

**INFLUENCE OF LARGE CLASSES ON TEACHERS'
PEDAGOGICAL INNOVATION AND CREATIVITY: A
PHENOMENOLOGICAL STUDY OF THREE SECONDARY
SCHOOLS IN MOROGORO
MUNICIPALITY**

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PHENOMENOLOGICAL STUDY OF THREE SECONDARY
SCHOOLS IN MOROGORO
MUNICIPALITY**

By

Dionisi Mkulu

**A Dissertation Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of Arts in Education (MA-ED) of
Mzumbe University**

2019

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled **Influence of Large Classes on Pedagogical Innovation and Creativity: A Phenomenological Study of Three Secondary Schools in Morogoro Municipality**, in partial fulfilment of the requirements for the degree of Master of Arts in Education of Mzumbe University.

Signature

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Signature

Internal Examiner

Accepted for the Board of Faculty of Social Sciences

DEAN, FACULTY OF SOCIAL SCIENCE

DECLARATION AND COPYRIGHT

I, Mkulu Dionisi, declare that this report is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

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All in all, I thank God for granting me the wonderful ability to accomplish my study with such wonderful noble people whom this page cannot hold the list of their great contribution.

DEDICATION

I dedicate this research work to my compassionate parents whose 50th Marriage Anniversary has made them a societal model of teachers' life. Being the retired educational officers who firstly worked in a historical Karema Primary School found by the White Fathers' Missionaries in the East Coast of Lake Tanganyika, Mr and Mrs C. Mukulu have been the Tanzania Government Civil Servants from 1967 to 2007. Living in Morogoro town today, they are happy and stronger enough to teach their secondary schools' grand children from their neighborhood where they privately raise both children's social values and their own income. I am proud of you, my precious parents who have successfully raised a big family of seven children of your own and four of them are teachers. This work is your reward for I am honoured to have you.

LIST OF ABBREVIATIONS AND ACRONYMS

ACTs	Academic Cluster Teams
APs	Action Points
BRN	Big Results Now
CATs	Class Academic Teams
CS	Class Size
CSR	Class Size Reduction
EFA	Education for All
ELIB	Eradication of Learning Inconvenient Behaviour
ESA	Education Sector Analysis
ESDP	Education Sector Development Programme
ESR	Education Sector Report
GPA	Grade Pass Average
ICT	Information and Communication Technology
LCs	Large Classes
LCMMTs	Large Class Macro Managing Tools
MDGs	Millenium Development Goals
NECTA	National Examination Council of Tanzania
PEDP	Primary Education Development Programme
SBM	School Based Management
SEDP	Secondary Education Development Programme
STAR	Student Teacher Achievement Ratio
TPIC	Teachers' Pedagogical Innovation and Creativity
TUCTs	Teacher's Unique Constructed Techniques
T-L	Teaching-Learning
UPE	Universal Primary Education
UNESCO	United Nations Educational Scientific and Cultural Organization
3-PIFLCs	3-Pedagogical Instinctive Features for Large Classes

ABSTRACT

All living organisms, especially human beings, have natural skills of creating a struggle to settle down a difficulty in their respective environment.

The study investigated on the influence of Large Classes (LCs) on Teachers' Pedagogical Innovation and Creativity. Teachers create some teaching tactics resulted from Large Classes (LCs) controversy in an attempt to address the related learning difficulties. The study's specific objectives were to find out the emerged classroom activities teachers consider, from their lived experience of teaching LCs, as effective methodologies, techniques and approaches, To identify the work or function of the emerged methodologies, techniques, and approaches in addressing learning needs related to LCs, and to express, from teachers' perspectives, on how the emerged methodologies, techniques and approaches impact students' learning in schools with LCs.

The sample size of the study was 34 respondents, obtained through purposeful sampling techniques. The methods of data collection included observation, interview and documentary assortment based on the mixed design whereby Interpretive Phenomenological Analysis (IPA) on idiographic focus was dominant.

