitude of LLLA

was I feel others are in a better position than I am to evaluate my success as a student. In institution M, the implemented instructional model was ECBM, and the results show that respondents had a Medium ability to do self-evaluation about their own learning in phase I, and it slightly deteriorated to Medium in phase II (see App. 7.1). This implies that respondents join the degree programme with Medium ability to do self-evaluation in learning. This further implies that the implemented instructional model results in deterioration in ability to do self-evaluation. In institution D, BA Education programme under the ETM, results show that respondents had Low ability to make self-evaluation in learning during phase I, and the ability dramatically developed toward a positive direction to High in phase II (see App. 7.2). This implies that respondents join the degree programme with Low ability to make self-evaluation in learning. It further implies that the implemented instructional model culminates in the development of ability to make self-assessment among students.

Again, in institution D, MEMA programme under the ETM, its results show that respondents had Medium ability to make self-evaluation about their own learning in phase I, and it dramatically developed toward a positive direction to High in phase II (App. 7.3). This implies that respondents join the degree programme with Medium ability to make self-evaluation. This further implies that the implemented instructional model results in the development of ability to do self-evaluation in learning process. In the same institution, MA.HI, a graduate programme under the CCBM, its results show that respondents had High ability to make self-evaluation in learning during phase I, and it rapidly deteriorated to Very low in phase II (App. 7.4). This implies that respondents join the degree programme with High ability to make self-evaluation. This further implies that the implemented instructional model culminates in the deterioration of ability to make self-evaluation in learning.

Further, one of the measurements of responsibility for learning was ability to connect what one already knows with what one learns, the Likert item was *when I approach new material; I try to relate it to what I already know.* In institution M, under ECBM, results show that respondents had Very high ability to relate old materials to

new materials during phase I, and it slightly deteriorated, but it remained Very high in phase II (see App. 7.1). This implies that implemented instructional model results in gradual deterioration in attitude to relate old materials to new ones. In institution D, BA Education programme under the ETM, results show that respondents had a Very high ability to relate old learning to new one in phase I, and it dramatically deteriorated, but it remained Very high in phase II (see App. 7.2). This implies that respondents join the degree programme with Very high ability to associate between what they already know and what they learn. This further implies that the implemented instructional model results in gradual deterioration of ability to associate between what they already know and what is new during learning.

In another programme, in institution D, MEMA under ETM, its results show that respondents had Very high ability to relate old materials to new ones in phase I, and it drastically deteriorated though it remained Very high in phase II (see App. 7.3). This implies that respondents join the degree programme with Very high ability to associate the prior learning to new knowledge. This further implies that the implemented instructional model culminates in deterioration in ability to relate old materials to new ones. In institution D. MA.HI under the CCBM, its results show respondents had Very high ability to relate old materials to new ones in phase I, and it drastically deteriorated, but it remained Very high in phase II (see App. 7.4). This implies that respondents join the degree programme with Very high ability to associate prior learning to new knowledge. This further implies that the implemented instructional model results in deterioration in ability to relate old materials to new ones.

Further another measurement for responsibility for learning tested ability to make sense of what one learns, the Likert item of which was *it is my responsibility to make sense of what I learn at school*. In institution M, B. Education programme under the ECBM, its results show that respondents had Very high ability to make sense of what they learnt at school in phase I, and it slightly deteriorated in phase II, but it remained Very high (see App. 7.1). This implies that respondents join the degree programme with Very high ability to make sense of what they learn. This further

implies that the implemented instructional model resulted in gradual deterioration of ability to make sense of what one learns during schooling. Accordingly, in institution D, BA Education programme under the ETM, results show that respondents had a Very High ability to make sense of their own learning in phase I, and it slightly deteriorated in phase II (see App. 7.2). This implies that respondents join the degree programme with Very high ability to make sense of their own learning. This further implies that the implemented instructional model results in gradual deterioration of responsibility for making sense in learning.

In the programme MEMA in institution D under the ETM, its results show that respondents had Very high ability to make sense about what they learnt in phase I, and it dramatically deteriorated in phase II, but it remained Very high (see App. 7.3). This implies that respondents join the degree programme with Very high ability to take responsibility for learning. Moreover, this implies that the implemented instructional model culminates in deterioration in ability to make sense in learning among students. In addition, in institution D, MA.HI, a graduate programme operated under the CCBM, its results show that respondents had a Very High ability to make sense of what they learnt, and it stagnated in phase II (see App. 7.4). This implies that respondents join the degree programme with Very high ability to make sense of what they learn at school. This further implies that the implemented instructional model results in stagnation of ability to make sense of what they learn. The understanding of findings in view of the above attitudes is a narrow view of understanding the same. Below, it is a broad view of understanding the findings for shouldering responsibility for learning, a dimension of LLLA.

To understand whether or not there was positive development on student ability to shoulder responsibility for learning the YIP average score for responsibility for learning attitudes was calculated for each implemented instructional model in each studied programme. The results indicated that the YIP average score was high in phase I, and it slightly deteriorated in phase II for B Ed programme under the ECBM housed in institution M (see App. 7.1). This implies that ECBM resulted in gradual deterioration of ability to shoulder responsibility for learning in this studied

institution and degree programme. In institution D, the YIP average score indicated that respondents had High ability to shoulder responsibility for learning and they gradually developed toward a positive direction in phase II (see App. 7.2). This implies that the implemented instructional model, ETM results in the development of responsibility for learning. It is further inferred that the respondents are likely to keep growing stronger in ability to shoulder responsibility for learning as they proceed with their studies. Moreover, in institution D, MEMA programme under the ETM, its results show that respondents had High ability to shoulder responsibility for learning in phase I, and it slightly developed toward a positive direction in phase II (see App. 7.3). This implies that the implemented instructional model contribute to gradual development of ability to should responsibility for learning. Finally, for MA.HI programme under the CCBM in institution D, its results indicate that respondents had high ability to shoulder responsibility for learning in phase I, and it dramatically deteriorated in phase II (See App. 7.4). This implies that the implemented instructional model results in drastic deterioration in ability to shoulder responsibility for learning.

7.2.2 Managing different situations

In order to know the presumed ability of a student to handle different situations in life, the study used one of the measurements, which tested the extent to which a respondent felt would solve problems as they arose. In this regard, the Likert item was *I can deal with the unexpected and solve problems as they arise*. In institution M, B Education programme under the ECBM, in phase I, the respondents showed Medium ability to solve problems as they arose, and the ability recorded slight development toward a positive direction in phase II (see App. 7.1). This implies that respondents join the degree programme with Medium ability to solve problems promptly. Further, it implies that the implemented instructional model resulted in gradual development of ability to deal with unprecedented problems. In institution D, BA Education programme under ETM, its results show that respondents showed High ability to solve problems as they arose in phase I, and it dramatically developed toward a positive direction in phase II (see App. 7.2). This implies that respondents join the degree programme with High ability to solve unexpected problems. It

further implies that the implemented instructional model culminated in the development of ability to solve unexpected problems.

In institution D, MEMA programme under the ETM, its results show that respondents indicated High ability to handle uncertain situations in phase I, and the ability deteriorated in phase II, but it remained High (see App. 7.3). This implies that respondents join the degree programme with High sense of solving uncertain problems. Furthermore, it implies that the implemented instructional model results in gradual deterioration in ability face uncertainties. In respect of institution D, MA.HI programme under the CCBM, its results indicated that respondents had Very high ability to handle unprecedented problems in phase I, and it remained solid Very high in phase II (see App. 7.4). This implies that respondents join the degree programme with Very high ability to handle unexpected problems. This further implies implemented instructional model culminates in stagnation of ability to handle unexpected problems.

Another measurement for ability to handle different situations tested ability to face new situations and handle them accordingly. The Likert item was *I feel uncomfortable under conditions of uncertainty*. In institution M B Education under ECBM, its results show that respondents had Low ability to face uncertain situations in phase I, and it deteriorated in phase II (see App. 7.1). This implies that respondents join the degree programme with Low ability to handle new situations in life. This further implies that the ECBM culminates in deterioration in ability to handle unpredictable conditions in life. In institution D, BA Education programme under the ETM, its results show that respondents had Medium ability to contain uncertain conditions in phase I, and it deteriorated to Low in phase II (see App. 7.2). This implies that the implemented instructional model results in deterioration in ability to solve problems in a prompt way for undergraduates.

In graduate programmes, for example, the MEMA under the ETM, its results indicate that respondents had a Medium ability to handle uncertain situations in phase I and it dramatically developed toward a positive direction in phase II (see App. 7.3). This

implies that the implemented instructional model results in the development of ability to handle uncertain situations among students. In institution D, MA.HI programme under the CCBM, its results show that respondents had Low ability to handle uncertain situations in phase I, and the ability dramatically developed to Very high in phase II (see App. 7.4). This implies that the implemented instructional model culminates in the development of ability to handle uncertain situations.

Further, another measurement for ability to manage different situations tested how respondents felt when they encountered confusing situation. The Likert item was *I am able to impose meaning upon what others see as disorder*. In institution M, B Education programme under ECBM, its results show respondents indicated Medium ability to make sense under complicated situations, and it developed to High in phase II (see App. 7.1). This implies that respondents join the institution when they have Medium ability to handle complex situations. Moreover, this implies an implemented instructional model results in the development of ability to handle complex situations in life. Equally important, in institution D, BA Education programme under the ETM, its results show that respondents had High ability to make meaning out of confusing situations in phase I, and it slightly deteriorated in phase II, but it remained High (see APP. 7.2). This implies that the implemented instructional model culminates in deterioration of ability to make sense out of what others see as problematic situations.

In institution D, MEMA programme under the ETM, its results show that respondents had High ability to make meaning out of what others see as disorder in phase I, and it dramatically developed in phase II, but it remained High (see App. 7.3). This implies that the implemented instructional model culminates in the development of ability to make sense from confusion. In institution D, MA.HI programme under the CCBM, its results show that respondents had High ability to make sense from what other people saw as confusion in phase I, and it slightly developed toward a positive direction in phase II, and it remained High (see App. 7.4). This implies that the implemented instructional model results in the development of ability to make sense in complex situations.

The last measurement for managing different situations involved testing respondents on their ability to think in a divergent way. The Likert item for measuring divergent thinking was *I prefer problems for which there is only one solution*. In institution M, B Education programme under the ECBM, its results show that respondents had Very low ability to generate multiple solutions to a problem in phase I, and the ability deteriorated to Very low in phase II (see App. 7.1). This implies that students join the degree programme with Very low sense of divergent thinking. This further implies that the implemented instructional model culminates in the deterioration in ability to generate several solutions for a problem. In institution D, BA Education programme under ETM, its results indicate that respondents had Very low ability to generate a number of alternatives for a problem in phase I, and the ability deteriorated in phase II (see App. 7.2). This implies that respondents join the undergraduate programme with Very low divergent thinking. This further implies that the implemented instructional model results in deterioration in divergent thinking among year one students.