The findings show that teachers have managed teaching in schools with LCs through teaching styles that mould students' behaviour, compensate the educational facilities inefficiency, and enhance students' effective learning appropriately.

Despite building multiple numbers of classrooms, the study conclusively recommends the nation's educational administrators and policy makers to project teachers' refresher workshops in secondary schools that will build and facilitate the emerged pedagogical innovations for educational achievement in schools with LCs.

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CHAPTER ONE

PROBLEM SETTING

1.1 Introduction

This chapter comprises of seven subsections that intend to give a reader the general first experience on the study. The subsections include the Background of the Study, Statement of the Problem, Objectives, Research Questions, Significance of the Study, the Scope, Limitation of the Study, and the Organization of the research.

1.2 Background

The background of this study briefly begins with problems related to teaching Large Classes (LCs) in Tanzania. It then exemplifies the historical views and a worldwide perception on LCs so as to acknowledge about the concept in relation to our Tanzanian secondary schools' class size (CS) affairs. This background helps a reader to conceptualize the researcher's point of view on how Teachers' Pedagogical Innovation and Creativity (TPIC) emerged in schools with overcrowded classes.

Experience noted from many Tanzanian public secondary schools with LCs, mainly the day schools located in urbanized cities or municipal councils like Morogoro, express teachers' complaints that teaching in an overcrowded class is a burden. Some of the reasons were shortage of teachers, low morale of teachers, limited teaching and learning materials, limited infrastructure and facilities like classrooms and desks, and poor teaching and learning methods (Mwaisaka, 2014; Kambuga & Dadi, 2015). The reasons, resulted to problems allied to distracted learning environment, have basically emerged teachers' strategic incentives to address the problems so as to withstand learning.

Efforts were taken by the government to address the LCs related problems in Tanzania implicitly through Universal Primary Education (UPE) programme. Teachers' recruitment and community involvement strategies were validated. Later on from 2005 to date the project of building more classrooms is highly enacted. The efforts were parts of the nation's attempts to eliminate illiteracy, promote socio-economic development and respond to the world programmed visions of Millenium

Development Goals (MDGs). The programmes, aligned with the Education Sector Development Programme (ESDP), drew upon the broader national and international policies; nationally the Tanzania Development Vision 2025, which sees education as “a strategic agent for mindset transformation and for the creation of a population equipped with the knowledge needed to competently and competitively solve the development challenges that face the nation” (URT, 2013). Despite the programmes, the increase of secondary schools’ students’ enrollment marked the failure to abolish the LCs’ crisis due to an increase of civilians’ awareness on the importance of education.

Tracing back to the world history, we learn that large classes existed from the ancient Egyptian era in the 3rd century, Before Christ (BC). According to Angrist and Lavy (1996), in Finn and Achille (1999), there were 72 students in Alexandria, one of the world ancient academies. Despite the ancient LCs, the philosophers who were educational instructors by then managed to transfer knowledge to any number of their followers in order to accomplish the societal educational needs accordingly (Sienkewicz, 2007).

Concentration of labour power into factories, in the Britain’s 18th century industrialization era, increased settlements and urbanization where the multiple number of school children marked the beginning of LCs. Carl (2009) explained the fact that the gains in income and wealth during the industrial age made possible larger public expenditures for the welfare of the general population, and all governments considered schooling a necessary step in their expanded social calculus. Nevertheless, teachers were transmitting skills effectually to the new generation as Carl (ibid) argues that the rise of mass schooling took its status in the continental Europe.

Teachers in India, Bangladesh, and Pakistan, considered overcrowded classes a normal phenomenon and a common challenge to adapt rather than a problem to solve (Bashir & Ferdousy, 2006; Marcus, 1997; Sarwar, 2001). Bashir and Ferdousy surveys (ibid), on a number of public and private universities of Bangladesh, found that the number of students vary from 15 to 91, and 60% of the language instructors

affirmed that the about to 91 variations actually represented a large class. However, in Asian highly populated countries, teachers, successfully familiarized LCs teaching.