In institution D, MEMA programme under the ETM, its results show that respondents had Very low ability to generate multiple alternatives for a problem in phase I, and it developed toward a positive direction in phase II, but it remained Very low (see App. 7.3). This implies respondents join the degree programme with Very low ability to generate a number of solutions to a problem. Further, this implies that the implemented instructional model result in gradual development of ability to generate multiple solutions for a problem. In the same institution, MA.HI under the CCBM, its results indicate that respondents had High ability to generate multiple solutions to a problem in phase I, and it deteriorated dramatically to Low in phase II (see App. 7.4). This implies that respondents join the programme with High ability to generate multiple solutions to a problem. This further implies that the implemented instructional model culminates in deterioration of ability to generate multiple solutions for a problem. The next paragraph presents overall development of ability to manage different situations for each implemented instructional model and for each studied programme from higher education institutions.

In institution M, looking into the YIP average score for managing different situations in the B Education under the ECBM, the findings show that the ability was Low in phase I, and it slightly developed toward a positive direction in phase II, but it remained Low (see App. 7.1). This further implies that the implemented instructional model in the institution gradually contribute to the development of ability to solve problems in different situations in life. As for institution D, BA Education programme operated under the ETM, the findings show that respondents had Medium ability to manage different situations in phase I, and it dramatically deteriorated in phase II (see App. 7.2). This implies that the implemented instructional model results in the deterioration in ability to face different situations in life. This follows that the graduates from the ECBM and from the ETM do not develop ability to solve problems in different situations in life to High YIP at the time of graduation.

Furthermore, in institution D, MEMA programme under the ETM, the YIP average score show that respondents had Medium ability to solve problems in different situations in phase I, and it gradually developed toward a positive direction in phase II, but it remained Medium (see App. 7.3). This implies that the implemented instructional model contributes to the development of ability to manage different situations at marginal degree. In the same institution, the MA.HI programme under the CCBM, its findings show that respondents had High ability to manage different situations in Phase I, and it dramatically deteriorated to Medium in phase II (see App. 7.4). This implies that the implemented model results in deterioration in ability to manage different situations in life. This is a surprising finding given the nature of implemented instructional model in this institution and/or programme. This situation might be attributable to too much focus on passing courses rather than developing internal interest to solve problems.

7.2.3 Application of learning

Application of knowledge as one of lifelong learning attitudes feature was tested through a Likert item that measured the ability of respondents to apply knowledge. The Likert item was *I love learning for its own sake*. In institution M, B. Ed

programme under the ECBM, its results show that respondents had a Medium ability to apply their learning in phase I, and it dramatically deteriorated to Low in phase II (see App. 7.1). This implies that respondents join the degree programme with Medium ability to apply knowledge from learning process. This further implies that the implemented instructional model culminates in deterioration in the ability to apply knowledge among students. In institution D, BA Education programme under the ETM, its results indicated that respondents had Medium ability to apply learning in phase I, and it deteriorated in phase II, but it remained Medium (see App. 7.2). This implies respondents join the degree programme with Medium ability to apply knowledge. This further implies that the implemented instructional model results in deterioration in ability to apply knowledge.

Again in institution D, MEMA programme under the ETM, its results show that respondents had High ability to apply learning in phase I, and it dramatically deteriorated in phase II, but it remained High (see App. 7.3). This implies that respondents join the degree programme with High ability to apply knowledge. This further implies that the implemented instructional model results in deterioration of ability to apply knowledge among students. In the same institution, MA.HI programme under the CCBM was studied; its results show that respondents had Low ability to apply knowledge in phase I, and it developed to High in phase II (see App. 7.4). This implies that respondents join the degree programme with Low ability to apply knowledge. This further implies that the implemented instructional model results in growth of ability to apply knowledge.

Another measurement for ability to apply knowledge tested the extent to which the respondents were able to relate academic with practice, the Likert item was *I try to relate academic learning to practical issues*. In institution M, B Education programme under the ECBM, its results indicate that respondents had High ability to relate academic and practice in phase I, and it dramatically developed to Very high in phase II (see App. 7.1). This implies that respondents join the degree programme with High ability to relate theory to practice. Furthermore, it implies that the implemented instructional model culminates in the growth of ability to relate

academic with practice. In institution D, BA Education programme under the ETM was studied; results show that respondents had High ability to relate academic to practice in phase I, and it dramatically developed to Very high in phase II (see App. 7.2). This implies that the respondents join the degree programme with High ability to relate academic to practice. Furthermore, this implies that the implemented instructional model resulted in the growth of ability to relate academic to practice.

In connection with the above findings, institution D had another programme, MEMA under the ETM, its results indicated that respondents had Very high ability to relate academic and practice in phase I, and it stagnated (remained solid) Very High in phase II (see App. 7.3). This implies that respondents join the degree programme with Very High ability to relate academic and practice. This further implies that the implemented instructional model culminated in stagnation of ability to relate academic and practice. In the same institution, the MA.HI, a graduate programme under the CCBM, its results show that respondents had Very high ability to relate academic and practice in phase I, and it dramatically deteriorated to High in phase II (see App. 7.4). This implies respondents join the graduate programme with Very High ability to relate academic and practice. This also implies that the implemented instructional model results in dramatic deterioration in ability to relate theory to practice.

Calculating the YIP average score for application of knowledge measurements, the results indicate that in institution M B Education programme under the ECBM; respondents had High ability to apply knowledge in phase I, and it stagnated solidly in phase II (see App. 7.1). This implies that the implemented instructional model culminates in stagnation of ability to apply learning among students. This further infers that the respondents are likely to graduate with high ability to apply knowledge. Further, in institution D, BA Education programme under the ETM, its YIP average score shows that respondents had High ability to apply knowledge in phase I, and the ability dramatically developed to High in phase II (see App. 7.2). This implies that the implemented instructional model largely contributes to the growth of ability to apply learning for undergraduates in the institution.

Similarly in institution D, the MEMA programme under the ETM, the results indicated that respondents had Very high ability to apply knowledge in phase I, and it slightly deteriorated in phase II (see App. 7.3). This implies that the implemented instructional model culminates in gradual deterioration of ability to apply learning. In the same institution, MA.HI programme under the CCBM, results indicate that respondents had a Very high ability to apply learning in phase I, and it dramatically deteriorated to high in phase II (see App. 7.4). This implies that the implemented instructional results in steep deterioration in ability to apply knowledge.

7.2.4 Evaluation of information

In relation to ability to locate information, the Likert item was *I often find it difficult to locate information when I need it*. In institution M B Education programme under the ECBM was studied; its results indicate that respondents had Low ability to locate information when needed in phase I, and it slightly deteriorated in phase II, but it remained Low (see App. 7.1). This implies respondents join the degree programme in the institution with Low ability to draw the right information to use when needed. In addition, it implies that the implemented instructional model culminates in gradual deterioration in ability to evaluate information. In institution D, BA Education programme under the ETM, its results indicate that respondents had Medium ability to draw the right information when needed in phase I, and it slightly developed toward a positive direction in phase II, but it remained Medium (see App. 7.2). This implies that respondents join the degree programme with Medium ability to locate information when needed. This further implies that the implemented instructional model results in gradual development of ability to evaluate information.

In the MEMA programme under the ETM in institution D, results indicate that respondents had Low ability to locate information when needed in phase I, and their ability deteriorated to Very low in phase II (see App. 7.3). This implies that respondents join the degree programme with Low ability to locate information. It further implies that the implemented instructional model results in the deterioration in ability to evaluate information. In the same institution, the MA.HI programme under the CCBM, results show that respondents had Low ability to locate

information in phase I, and it rapidly deteriorated to Very low in phase II (see App. 7.4). This implies respondents join the degree programme with Low ability to evaluate information. It further implies that the implemented instructional model culminates in steep deterioration of ability to evaluate information.

7.2.5 Looking at things in “big picture”

Regarding the development of ability to look at things in a “big picture,” the Likert item was *when I learn something new I try to focus on the details rather than on the ‘big picture’*. In institution M, B Education programme under the ECBM was studied; its results indicate that respondents had High ability to see things in a big picture in phase I, and it developed dramatically toward a positive direction to High in phase II (see App. 7.1). This implies that respondents join the degree programme with High ability to look at things in a “big picture.” This further implies that the implemented instructional model contributes to the development of ability to look at things in a “big picture.” In institution D, BA Education programme under the ETM, its results indicate that respondents had High ability to focus on a “big picture” in phase I, and it dramatically developed to Very high ability in phase II (see App. 7.2). This implies that respondents join the degree programme with High ability to look at things in a “big picture” when learning. This further implies that the implemented instructional model results in the development of learners’ tendency to focus on a “big picture” on what they learn.

In institution D, the MEMA programme under the ETM, results indicate that respondents had Medium ability to look at things in a “big picture” in phase I, and it developed to High in phase II (see App. 7.3). This implies respondents join the degree programme in the institution while they have Medium ability to look at things in a “big picture.” This further implies that the implemented instructional model resulted in the development of the ability to look at things in a “big picture.” In same institution, the MA.HI programme under the CCBM, its results show that respondents had Very high ability to look at things in a “big picture” in phase I, and it stagnated (remained solid) Very high in phase II (see App. 7.4). This implies that respondents join the degree programme with Very high ability to see things in a “big

picture” when learning. It further implies that the implemented instructional model results in the development of ability to look at things in a “big picture.” Having seen the findings from all studied institutions and programmes, the section below covers on the understanding of findings through comparing programmes under different instructional models.

7.3 Cross-case understanding of findings

In this section, we look into findings based on programmes and institutions, M and D. Thus the section delves into the understanding of two undergraduate and two graduate programmes on the development of LLLA. The understanding of development of LLLA in narrow view perspective, specifically, at the level of LLLA dimensions. Doing cross-case analysis is important for generalisation of some of the findings and gaining insights on the development of selected dimensions of LLLA based on degree programmes.

In that regard, in institution M, B Ed programme under the ECBM had High ability to shoulder responsibility for learning and it deteriorated with training time. In contrast, the BA Ed programme under the ETM in institution D had High ability to shoulder responsibility for learning, and it gradually developed toward a positive direction with training time. In the same institution, MEMA programme under the ETM had High ability to take responsibility for learning, and it gradually developed toward a positive direction over time. Nevertheless, the MA.HI programme under CCBM had High ability to take responsibility for learning. Nevertheless, the ability dramatically deteriorated over time. Surprisingly, undergraduates had Higher YIP average scores on ability to take responsibility for learning when compared to graduate students. In view of this, all studied programmes had High ability at the beginning of semester I; however, they varied over time.

Cross-case analysis on ability to manage different situations in life shows that B. Ed programme under the ECBM in institution M had low ability to manage different situations in life. However, the ability developed gradually toward a positive direction with training time. In the BA Ed programme under ETM in institution D,

the ability to manage different situations in life stood at Medium though it dramatically deteriorated over time. For MEMA, a graduate programme under ETM, respondents had Medium ability to handle different situations in life, and it gradually developed toward a positive direction. For MA.HI, a graduate programme under CCBM, the ability to solve problems in different situations was High at the beginning of their studies; however, it dramatically deteriorated to Medium. The development of ability to solve problems in different situations was ambivalent across programmes.

About the ability to apply learning, in the B. Ed programme under ECBM in institution, M respondents had High ability to apply learning; however, there was stagnation of the ability. With respect to BA Ed programme under ETM in institution D, respondents had High ability in applying knowledge, and it developed toward a positive direction with time. For MEMA, a graduate programme under the ETM, respondents had Very high ability to apply knowledge. However, it deteriorated over time, but it remained Very High. On the contrary, the MA.HI a graduate programme under CCBM respondents had Very high ability to apply knowledge. Nevertheless, it dramatically developed to High. In this situation, graduate students had Very high ability whereas undergraduates had High ability. While graduate students showed deterioration in the ability, the undergraduates showed stagnation or development of the ability. Table 7.1 shows a summary of the information presented.

Table 7.1: Cross-case comparison for YIP average results for studied programmes by phases

Dimension of LLLA	programme	YIP-I	YIP-II	Programme	YIP-I	YIP-II
Responsibility for learning	B. Ed	0.73	0.70	MEMA	0.64	0.65
	BA Ed	0.72	0.76	MA.HI	0.67	0.35
Managing different situations	B. Ed	0.35	0.38	MEMA	0.44	0.46
	BA Ed	0.49	0.41	MA.HI	0.75	0.50
Application of learning	B. Ed	0.63	0.63	MEMA	0.86	0.80
	BA Ed	0.67	0.73	MA.HI	0.80	0.66
Evaluation of information	B. Ed	0.33	0.31	MEMA	0.24	-0.13
	BA Ed	0.41	0.42	MA.HI	0.33	-0.33
Looking at big picture	B. Ed	0.64	0.77	MEMA	0.57	0.60
	BA Ed	0.67	0.81	MA.HI	1.00	1.00
Average	B. Ed	0.53	0.56	MEMA	0.55	0.47
	BA. Ed	0.59	0.62	MA.HI	0.71	0.43

Table 7.1 shows that all programmes had High ability to take responsibility for learning, but some programmes developed toward a positive direction with time while others developed toward a negative direction. The table further shows that all programmes showed mixed findings on ability to manage different situations in life, but MEMA programme had stable and interpretable results on ability to manage different situations in life. In addition, the table shows that graduate students had higher ability to apply learning than undergraduates did. The table also shows that both undergraduates and graduate students were poor at ability to evaluate information and use it based on need(s). Moreover, the table shows that the MA.HI, a graduate programme had the highest scores on ability to look at things in a “big picture”.

The broad view of understanding of findings show that YIP average scores for the dimensions of LLLA in undergraduate programmes under the ECBM in institution M and those under the ETM in institution D resulted in gradual development of LLLA. In a surprising way, the ETM applied in institution D in MEMA, a graduate programme, it resulted in deterioration in LLLA. In a more surprising way, the MA.HI, a graduate programme under the CCBM in institution D resulted in dramatic

deterioration in LLLA. Table 7.2 shows the YIP average scores of LLLA dimensions for studied programmes in both semesters.

Table 7.2: Yeh's Index of Perception average scores for phase I and II by LLLA dimensions and programmes

Dimension of LLLA	Programme	YIP mean-I &II	Programme	YIP mean-I&II
Responsibility for learning	B. Ed	0.71	MEMA	0.64
	BA. Ed	0.74	MA.HI	0.51
Managing different situations	B. Ed	0.36	MEMA	0.45
	BA. Ed	0.45	MA.HI	0.73
Application of learning	B. Ed	0.63	MEMA	0.83
	BA. Ed	0.70	MA.HI	0.73
Evaluation of information	B. Ed	0.32	MEMA	0.05
	BA. Ed	0.41	MA.HI	0.00
Look in a big picture	B. Ed	0.70	MEMA	0.58
	BA. Ed	0.44	MA.HI	1.00
Averages	B. Ed	0.54	MEMA	0.51
	BA. Ed	0.54	MA.HI	0.59

Table 7.2 shows that undergraduates had Higher YIP average scores in phase I and Phase II on responsibility for learning than graduate students. Despite that, three programmes had High ability to shoulder responsibility for learning, two were undergraduate programmes and one was a graduate programme. Again, one graduate programme had Medium ability to shoulder responsibility for learning.

On ability to manage different situations, one undergraduate programme had low ability to manage different situations while two programmes, an undergraduate and a graduate programme had Medium ability to Manage different situations. Equally, one graduate programme, MA.HI under the CCBM demonstrated High ability to manage different situations.

About ability to apply learning, three programmes had High ability whereby one was a graduate programme. At the same time, one graduate programme, MEMA had a Very high ability. Overall, graduate programmes had higher ability than undergraduate programmes in applying learning.

Surprisingly, on ability to evaluate information, the graduate programmes had a Very low ability whereby undergraduate programmes had Low and Medium ability. In

reference to ability to look at things in a “big picture”, there were mixed results, one of undergraduate programme demonstrated Medium ability while another one showed High ability. In the same way, one graduate programme showed Medium ability while another one showed Very high ability. The YIP average scores for undergraduate and graduate programmes stood at Medium development of LLLA. However, the MA.HI under the CCBM had the Highest YIP average score.

7.4 Discussion

7.4.1 Efficacy of implemented instructional models and in developing lifelong learning attitude

This section discusses findings presented. In the discussion of the findings, there is integration of findings from Chapter Five on the implemented instructional models. Therefore, there are concepts from Chapter Five in this section.

In the B. Education programme in institution M, there was development toward a positive direction in some of dimensions of lifelong learning attitude. This implies that the ECBM culminates in the development of some of the dimensions of lifelong learning attitude.

Furthermore, there was gradual development of LLLA toward a positive direction in a programme under the ECBM or MiTM. This implies that the implemented instructional model steadily develops most of lifelong learning dimensions toward a positive direction. The findings imply that students under the ECBM graduate with some traits of lifelong learners. The gradual development of LLLA toward a positive direction could be attributable to core functions of *professors* in classes, which are reading and clarifying contents to students (see Chap. V) of this thesis. The findings agree with the Variation Theory by Marton as improved by Lo (2012) who assumes that the choice of teaching methods makes a teaching effective or ineffective.

Furthermore, these findings are like this probably because in studied programme in institution M; students do not have seminar sessions in the programme or rather institution. Therefore, probably students show gradual development LLLA because

they do group works under high cooperation from each group member, thus, growing gradually as they learn through group discussions from group assignments outside classes. Moreover, probably the findings are like this because of the students are by-and-large exposed to lifelong learning precepts from their teachers since the institution is under the NACTE. Therefore, *professors* do some extra job in developing lifelong learning attitude among students. However, *professors'* way of teaching is mostly the same in the two studied institutions.

Furthermore, there was gradual development of LLLA toward a positive direction for undergraduates, under the ETM. In contrast, there was deterioration in LLLA among graduate students under the ETM. This implies that the ETM contributes to gradual development of LLLA among undergraduates and it results in deterioration in LLLA among graduate students. The findings are similar to those of other scholars (Weltman & Whiteside, 2010) who assert that active learning promotes academic achievement among students with low grade point average, and it results in low academic achievement among students with higher grade point average. This implies further that the ECBM used in institution M is as good as the ETM, which has some diluted seminars. This finding is consistent with the research model, which assumes that the CBM is more likely to result in the development of LLLA. Since the ETM has a higher YIP score than the ECBM or MiTM. However, the YLLLLAIP score difference for the two instructional models is marginal. Probably, the findings imply that the ECBM and the ETM have equal chances to develop LLLA. Furthermore, it may imply that students in institution M work more effectively in-group assignments than those in institution D. In view of this understanding, it might not mean that the ETM is more ineffective than the ECBM in developing LLLA, but rather the problem is on how it is implemented by both students and their *professors*. According to Xing, Lin and Gui-feng (2013) the mode of teaching that moves from lectures to seminar sessions results in the best in promoting self-initiative and creativity among students studying statistics. This implies lecture to seminar sessions mode is also good at developing LLLA since self-initiative and creativity are some of attitudes of lifelong learners. This instructional model, MTM is

proposed to be used in higher education institutions in China (Xing, Lin & Gui-feng, 2013).

There was deterioration in LLLA development in a programme under the CCBM. This implies the CCBM does not develop lifelong learning attitude among students. These findings are unexpected. Further, the findings imply that the CCBM does not develop lifelong learning attitude. These findings are not in line with the research model that logically assumes that the CBM develops LLLA better than the MTM. The findings also contradict with the widely held belief that the application of the CBM results in the development of LLLA. Probably, this is because students under the instructional model are more biased on individual assignments, and are overloaded with tons of individual assignments such that they have no time to learn from others in informal settings. This implies further that *professors* need to go extra mile to develop LLLA among students. These finding are similar to those of other scholars (Xing, Lin & Gui-feng, 2013) who assert that a combination of typical traditional lecture method with seminar sessions is a better way of teaching graduate students than the use of seminar sessions alone. Probably, this thinking applies in the context of this study as well though the subjects examined are quite different in context and in nature. More importantly, it could be because students concentrate more on passing courses than concentrating on learning.

The ECBM and the ETM had interrelated levels, which ranged from 0.51 to 0.61 attained YLLAIP. The CCBM had the highest, 0.69 YLLAIP. This implies that the CCBM has more chances to develop LLLA among students in Tanzania higher education institutions. This implies further that the difference in the years of schooling seem to count in developing LLLA. These findings agree with the assumption of the perception theories by Gibson and Gregory both of 1966 that experience and education influence the perception of an entity (Demuth, 2013). This implies further that the more one attains higher education and the more one is experienced the lower one develops LLLA in higher education in Tanzania. This is because graduate programmes show deterioration in lifelong learning attitude development despite having different instructional models in operation.