In the United States a debate on contemporary class size (CS) and its effects on the Teaching-Learning process in schools led to the constitutional amendment of it all over the country. Class Size Reduction (CSR) programme was permitted by Florida voters in November 2002 election after the Student Teacher Achievement Ratio (STAR) project and its smaller secondary studies being approved successful. The studies found that teaching effectiveness and learning achievement levels are higher in smaller classes of 15 to 20 pupils and the regular classes of 21 to 30 pupils than in large classes of more than 35 students (Bain, 1989). Still, the debate showed least interest on the appropriate pedagogy for the reduced CS.

In the Sub-Saharan Africa, including South Africa, it is normal for a teacher to instruct over 40 students in a classroom. The situation presents them many challenges that are thought to limit students' extra capability achievement and drive the committed teachers to innovate some managing strategies. Anderson (2015) suggests that teachers have to identify common problems they face and develop their own solutions in order to improve their teaching efficiency.

The delivery of free education in Tanzania, guided by the Tanzania Development Vision towards the year 2025, increased school enrolment trend in primary and later in secondary school levels. Basically, the vision identified the aim of having a well-educated and learning society to respond and compete to the international levels of development. The Educational Sector Development Programme (ESDP) of 1996 redressed the uneven interventions of the prior programmes of; Education for Self Reliance (ESR) of the year 1967; Musoma Resolution (MR) of 1974; Universal Primary Education (UPE) of 1977; and the Education and Training Policy (ETP) of 1995. In the year 1997, the implementation of ESDP came up with its two subsector programmes in five years of its first phase (2002-2006) as the Primary Education Development Programme (PEDP) and the (2004-2009) Secondary Education Development Programme (SEDP). The programmes had expression of commitment

to meet Education for All (EFA) and the Millenium Development Goals (MDGs) targets of 2006 to 2015 ten year costed plan undertaken by the Government of Tanzania and its development partners (MoEC, 2006, MoEC, 2004). Together with the continuing implementation of the Free Education policy started from the year 2016 to date, the increase of enrolment of students to the public schools in the country would automatically drive teachers to innovate a sort of pedagogy that suits the crowded classes.

The Education Sector Report (ESR) analysis of Tanzania cleared that the teaching approaches used and the 1:40 Teacher-Students ratio were made to lower unit costs as it supported the enrollment increase (URT, 2011a). Though the recommended CS was still large, there were no clear instructional methods, techniques or approaches stated for the CS. It is not known how teachers have been managing teaching such LCs and what it meant to them. This study was therefore set to gather teachers' lived experience of teaching LCs in a view to learn innovations and creativity that emerged as a significant means to make them teach large classes and yet help students perform well in examinations and other evaluation tests.

1.3 Statement of the problem

In Tanzania, as it might be the case in many developing countries, there is a progression of higher enrollment in primary schools, secondary schools and higher educational levels. Enrolment ratios in Tanzanian primary school level, for instance, increased impressively from 58% in 2000 to 97.3% in 2007 (MoEC, 2006b; MoEC, 2010). This verifies the truth that there is a reflected infinite increase in secondary schools and higher educational levels too. Among other factors, the increase is a result of the implementation of global development goals as stipulated in the MDGs and Sustainable Development Goals (SDGs). Thus, the increase in enrollment exceeds the number of classrooms and teachers available and consequently, many schools in Tanzania suffer from having LCs.

The literature shows that there are least prearranged efforts of using teachers' pedagogical skills to fade away or reduce problems that interrupt learning process in schools with LCs. This study, therefore, finds out how the circumstance of teaching

large classes influence teachers' pedagogical efforts, in terms of creativity and innovation, in pursuing their obligation in schools. The study unveils pedagogical innovations and creativity emerging as a consequence of teaching large classes using a phenomenological study of three crowded secondary schools in Morogoro Municipality.