In institution D, the graduate programme, MA.HI under the CCBM showed deterioration in the development of LLLA. This implies that the implemented instructional model culminates in the deterioration in most of the dimensions of LLLA. This finding agrees with Gibson's Theory of perception, which assumes that the change of one's position on what they see is a function of a change in understanding of the world in which one is (Demuth, 2013). It implies further that the way *professors* apply the implemented instructional model in the programme do not appear to be dearly contributing to the development of LLLA in the programme. This implies further that the development of LLLA is not about the instructional model applied, but it is probably about what the *professors* tell the students about sources of knowledge. It is also about how to solve problems in life, the reason students should be inquisitive through life, about how to face the fast-changing world with its complex problems politically, socially, culturally, economically, and the list goes on.

For example, do *professors* tell students to value informal sources of knowledge? Do *professors* encourage students to evaluate their own learning? In addition, do *professors* present cases of complex problems from various spheres of life and encourage students to think about them and provide possible solutions for them? Or do *professors* tell the students the purpose of independent reading/study they provide to them? Do *professors* help and tell students about the purpose of group assignments in higher education institutions? At times, students are exposed to answers of these questions as they relate to the kind of the world in which they are. They can easily associate what they learn and the competences gained. These findings contradict the research model of this study, which assumes that the CBM results in higher sense of LLLA. These findings disagree with those of Cropley and Knapper (1983) who report that student-centred methods promote lifelong learning. Moreover, the findings are in line with the Variation Theory by Marton as improved by Lo (2012) who propounds that the choice of teaching methods may make an effective or ineffective teaching.

In view of Lo (2012), it is true in some contexts that the *professors* may choose to use the methods that they feel do not result in quality education and/or graduates. However, circumstances influence *professors* to go for the methods believed to culminate in ineffective teaching. In some situations, *professors* choose to use teaching methods that are believed to be effective, for example, when classes are small a *professor* is more likely to use learner-centred methods than when a class is big. However, the size of a class is not the only determinant for a *professor* applying competence-based teaching and learning since in the MEMA programme students were few, but *professors* used ETM instead of the CBM.

In addition, the ability to manage different situations and the ability to evaluate information were dimensions with either Low YIP or Medium YIP. This implies that the learning environment for all programmes do not promote the two dimensions of LLLA among students. Moreover, this implies that the implemented instructional models cannot develop ability to generate a number of solutions to a problem and ability to find the right information to solve problems. The findings are in line with UCL (2019) who establishes that the teaching methods in higher education in Africa do not promote critical thinking.

Furthermore, this implies that the implemented instructional models in the education system do not seem to produce creative minds. This is because respondents from all programmes show the inability to solve problems in different situations. The findings are like this because the students' learning schemata are dominated by listening and taking some notes. The activities that involve developing creative minds are rare in and after classes, and if any the participation rate of students is very low (see Chap. V) of the thesis. This finding disagrees with the Gibson and Gregory's theories of perceptions, which assume that education and experience influences perception (Demuth, 2013). This is because year one graduate students and undergraduates do not seem to show remarkable difference in the ability to manage different situations despite their differences in experience and in formal schooling. Further, the findings are similar to those of Abner and colleagues (2014)

who aver that the CBM and the TM do not show any difference in developing ability to handle different situations.

Graduate students had higher the ability to apply knowledge than undergraduate students. This implies that experience and schooling years contribute to the development of ability to apply learning. This finding is in line with the Gregory's theory of perception, which assumes that education, and experience influences one's perception (Denuth, 2013). This implies that the implemented instructional models in the education system promote the ability to apply knowledge among students in Tanzania

From broad view of understanding the findings, the ECBM and the ETM culminated in stead development of LLLA. This implies that the implemented instructional models for undergraduates develop LLLA gradually. Mwaikokesya (2014) asserts that lifelong learning develops gradually at the undergraduate education cycle. The findings contrast those from graduate programme students, which showed that the implemented instructional models, CCBM and ETM culminate in deterioration in LLLA. These findings disagree with Mwaikoksya (2014) who asserts that the undergraduate education cycle culminates in gradual development of lifelong learning. Again, the findings disagree with those of (Okoye & Isaack, 2015; Pridane, 2017) who contend that the CBM develops lifelong learning attitude. This contradiction may be associated with too much concentration of learners on passing examinations rather than concentrating on learning.

Furthermore, year one undergraduates and graduate students had YLLLAIP ranging from 0.51 to 0.69. This implies that in Tanzania the implemented instructional models in the education system have not raised the development of student LLLA beyond High. This implies further that the LLLA does not go beyond the High Yeh's index of perception in undergraduate educational cycle in Tanzania. This finding is similar to that of other scholars (Mwaikokesya, 2014; Viron & Davies, 2015) who assert that inadequate implementation of strategies for developing LLLA result in gradually development of the same. In the context of Tanzania's studied

institutions, this could be attributable to ways *professors* teach students and responsiveness of students in learning processes, for example, low participation in group works provided in training, and dull response to reading assignments *professors* provide.

Alternative explanation for the deterioration in LLLA is inadequate application of methods that promote LLLA, for example, student teacher field placement in Tanzania does not seem to have remarkable effect on LLLA development. This is because year one graduate students have more or less the same YLLLAIP, which is between Medium and high for undergraduate and graduate students. This is the situation despite graduate students having worked in the field as student teachers as well as employees. Therefore, this implies that placing students in workplaces for sixteen weeks in three years period of their undergraduate training has little to do with developing LLLA. Moreover, working as employees in different organisations, it has little to do with developing LLLA in Tanzania.

CHAPTER EIGHT

SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

8.1 Introduction

The previous chapter has covered on implemented instructional models and their efficacy in developing LLLA. The chapter provides a summary of the whole study. It provides the descriptions about main conclusions and main practical suggestions in order to improve the implementation of educational innovations. Furthermore, the chapter provides the limitations of the research process and the milestones the study has made despite the limitations. From the limitations, the chapter provides recommendations for further research.

8.2 Study summary

This study investigated the extent to which the implemented instructional models in Tanzania higher education institutions developed LLLA among year one undergraduates and graduate students. To achieve this purpose, the study used three interrelated objectives. These include examine implementation of norm instructional models in Tanzania higher education institutions; to analyse factors for the dominance of implemented instructional models in studied Tanzania higher education institutions; and to determine the extent to which implemented instructional models inform the development of LLLA in studied Tanzania higher education institutions. The study sought to understand the process through which the students went, and the extent to which the process resulted in the development of LLLA.

To achieve the above purpose, the study employed sequential exploratory design. In which case, the qualitative data and the quantitative data were integrated at the level of discussion and interpretation. The data were collected in two Phases, Phase 1 took place at the beginning of semester I in November 2017, and Phase II took place at the end of semester II in the end of May 2018. The study used data collection methods such as observation, semi-structured interviews and document review to collect qualitative data and questionnaire was used to collect quantitative data. Equally

important, the study used purposive sampling and total population sampling techniques to include the subjects in the study. In the same way, the study used content analysis and Yeh's Index of Perception to analyse qualitative data and quantitative data, respectively.

From research methods above, the study found out two norm instructional models for institution M, namely, the CBM and the MTM. However, the former was expected to be the implemented instructional model in classes. This is because the institution was under the NACTE, the organ that advocated for the CBM. In institution D alike, there were two norm instructional models, the MTM and the CBM. Nonetheless, the former was the instructional model that was expected to be in operation in studied programmes at the time of this study. However, one programme did not use this instructional model; instead, it implemented the CBM, which was not the norm instructional model for institution D. Despite that, the CBM appeared to have been just introduced at the time of data collection; no wonder some *professors* were not aware about the presence of the CBM in their institution. The instructional model, CBM operated in research based graduate programmes. The MTM was a norm instructional model for undergraduate programmes and graduate programmes pursued by coursework and dissertation. Despite that, the CBM was the norm instructional model for *professors*.

Being exposed to the norm instructional models supposed to operate in selected institutions, we focus on implemented instructional models. In institution M, the implemented instructional model was the ECBM or the MiTM whereas in institution D, more specifically, in the BA Education and in the MEMA programmes, the implemented instructional model was the ETM. In contrast, in an MA.HI programme, the implemented instructional model was the CCBM. In light of implemented instructional models, it seems *professors* in studied institutions did not apply the norm instructional models based on implementation specified standards. In this regard, it is important to note that the norm instructional model for institutions under the TCU was the CBM at the time of data collection, but it had not yet taken off and ingrained in the minds of *professors*. In view of this, the MTM was the norm

instructional model institutions grappled to implement. This was the dominant norm instructional model and the institutions made efforts to implement it. Ironically, both norm instructional models, CBM and MTM were not implemented based on their expected standards. The inadequate implementation of the norm instructional models resulted in breeds of instructional models presented in chapter V of this thesis.

A number of factors culminated in the implemented instructional models mostly were below the expected standards in terms of implementation. The factors that culminated in implemented instructional models were poor economic conditions; poor instructional culture and in/appropriate *professor's* professional intuitions and qualities. The broad factors resulted in implemented instructional models.

On whether implemented instructional model result in the development of dimensions of LLLA, namely responsibility for learning, managing different situations, application of learning, evaluation of information and looking at things in a “big picture”, findings from a narrow view are mixed. For example, the implemented instructional model, ECBM or MiTM in the B Ed programme in institution M seemed to result in slight deterioration in the ability to shoulder responsibility for learning as one of dimensions of LLLA. In the same way, the implemented instructional model appeared to result in the gradual development of ability to manage different situations in life. It also appeared to result in stagnation of the ability to apply knowledge. Importantly, it appeared to result in gradual deterioration in ability to evaluate information. Moreover, the implemented instructional model in institution M appeared to result in the development toward a positive direction in ability to look at things in a “big picture.”

As implemented instructional model in institution D, the ETM in the BA Ed programme, the instructional model resulted in a gradual development of ability to shoulder responsibility for learning. It also resulted in deterioration in the ability to manage different situations in life. Further, it led to development toward a positive direction in the ability to apply knowledge. Equally important, it resulted in a very

gradual development of ability to evaluate information. Moreover, it culminated in a dramatic development toward a positive direction in the ability to look at things in a “big picture.”

Again, the ETM was also implemented in the MEMA programme in institution D. The instructional model appeared to result in the development toward a positive direction in the ability to shoulder responsibility for learning. In the same way, it appeared to result in the development toward a positive direction in the ability to manage different situations in life. However, it culminated in the deterioration in the ability to apply knowledge. It further resulted in deterioration in the ability to evaluate information. Finally, it resulted in the development toward a positive direction in the ability to look at things in a “big picture.”

As far as the CCBM is concerned, it was an implemented instructional model in an MA.HI programme in institution D. This instructional model culminated in deterioration in responsibility for learning. Similarly, it resulted in deterioration in the ability to manage different situations. In the same way, it resulted in deterioration in the ability to apply knowledge. It also led to deterioration in the ability to evaluate information. However, the implemented instructional model resulted in the development toward a positive direction in the ability to look at things in a “big picture.”

Indeed, the mind-blowing results indicate that the attainment of LLLA development for all studied programmes in the institutions appears that the efficacy in developing LLLA of all implemented instructional models was more or less the same. The development ranged from Medium to High YIP in all studied programmes and in all institutions. Nevertheless, it is important to note that the programme that applied the CCBM had the highest attained development of LLLA.

8.3 Conclusions

Higher education institutions have more than one norm instructional models, namely, the CBM and the MTM. The former is assumed as a norm instructional model in all

institutions, but it seems it is not yet rooted in the studied institutions. The latter is common in undergraduate programmes and graduate programmes offered by coursework and dissertation. Again, the MTM is the dominant norm instructional model, despite institutions under TCU having adopted the instructional model, the CBM recently. Documents of some programmes in studied institutions are based on the CBM. However, what is new from the programme documents is simply the insertion of number of hours for each task a student is expected to spent, for example hours for lectures, seminars, assignments, independent study and practical work. However, what is in the document is mere label for the CBM, but in practice the same instructional strategies, lecture to seminar, plus group and individual assignments or term papers mode of delivery persist, which are not new, it is a mode of delivery that has been used ever since institution D was born in the 1970s.

The CBM seems to be a norm instructional model for *professors* in higher education institutions in all selected programmes. Thus, the likelihood is that *professors* are more likely to use competence-based teaching and learning if preconditions (aspects) for successful implementation of the CBM are balanced. In this way, *professors* can develop the LLLA among students. If all necessary conditions enabling the development of LLLA are met, LLLA is likely to develop tremendously.

As seen in Chapter six of the thesis, a number of factors impeded the implementation of norm instructional models; as a result, the development of LLLA appears to be shaky. Course outlines were loaded with contents; too much emphasis on obtaining higher grades or surviving in examinations; low proficiency in the language of instruction; shortage of classrooms, shortage of *professors*, lack of training on teaching for some *professors* and some *professors* engaging in research projects not within the boundaries of their professions.

From the above factors and from the previous studies, it is reasonable to conclude that there are preconditions for effective implementation of the CBM and the MTM. Some of the preconditions could be creating awareness among students about developments on teaching and learning and their critical role in teaching-learning

process. In connection to this, it is important to reform curricula designs to suit competence-based teaching practices in classes. Accordingly, higher education institutions need to find teaching and assessment strategies that may make students learn for knowledge and skills, and not to learn for grades. Therefore, teaching strategies could be those, which terminate the student tendency to learn for certification, grades and surviving in the education system. Importantly, Tanzania could use Kiswahili as a medium of instruction at all levels of education to allow active participation and learning in classes. Moreover, it could be useful to construct enough classrooms and employ enough *professors* for effective implementation of the CBM and the MTM.

As hinted above, the implementation of norm instructional models is not based on specified standards, which has led to a number of breeds of the norm instructional models. The breeds are from the CBM and from the MTM. The breeds from CBM are CCBM and ECBM whereas the breeds from MTM are MiTM and ETM. The instructional models breeds or the implemented instructional models are not the standard instructional models of either institutions or the *professors*. Notwithstanding, the CBM is the norm instructional model in all higher education institutions today, it is perceived as an imposed instructional model in institution D until at the time of this study. This is because all other programmes have different methods (teaching and assessment methods), but graduate programmes in one department. In addition, the implemented lecture and seminar session models are Typical Traditional Lecture Model (TTLM) and Modified Traditional Lecture Model (MTLM). In this respect, the MTLM dominates classes. For seminar sessions models, there are passive-active seminar models and active seminar models. Again, the passive-active seminar models pedagogical practices dominate seminar sessions. From this variation in implementing instructional models, possibly higher education institutions provide training with different degree of quality. The quality (attributes) of graduates from different institutions and departments is not likely to be the same.

In light of above implementation inconsistencies, the implementation of the norm instructional models varies across institutions and among *professors*. The

implementation varies from the standard implementation because most of aspects expected to appear in the execution of the instructional model are ignored. Thus, this culminates in a gap between a desired and achieved implementation. To clarify, the gap exists between what is accepted as standard and the actual practices. Moreover, the gap exists between policy stipulations and the actual practices. More importantly, the gap exists between theory and practice. The difference between what is planned and its implementation requires adequate explanation.

Providing adequate explanation on theory-practice gap seems to serve two purposes. First, as seen in the findings, there are multiple aspects impeding the implementation of the norm instructional models. Thus, the knowledge that theory-practice gap has its roots from a number of aspects; it helps planners in education to think in advance about important aspects for effective implementation of an educational innovation. Second, if the implementation of an educational innovation is well planned and the most important aspects for its effective execution are in place, the assumption is that it opens a reasonable room for sound evaluation on the efficacy of an innovation. To illustrate, it helps determining whether the innovation in place brings the intended outcomes or it needs improvement. This is because when aspects contributing to achievement of a standard implementation of an educational innovation are not considered well in advance; it might be impossible for implementers to achieve the desired standard of implementation or rather achieve intended educational outcomes. It is not only difficult to achieve standard implementation and/or intended outcomes, but also it is difficult to evaluate the efficacy of an innovation.

From the implemented instructional models, it appears that there is development of responsibility for learning and application of learning among students. On the contrary, there is gradual development or no development in the ability to manage different situations and ability to draw appropriate information to solve problems one encounters in life. Consequently, the implemented instructional models seem not to develop all dimensions and attitudes of LLLA.

With the knowledge that several aspects impede the implementation and achievement of the intended learning outcomes, it is reasonable to conclude that the implementation of innovations needs qualitative and quantitative multiple-aspect-alignment to have successful implementation and to achieve intended learning outcomes. Otherwise, educational innovations cannot be implemented to specified standards, and therefore, the expected quality of educational outcomes cannot be achieved.

Nevertheless, the conclusion above should be taken with caution. This is because the analysis of previous and present study findings infers that the implementation of educational innovations does not guarantee a hundred percent execution despite the consideration of the aspects necessary for successful implementation of an innovation. The previous and present findings imply that often the implementation of innovations is inadequate such that it offers enough apace for developing a principle in operation. This thesis with audacity has developed a principle, which is referred to as “***Reversed norm principle.***” The principle affects a hundred percent implementation of whatever educational innovation. The reversed norm principle affects the implementers from achieving the standard implementation, outcomes and/or practices. To clarify, in ***Reversed norm principle***, implementers usually find themselves in a situation whereby they violate the procedures, laws, code of ethics, or whatever acceptable norms in behaving or acceptable practice in life. For example, a professional may be very aware about how to perform a task based on specified standards and all conditions to perform a task based on desired expectations are met. However, a professional may do the contrary because of circumstances beyond the established conditions, which are in essence met. Consequently, though everything can be in place, but a hundred percent achievement of the standard implementation of an innovation seems to be a rare noble happening.

Despite the caution explicated above from the reversed norm principle, it is still important to consider various aspects before and during implementation of educational innovations, the norm instructional models are not different. In so doing, the expected standard of implementation of educational innovations might be

achieved sufficiently. However, it is important to note that the necessary aspects to consider before implementing educational innovations are not universal. Since the key aspects are not universal, it seems to be prudent to conduct pilot implementation of an innovation to establish the key aspects to consider before the implementation of a plan.

The implemented instructional models seem to develop gradually LLLA among undergraduates and seem to culminate in deterioration in LLLA among graduate students. Therefore, instructional models do not have the same effect on the development of LLLA for undergraduates and for graduate students. Nevertheless, the instructional models seem to have the same overall effect on the development of LLLA for undergraduate programmes under different implemented instructional models. From this, it could be reasonable to assume that the instructional models have the same efficacy in developing LLLA at undergraduate and at the post-graduate levels.

From inadequate implementation of the CBM and the MTM, this study has been disempowered to conclude categorically that LLLA develops or does not develop from the CBM or the MTM in Tanzania higher education institutions. Despite the inadequate implementation of the two instructional models, the analysis of previous and present study findings shows that the two instructional models are one thing with different names. In this situation, the assumption remains if the two instructional models are implemented based on their standards have a better chance of developing LLLA among higher education institution students than the Typical Traditional Model (TTM). However, the TTM is literally none existent in practical terms at higher education level in Tanzania.

Despite the inadequate implementation of the CBM and the MTM indicated above, this study draws a conclusion by inference. However, the inference is based on the following understanding. First, the competence-based teaching and learning is introduced to improve the quality of teaching among teachers, and it allows more students pass well in their subjects. In contrast, the TM has been ear marked as

resulting in skewed results in academic achievement for some subjects. Second, the competence-based teaching and learning allows students to develop competences for them to complete educational cycle. On the contrary, the MTM is elitist because it does not allow student to develop competences, but rather it throws weak students out of education system. Considering this, the competence-based teaching and learning has better chances for developing lifelong learning attitude than the MTM. Moreover, the World Bank advised Swaziland to adopt the CBM to boost its economy in 2010-2017 economic crises in the country. Moreover, it has been reported that the youth in Rwanda their economic conditions have improved because of the use of CBM in the education system. In Tanzania, it has been recommended at university level to promote business orientation among Tanzania varsity graduates. Importantly, this thesis shows that the programme operating under the CCBM has resulted in the highest YLLLAIP overall average score of all studied programmes from selected institutions. Further, the CBM allows a student to decide what to learn and how; it makes a teacher part of learners; it allows learning from anybody even from peers; recognises informal learning, this is unlike the MTM. From these presented data on the instructional models, the CBM seems to have more chances to develop lifelong learning attitude than the MTM. Looking into the two instructional models, the two instructional models are fraternal twins because they share one main feature, which is the use of a combination of theories of learning principles, but they differ on many other respects, for example, student progression.

8.4 Policy Implications

This section provides information about practical issues relating to implementation of instructional models in education systems. The practical considerations range from those relating to policy makers; higher education institution leadership; *professors* and students. The policy implications for each group are presented under.

As for higher education institutions and *professors*, it is important to emphasise on teaching methods that science has proved that they develop LLLA. In view of this, *professors* have to make deliberate efforts to emphasise on the use of methods that

develop LLLAs among higher education students in Tanzania. In connection to this, *professors* have to move away from read and clarify as cardinal activities to other activities that contribute to the development of LLLA.

With good economic conditions, then, implementable *professor* recruitment policy can be developed to attract more people getting into the teaching career in higher education institutions. When the problem of shortage of *professors*, it is addressed; then, the question of lack of time to do the job efficiently turns into history. However, heavy investment is required to provide quality education through CBM or MTM. The investment depends on the strength of the economy of a country and/or higher education institution. As a nation, we need to see that the tax base is expanded and small businesses are nourished to big enterprises, which in turn will be able to pay more tax. Creating an environment that can promote business and terminate tax evasion will create a room for national economy growth, and therefore, solve social problems needing funds from the government.

In any case, the NACTE and the TCU have to make deliberate efforts to understand key elements of the CBM that are already in practice and those which are missing in the present-day *professor* classroom practices, especially, in terms of methods (teaching and assessment methods). This could be of helpful to the two organs to capitalise on the CBM elements that are missing so that the *professors* can see what they miss in their methods, and therefore, improve accordingly. For example, the CBM is an integrated and inclusive instructional model; however, experience has shown that even after introduction of CBM discontinuation of students continues in higher education which is typical a traditional model practice. This practice does not align with the CBM, and therefore, it makes students concentrate on surviving in the education system rather than developing lifetime interest in learning and solving problems.

For successful implementation of the CBM, a norm instructional model for *professors*, the NACTE and recently the TCU, it is important to ensure that higher education institutions have enough small classrooms to meet the requirements of the

instructional model. The classrooms should have a carrying capacity of 40 students; that is a *professor*-student ratio of 1:40. In addition, the teachers at lower levels of education may need sufficient implementation of the CBM; there is need to formulate a policy for producing and keeping enough *professors* in higher education institutions. Moreover, the language of instruction used should be the one that is familiar to both *professors* and students. In the context of Tanzania, as said earlier, it is obvious that majority are familiar with Kiswahili, and therefore, it might be a good idea to use it as a Medium of instruction in higher education institutions since the recommended instructional model is the CBM. However, English Language should be taught very well at all levels of education for students to have mastery on the language. Deliberate analysis to understand what is done and what is not done in connection to CBM is important so that emphasis is directed to aspects that are not implemented as far as the CBM is concerned in a classroom context.

Further, it is important to do situational analysis for *professors* in higher education institutions to identify qualifications, which are scarce in the institutions, and set short, medium and long-term strategies to produce enough *professors* for higher education institutions. The situational analysis should be done by discipline in each public higher education institution. Increasing *professors* qualitatively and quantitatively in higher education institutions, it off loads *professors* who are at present overloaded; consequently, enabling effective implementation of the CBM or the MTM in return for quality education and graduates.

Finally, planners and implementers of educational innovations (CBM not exclusive) should consider multiple-aspect-alignment (pre-conditions) for a particular educational innovation well in advance before its implementation. This could be a panacea to problems relating to inadequate implementation of innovations in education systems. For successful implementation of educational innovations, there should be a multiple-aspect-alignment before its implementation. To understand, the pre-conditions (multiple-aspect-alignment) before scaling an educational innovation in a countrywide and/or educational institution, it is a matter of necessity rather than choice to have a pilot implementation. The pilot implementation should not solely

focus on understanding the efficacy of an educational innovation, but it should focus on understanding the pre-conditions of achieving sufficient implementation and attainment of intended innovation outcomes.

As has been noted, the aspects for successful implementation of an innovation are not universal, but they are contextual. The contextual differences appear to be true between and across countries or between and across institutions. In view of this, each innovation borrowed from other countries or invented in a country must be pilot implemented to see the necessary conditions for its successful implementation. This is important because we already know factors affecting the implementation of educational innovations are not the same all the time, at all places and in all ethnic backgrounds.

In some studied institutions, *professors* are not duly paid their legitimate rights. This de-motives them from performing their job appropriately. Thus, leadership in higher education institutions has to understand well the needs of *professors* and other non-academic staff in bid for implementing the norm instructional models in a successful manner. They need to meet them; listen to them; discuss with them amicably and decide with them what to do and how to do it. This should be done in order that, the learning environment favouring the implementation of a norm instructional model of institutions or *professors* is created. In this way, the leadership can identify aspects that need to be aligned with the norm instructional model to achieve intended learning outcomes and/or practices. Additionally, higher education institutions leadership should timely pay/provide employee legitimate claims or rights. This could makes employees stay motivated in doing their teaching job in the right way and in a committed manner

The findings have indicated that higher education institutions have well established teaching and assessment methods which seem to be traditionally more acceptable and *professors* believe that they cannot go for other methods. From this, higher education institutions should find a mechanism for opening up to other teaching methods that can promote the 21st century skills whereby LLLA is one of them.

Higher education institutions should be open to teaching and learning methods so that *professors* go beyond the prescribed methods (teaching and assessment methods). *Professors* should be able to go beyond lecture, individual assignment, group assignment, research projects and ways of assessing students should change accordingly. These methods are useful, but the institutions should open up for more teaching and assessment methods, which promote the development of LLLA among students. The methods that are already in use should be consolidated to produce the intended learning outcomes while the added methods supplement the methods that are already in use. As far as this study is concerned, particular attention should be on exploring and on understanding methods that can promote all LLLAs. Especially, much concentration should be on dimensions that seem to deteriorate when the present instructional models or rather teaching and learning methods are in operation.

Since some *professors* perceive students as *tabula rasa*; therefore, it could be a rational course of action for *professors* to orient themselves on literature relating to CBM and relating to how to use it in developing LLLA in classes. Through self-orientation on CBM literature, *professors* can possess confidence to apply it. The self-orientation on the instructional model can change the thinking among *professors* about how students learn. *Professors* can change from perceiving students as *tabula rasa* to perceiving them as colleagues in teaching-learning process. In this way, the two sides work together in amicable manner toward discovery of knowledge.

Additionally, the findings show that some *professors* are not trained as teachers in higher education institutions. From this understanding, it is important to provide CBM in-house seminars (workshops) among *professors* regardless of their experience in the career. Moreover, it is important to design programmes relating to continuing education meant to offer say four-month training to *professors* joining the teaching career in higher education, particularly, those who have never been in the teaching profession before joining higher education teaching career. However, seminars and courses on teaching in higher education institutions would mean more costs to incur for on-the-job training and in higher education system, respectively.

As seen in the findings, student participation in seminar presentations appears to be low and reading culture seems to be ignored. Thus, students need to develop internal motivation to learn and get highly committed in teaching-learning activity. Their major concentration may be on search for information relating to their studies and read to get well informed in advance, about whatever that has to be discussed in class. In this way, active participants in the learning activities and lifelong learners are created over time. Additionally, students need to participate fully in-group works to develop ability to learn from each other through task-oriented interaction. In so doing, LLLA can be developed. Furthermore, students should be proactive in the participation of the teaching and learning processes. Proactive participation in teaching-learning process requires double commitment in studying or reading books. The commitment to study through reading books contributes in active participation in academic oriented activities in classes.

8.5 Limitations of study and suggestion for further studies

This study encountered a number of limitations. First, the study was conducted in Tanzania higher education institutions; thus, the findings on instructional models in operation and the development of LLLA cannot be generalised to higher education institutions in other countries. However, there are analytical generalisations that apply in all countries and all fields when it comes to implementation of innovations.

Second, given the nature of the study, the sequential exploratory design collected quantitative data in two Phases in two consecutive semesters. The study could collect data on yearly basis following up the same respondents; however, given the available time only one academic year data were collected at the beginning of Semester I in November 2017 and at the end of Semester II end of May 2018. However, this did not affect the findings because the categories of respondents were heterogeneous, undergraduates, and graduate students.

Third, the topic studied is inherently wider than what has been covered when we talk about instructional models. This study focused more on classroom setting; contexts

beyond classroom have been included for explanatory purposes, but not dealt with in depth. Therefore, the study leaves a lot unknown outside the classroom setting.

Fourth, since the research was biased on qualitative data, some of findings cannot be generalised beyond Tanzania, for example, the instructional models applied at the time of this study at lower levels of education and higher education do not develop LLLA beyond Medium YLLLAIP. This generalisation is achieved because of the use of a number of cases from different institutions. However, the generalisation cannot go beyond the Tanzania higher education institutions.

8.6 Contribution of study

Despite the limitations of the study highlighted, the study makes remarkable theoretical, methodological, and practical contributions. The three forms of contribution are presented based on their listing in this section.

With respect to theoretical contribution, the study has generated new techniques and concepts useful in research and in the field of education, respectively. For example, in the previous literature attempts to explain the nature of theory practice gap in implementing educational innovations are rare. This study with clarity has attempted to explain the nature of the theory practice gap in implementing any innovation in any field. From the explanation, planners and implementers now can think well in advance to ensure that educational innovations or any plan is successfully implemented. Based on the explanation on the nature of theory practice gap, it can be largely minimised in implementing educational innovations. In this regard, this study adds in the literature the concept of multiple-aspect alignment in the implementation science, which is a very useful theoretical concept for planners and implementers in the field of education and beyond. This is to say when there is lack of multi-aspect-alignment in planning and in implementing educational innovations, the implementation usually is inadequate. Therefore, planners and implementers must establish important ***pre-conditions***, and ensure that the pre-conditions are in place for successful implementation of educational innovations. Therefore, the

concept of multiple-aspect-alignment in implementation science in education is new and thus the study contributes this understanding in the implementation science.

Apart from the above theoretical contribution, this study adds new factors for inadequate implementation of the Competence-Based Model (CBM) and the Moderated Traditional Model (MTM) in higher education system literature. The factors are considered as new because they are not in the literature of implementation of the CBM and the MTM. These factors are: *professor* engagement in part-time jobs; *professors'* engagement in research projects to earn more income; poor reading culture among *professors* and students and background of students. These factors (sub-factors) have not been mentioned in the previous literature reviewed, theoretical and empirical literature. In this situation, this study makes theoretical contribution. In that regard, this study, demands rethinking of Variation Theory and the Lindgren theory of teaching and learning. It is important to add the new concepts in the schools of thought to develop grand theories.

Furthermore, this study makes a significant contribution to literature relating to the influence of instructional models on learning outcomes, more specifically in developing LLLA. This study contributes to literature because a plethora of literature has covered on the influence of instructional models on academic achievement (scores in subjects), and in understanding the implementation of norm instructional models at lower levels of education. However, little has been done on the implementation and influence of implemented instructional models on learning outcomes, more specifically on the development of LLLA among continuing students in higher education institutions. This understanding will help *professors*, institutions monitoring higher education and policy makers to make informed decision about the instructional models especially as they relate to purposes of education in a country. Again, while literature has shown that the CBM is good at developing LLLA, this study gives mixed findings signalling that deliberate efforts are needed to develop LLLA. In which case, the sole use of the CBM principles does not appear to result in the development of all dimensions and attitudes of LLLA, but something extra must be done to realise the object of developing LLLA.

The present study benchmarks future studies on whether or not the recent efforts of the TCU and the NACTE to implement the competence-based teaching and learning among higher education institutions yield different or same quality of learning outcomes, particularly, in developing LLLA as a learning outcome which is highly needed in the current and future unstable world.

Moreover, the study has attempted to develop concepts such as vertical alignment in education and horizontal alignment in education. The two concepts help educationist to remember all considerations in bid for creating the kind of society we want from an education system. Further, the study has managed to develop a ***Reversed norm principle***. The principle that informs educational innovation evaluators that it is not always possible to implemented educational innovation by a hundred percent despite all pre-conditions necessary for implementation being in place. Therefore, what is important is for educationist during evaluation to concentrate to what is assumed as sufficient implementation of innovations.

Besides theoretical contribution, the study makes important practical contribution. For example, the study provides a practical guide on how to minimise the theory practice gap in implementing educational innovations or plans. For instance, planners and implementers of an innovation have to think well in advance on important aspects to be considered for successful implementation of a plan or an innovation. Thus, before implementing an innovation, there must be multiple-aspect-alignment. Planners and implementers have to be sure that important aspects for a plan or an innovation to turn to reality are in place and well aligned (balanced). The balance referred herein is qualitative and quantitative balance for each aspect.

Finally, this study makes important methodological contribution. During this study the researcher used what is referred to as “*Blank cell technique*” as a data cleaning technique. In this technique, the researcher includes blank cells whereby no Likert statements are written. If it happens that, the respondent ticks several blank cells the assumption is that the respondents completed the Likert statements without reading. This technique led to the removal of some completed questionnaires from the

analysis of study. Equally important, the study used “*the odd out technique*” in this technique, the respondent was asked to asterisk any Likert item they did not understand; the purpose was to exclude from analysis items that were not understood to respondents.

Finally, this study used “*foreshadowing research technique*”. In this technique, the researcher collected data from all programmes related to target programme. This means from the second- and third-year programmes to understand how future teaching of the same students is likely to be in the following academic years, and what is the likely pace of student change in terms of lifelong learning attitude based on learning environment (see details in chap. III).

8.7 Areas for further research

This section provides avenues for further research. The avenues for further research are born out of the limitations of the study. In view of this, researchers can conduct the same study in other countries to understand the implemented instructional models and the extent they inform the development of LLLA.

This study has used sequential exploratory design with some of data collected in time series in one academic year. Thus, future studies may conduct the same study on yearly basis following a cohort of students from the commencement of their studies to graduation to see the development, stagnation or deterioration in LLLA. In addition, the future studies, which collect data in time series in Tanzania higher education institutions, should always collect data at the beginning of first semester of an academic year. Since collecting data in time series at the end of a semester, student participants or respondents are usually too busy to concentrate on the study. Ultimately, this causes issues with completion of questionnaire.

Further, future studies can concentrate on aspects that are not confined in classroom settings which are associated with Competence-Based education and Knowledge-Based education, for example, teaching practice (practical training); research projects for students as teaching methods that do not happen in classroom setting. Moreover,

studies may be conducted on student retention in the competence-based education in Tanzania higher education system.

Moreover, future studies can focus on comparative studies comparing the development of LLLA between low economies and high economies to understand whether the LLLA develops at the same pace based on the Yeh's Index of Perception for students at same levels of education.

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APPENDICES

APPENDIX IA

**UNIVERSITY OF DAR ES SALAAM
COLLEGE OF SOCIAL SCIENCES (CoSS)
DEPARTMENT OF GEOGRAPHY**

Telegram: UNIVERSITY
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Ext. 2337
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P.O. Box 35049
Dar es Salaam
TANZANIA
E-mail: geog@udsm.ac.tz

12th December, 2017

TO WHOM IT MAY CONCERN

RE: MR. BRYSON D. KINYADUKA

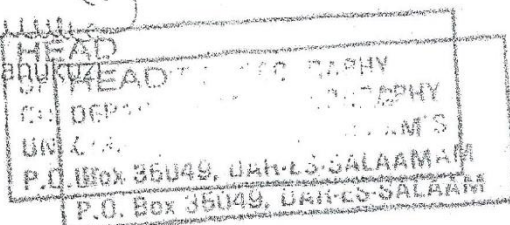
The above named person is a Ph.D. student at Mzumbe University. He is here to collect data through classroom observation. So, he will attend all classes i.e. 1st to 3rd year. Later he will conduct interviews with professors and students, then he will also administer questionnaire to student, collect documents – such as exams for previous semester, seminar questions and collect course outlines/syllabi for this semester geography courses year one to three.

Please give him any assistance he may need.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Dr. Phillip Mwanukwe'.

Dr. Phillip Mwanukwe
Head.



APPENDIX I B

CHUO KIKUU CHA DAR ES SALAAM TAASISI YA TAALUMA ZA KISWAHILI

S.L.P. 35110 Dar es Salaam
Simu Na:Mkurugenzi: 2410757
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Kumb: TATAKI/UKURU

Tarehe: 04.01.2018

KWA YEYOTE ANAYEHUSIKA

YAH: BW. BRYSON D. KINYADUKA

Somo hilo hapo juu lahusika.

Mtajwa hapo juu ni mwanafunzi wa Uzamivu katika Chuo Kikuu cha Mzumbe. Yupo katika hatua ya ukusanyaji wa data kwa ajili ya utafiti wake ambao utahusisha kuhudhuria madarasa ya wanafunzi wa B.A. Kiswahili, kufanya mahojiano na walimu Taasisini na kutumia hojaji katika utafiti wake.

Tafadhali unaombwa kumpa ushirikiano.

M. Mbinda

Kny: Mkurugenzi, Taasisi ya Taaluma za Kiswahili

nk: Mkurugenzi, Taasisi ya Taaluma za Kiswahili
nk: Mudir, IFAMU
nk: Mudir, ILUKII

APPENDIX IIA: INTERVIEW GUIDE FOR PROFESSORS

1. What is your belief about how students learn?
2. What teaching methods do you use mostly and why?
3. Are you happy with the teaching methods you use mostly? Why?
4. Provide your opinion about the suitability of learning environment in relation to teaching methods you would prefer most to use?

NB: Probing questions would be asked depending on response

APPENDIX IIB: INTERVIEW GUIDE FOR QUALITY ASSURANCE OFFICIALS

1. May you outline your responsibilities as a quality assurance official in this institution?
2. What teaching and assessment methods do professors use most in this institution?

APPENDIX IIC: TEACHING PRACTICE (TP) COORDINATORS

1. What is the purpose of Teaching Practice?
2. What challenges do you encounter during teaching practice?

NB: Probing questions were asked

APPENDIX IID: INTERVIEW GUIDE FOR HEADS OF DEPARTMENTS

1. What methods do professors use in teaching and assessing students? Why?

NB: Probing questions would asked based on responses

APPENDIX III: OBSERVATION CHECK LIST FOR LECTURE and SEMINAR SESSIONS

Item to observe	Guiding question	YES	NO	combination	remark
Methods	Are methods used active?				
Class activities	Are students involved in teaching-learning process?				
Class management & organisation	Do students sit in rows?				
Student-student interaction	Does student-student interaction go beyond ten minutes a session?				
Assessment	Do professors use authentic assessment?				
Resources	Do professors use various text?				
EVENTS	What other happening in this class?				

APPENDIX 7.1

Development of LLLA by phases for ECBM in B. education programme in institution M2

Dimensions and Likert items	Likert scale response in % phase I			Likert scale response in % phase II			YIP-I	YIP-II
	Disagree	Undecided	Agree	Disagree	Undecided	Agree		
Responsibility to learn								
Prefer others plan for my learning	3.75	15.0	81.25	4.5	13.6	81.8	0.96	0.77
I rarely think about my learning	11.25	15.0	73.5	9.1		81.8	0.62	0.72
I feel self-directed learner	15.00	18.75	66.25	18.2	22.7	59.1	0.51	0.40
Others evaluate my learning	15.0	12.5	72.5	4.5	36.4	59.1	0.57	0.54
Relate new to prior learning	5.0	3.75	91.25	4.5	9.1	86.4	0.86	0.81
Responsible in making sense	5.0	2.5	92.5	0.0	4.5	95.5	0.87	0.95
Average for YIP							0.73	0.70
Managing any situation	Disagree	Undecided	Agree	Disagree	Undecided	Agree	YIP-I	YIP-II
Can deal with unexpected	13.75	22.5	63.75	13.6	18.2	68.2	0.50	0.54
uncomfortable in uncertainty	58.75	18.75	22.5	18.1	36.4	45.5	0.36	0.27
Can make meaning in disorder	17.5	22.5	60.00	9.1	13.6	77.3	0.42	0.68
Prefer one solution problems	36.25	16.25	47.5	50.0	4.5	45.5	0.11	-
Average for YIP							0.35	0.38
Application of learning	Disagree	Undecided	Agree	Disagree	Undecided	Agree	YIP-I	YIP-II
I learn for its own sake	18.75	12.5	68.75	22.7	18.2	59.1	0.50	0.36
I relate academic with practice	7.5	7.5	85.0	4.5	4.5	90.9	0.77	0.91
Average for YIP							0.63	0.63
Evaluate information	Disagree	Undecided	Agree	Disagree	Undecided	Agree	YIP-I	YIP-II
I find difficult locating information	20.0	26.25	53.75	27.3	13.6	59.1	0.33	0.31
Look in big picture	15.0	6.25	78.75	9.1	4.5	86.4	0.64	0.77

APPENDIX 7.2

Development of LLLA by phases for institution D: BA education programme under ETM

Dimensions and Likert items	Likert scale responses in % phase I			Likert scale response in % phase II			YIP- I	YIP- II
Responsibility to learn	Disagree	Undecided	Agree	Disagree	Undecided	Agree		
Others plan for my learning	1.9	8.8	89.3	4.3	4.3	91.4	0.87	0.87
I rarely think about my learning	6.8	14.6	78.6	2.1	17.0	80.9	0.71	0.79
I feel self-directed learner	10.7	25.2	64.1	8.5	23.4	68.1	0.53	0.59
Others evaluate my learning	19.4	21.4	59.2	10.6	21.3	68.1	0.39	0.57
Relate new to prior learning	2.9	2.9	94.2	2.1	8.5	89.4	0.91	0.87
Responsible in making sense	0.0	6.8	93.2	2.1	4.3	93.6	0.93	0.91
Average for YIP							0.72	0.76
Managing any situation	Disagree	Undecided	Agree	Disagree	Undecided	Agree	YIP-I	YIP-II
Can deal with unexpected	9.7	12.6	77.7	10.6	4.3	85.1	0.67	0.74
uncomfortable in uncertainty	17.5	20.4	62.1	19.1	27.7	53.2	0.45	0.34
Can make meaning in disorder	3.9	19.4	74.7	6.4	21.3	72.3	0.72	0.66
Prefer one solution problems	32.0	21.4	46.6	38.3	31.9	29.8	0.14	-
Average for YLLAIP							0.49	0.41
Application of learning	Disagree	Undecided	Agree	Disagree	Undecided	Agree	YIP-I	YIP-II
I learn for its own sake	11.7	21.4	67.0	8.5	29.8	61.7	0.55	0.53
I relate academic with practice	5.8	8.8	85.4	2.1	2.1	95.8	0.79	0.94
Average for YLLAIP							0.67	0.73
Evaluation of information	20.4	18.4	61.2	14.9	27.7	57.4	0.41	0.42
Look in big picture	12.6	7.8	79.6	4.3	10.6	85.1	0.67	0.81

APPENDIX 7.3

Development of LLLA by phases for institution D: MEMA programme under elevated traditional model

LLLA Likert items	Likert scale responses in % phase I			Likert scale response in % phase II			YIP- I	YIP- II
Responsibility to learn	Disagree	Undecided	Agree	Disagree	Undecided	Agree		
Others plan for my learning	31.0	6.9	62.1	13.4	33.3	53.3	0.31	0.40
I rarely think about my learning	13.8	17.2	69.0	13.3	6.7	80.0	0.55	0.67
I feel self-directed learner	13.8	13.8	72.4	20.0	20.0	60.0	0.56	0.40
Others evaluate my learning	24.1	3.4	72.5	0.0	33.3	66.7	0.48	0.67
Relate new to prior learning	0.0	3.4	96.6	0.0	13.3	86.7	0.93	0.87
Responsible in making sense	0.0	0.0	100.0	0.0	13.3	86.7	1.00	0.87
Average for YLLLAIP							0.64	0.65
Managing any situation	Disagree	Undecided	Agree	Disagree	Undecided	Agree	YIP- I	YIP- II
Can deal with unexpected	3.4	17.3	79.3	6.7	26.6	66.7	0.76	0.60
uncomfortable in uncertainty	13.8	27.6	58.6	6.7	33.3	60.0	0.45	0.53
Can make meaning in disorder	6.9	13.8	79.3	0.0	33.3	66.7	0.72	0.67
Prefer one solution problems	44.8	27.6	27.6	26.7	40.0	33.3	- 0.17	0.06
Average for YIP							0.44	0.46
Application of learning	Disagree	Undecided	Agree	Disagree	Undecided	Agree	YIP- I	YIP- II
I learn for its own sake	10.3	6.9	82.8	6.7	26.6	66.7	0.72	0.60
I relate academic with practice	0.0	0.0	100.0	0.0	0.0	100.0	1.00	1.00
Average for YIP							0.86	0.80
Evaluation of information	34.5	6.9	58.6	46.7	20.0	33.3	0.24	-
Look in big picture	13.8	13.8	72.4	6.7	26.6	66.7	0.57	0.13 0.60

APPENDIX 7.4

Development of LLLA by phases for institution D: MA History programme under CCBM

Dimensions and Likert items	Likert scale responses in % phase I			Likert scale response in % phase II			YIP- I	YIP- II
Responsibility to learn	Disagree	Undecided	Agree	Disagree	Undecided	Agree		
Others plan for my learning	60.0	0.0	40.0	66.7	0.0	33.3	-0.20	-0.33
I rarely think about my learning	20.0	0.0	80.0	66.7	33.3	0.0	0.60	-0.60
I feel self-directed learner	0.0	0.0	100.0	0.0	0.0	100.0	1.00	1.00
Others evaluate my learning	20.0	0.0	80.0	33.3	33.3	33.4	0.60	0.0
Relate new to prior learning	0.0	0.0	100.0	0.0	0.0	100.0	1.00	1.00
Responsible in making sense	0.0	0.0	100.0	0.0	0.0	100.0	1.00	1.00
Average for YLLAIP							0.67	0.35
Managing any situation	Disagree	Undecided	Agree	Disagree	Undecided	Agree	YIP- I	YIP- II
Can deal with unexpected uncomfortable in uncertainty	0.0 0.0	0.0 20.0	100.0 80.0	0.0 33.3	0.0 33.3	100.0 33.4	1.00 0.80	1.00 0.0
Can make meaning in disorder	20.0	0.0	80.0	0.0	33.3	66.7	0.60	0.67
Prefer one solution problems	20.0	0.0	80	33.3	0.0	66.7	0.60	0.33
Average for YLLAIP							0.75	0.50
Application of learning	Disagree	Undecided	Agree	Disagree	Undecided	Agree	YIP- I	YIP- II
I learn for its own sake	0.0	0.0	100.0	66.7	0.0	33.3	1.00	0.33
I relate academic with practice	0.0	20.0	80.0	0.0	0.0	100.0	0.60	1.00
Average for YIP							0.80	0.66
Evaluation of information	40.0	0.0	60.0	66.7	0.0	33.3	0.33	-0.33
Look in big picture	0.0	0.0	100.0	0.0	0.0	100.0	1.00	1.00

APPENDIX IV QUESTIONNAIRE

I am a PhD student from Mzumbe University. I need data for thesis writing. Therefore I kindly request you to fill in this questionnaire with honest and integrity, and that your responses on this questionnaire are strictly confidential and are meant to be used for academic purposes only.

Institution:

Programme.....

Cell phone number.....

Tick (✓) against a statement and on a column you feel the scale describes you best on each statement.

S/No.	Likert item	Likert scale				
		Strongly Agree (1)	Agree (2)	Undecided (3)	Disagree (4)	Strongly Disagree (5)
1	I prefer to have others plan my learning					
2	I can deal with the unexpected and solve problems as they arise					
3	I feel uncomfortable under conditions of uncertainty					
4	I am able to impose meaning upon what others see as disorder					
5	I seldom think about my own learning and how to improve it					
6	I feel I am a self-directed learner					
7	I feel others are in a better position than I am to evaluate my success as a student					
8	I love learning for its own sake					
9	I try to relate academic learning to practical issues					
10	I often find it difficult to locate information when I need it					
11	When I approach new material, I try to relate it to what I already know					
12	It is my responsibility to make sense of what I learn at school					
13	When I learn something new I try to focus on the details rather than on the 'big picture'					
14	I prefer problems for which there is only one solution					

Thank you very much for your help.



MZUMBE UNIVERSITY
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Ref. No. MU/PhD/FSS/MZC/003/T.14/27

Date: 24th October, 2017

TO WHOM IT MAY CONCERN

RE: INTRODUCTION OF MR. BRYSON D. KINYADUKA

The bearer of this letter is a Staff of Mzumbe University pursuing PhD Studies at Mzumbe University. As a part of requirements for completion of his studies, he is collecting information on **"Comparative study on Interactive Model (IM) versus Behavioristic Model (BM) Higher Learning Teacher-education Institutions in Tanzania."** This exercise is expected to take place between 15th November, 2017 to 15th February, 2018.

This letter serves to achieve three purposes. Firstly, to verify that he is granted permission to undertake the research, secondly, to introduce him to you and thirdly to request you to facilitate any form of assistance he might need. We can assure you that this activity is entirely for academic purposes.

We trust that you will accord our student with necessary assistance.

Sincerely yours,

Dr. Fred Alfred (PhD)
For: **VICE CHANCELLOR**

APPENDIX V

DEPARTMENT OF HISTORY

COLLEGE OF HUMANITIES

MA TIME TABLE FOR SEMESTER I, 2017/2018

COURSE CODE	COURSE TITLE	INSTRUCTORS	CONTACT HOURS AND VENUE
HI 605	THEORY OF HISTORY	GASIAM NTANDU NSUMBAYI	THURSDAY 07:00 -10:00 HRS (SR 6)
HI 606	HISTONOGRAPHY OF AFRICA	OSWALD MASEBO	THURSDAY 12:00 – 15:00 HRS (SR 8)
HI 607	HISTORY RESEARCH METHODS	YUSUFU QWARAY LAWI & MAXMILIAN CHUHILA	THURSDAY 9:00 – 12:00 (SR 15)
HI 612	TOPICS IN ENVIRONMENTAL HISTORY	YUSUFU QWARAY LAWI & JOHAN KUPUWENI	FRIDAY 9:00 – 12:00 (SR 1)
HI 614	DISEASE AND HEALING IN AFRICAN HISTORY	FREDRICK JAMES KAJAGE & JULIE WEISKOPF	MON 9:00- 12:00 (SR 6)

UNIVERSITY OF DAR ES SALAAM
DIRECTORATE OF RESEARCH AND PUBLICATION
P.O. Box 35091 ■ DAR ES SALAAM

General Line: 2410500-8 Ext. 2084
Direct Line: 2410727
Website: www.udsm.ac.tz



Fax: 255 022 2410743
255 022 2410023
E-mail: research@udsm.ac.tz

Our Ref. AB3/31

1st November, 2017

Dean, School of Education
University of Dar es Salaam

RE: RESEARCH CLEARANCE

This is to introduce **Mr. Bryson Kinyaduka** who is a PhD student and staff of Mzumbe University. Mr. Kinyaduka is at the moment conducting data collection as part of his Studies. The title of his research is **'Comparative Study on Interactive Model (IM) Versus Behavioristic Model (BM) Higher Learning Teacher-Education Institutions in Tanzania'**.

This is to request you to grant the above-mentioned student any help that may enable him to achieve his study objectives. The period for which this permission has been granted is from **November 2017 to February 2018**.

Prof. S. Manya

DIRECTOR OF RESEARCH AND PUBLICATION

cc: Vice Chancellor
cc: DVC- Academic
cc: DVC- Administration
cc: DVC – Research

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Tanzania

Ref: No. MNMA/MAO/3/VOL.V/82

31st October, 2017

Vice Chancellor,
Mzumbe University,
P. O. Box 1,
MZUMBE.



RE: INTRODUCTION OF MR. BRYSON D. KINYADUKA

Please refer to your letter dated 24th October, 2017 concerning the subject mentioned above.

I am pleased to inform you that request for data collection in respect of Mr. Bryson Kinyaduka who is pursuing PhD studies at Mzumbe University has been accepted.

The Academy allows Mr. Bryson to collect information at Kivukoni Campus on "*Comparative study on Interactive Model (IM) versus Behavioristic Model (BM) Higher Learning Teacher-education Institutions in Tanzania*" from 15th November, 2017 to 15th February, 2018.

The Academy will accord Mr. Bryson all the necessary assistance.

Yours Sincerely,

THE MWALIMU NYERERE MEMORIAL ACADEMY


Dr. Thomas J. Ndlovu
For: RECTOR

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