1.4 Objectives of the study

The objectives are expressed in two ways; the general objective which gives the overall intention of this study and the three specific objectives respectively.

1.4.1 General objective

The general objective of this study was to explore the influence of Large Classes (LCs) on teachers' pedagogical innovation and creativity in addressing the challenging phenomena to impact learning in secondary schools. Teachers are subjected to overcrowded classes with students' number going over and above the recommended ratios, thus this study has unveiled how teachers' unique tactics have managed to teach effectively in such environment.

1.4.2 Specific objectives

- i. To find out the emerged classroom activities teachers consider, from their lived experience, as effective methodologies, techniques and approaches of teaching LCs.
- ii. To identify the function of the teachers' emerged methodologies, techniques, and approaches in addressing learning needs related to LCs.
- iii. To express from teachers' perspectives, on how the emerged methodologies, techniques and approaches impact students' learning in schools with LCs.

1.5 Research questions

- i. What are the emerged classroom activities teachers consider, from their lived experience, as effective methodologies, techniques and approaches of teaching LCs?
- ii. What is the function of teachers' emerged methodologies, techniques, and approaches in addressing the learning needs related to LCs?

- iii. How, from teachers' perspectives, do emerged methodologies, techniques and approaches impact students' learning in schools with LCs?

1.6 Significance of the study

The study's significance is expressed through four related main perspectives, primarily, is on how the findings will contribute to the knowledge gap; secondary, through effective teaching and learning perspectives; tertiary, related affairs on administrative management; and the forth significance, will express on the way TPIC can be a tool for educational achievement in developing countries.

Focusing, primarily, on the contribution to the knowledge gap, this study will help other educational researchers to examine on how epistemological constructivism theory is a 'two ways' traffic in education; it may apply to both learners and teachers as well. In one hand, teachers' pedagogical reflections may create, view or construct teachers' own instructional activities or practices by viewing and learn from the facilitated state of the learners' social and school environment the teacher experiences. So as learners, on the other hand, do reflect, view and construct the newly taught knowledge in relation to the learners' prior related experience.

In expanding knowledge on the significance of the emerged activities of teaching LCs, this study's findings will also contribute to the need of quantitative researches to examine the rate of students' performance per each methodology, technique and approach respectively.

The study will serve as a source of information to other researchers studying on the topic related to teaching in LCs. The findings are necessary as they are going to be the derived theoretical guide of dealing with LCs teaching. The references will provide new ideas for other related investigations on CS.

Focusing to the significance related to the LCs teaching and learning perspectives, this study will awaken teachers' LCs teaching morale and readiness, and hence building students' learning interest and outcome. The teachers' morale and learners' interest will result to higher performance achievement in educational transferring

process in the educational institutes with LCs in Tanzania and in other developing countries of the same educational environment as well.

The findings will help teachers be able to think about new ways to work with and help to find easier ways to develop their everyday teaching responsibilities. It will improve teachers' ability of applying creative thinking in order to solve LCs related problems efficiently since without creativity performance wouldn't have been improved.

The findings will make teachers recognize that teaching LCs is an interesting and manageable task that improves professional performance and teaching competence. Knowing secondary school students' needs in their adolescent teen age of learning, for instance, would guide a teacher think about using a peer group teaching approach.

The study's findings enable teachers to manage students' learning inconvenient behaviour. Teacher's ability of using teenager students' behavioural changing approach, of groups' presentation for instance, as one among the potential means in the naughty crowded LCs, would let the teenager students work hard since they are eager to be noticed that his or her participation is admirable. Students who prefer hiding themselves in a large class will hardly have a space to hide in the groups' presentation.

The findings would also help teachers to use the approaches that he or she thinks that it addressed the T-L material inefficiency resulted from the challenging LCs environment. Knowing that a school with overcrowded classes needs the double-shift sessions, for instance, is a significant skill of managing teaching process in schools with LCs.

Moreover, this study contributes to reveal the hidden knowledge that the ability to present and interpret topics and information in a fun and interesting teaching tactics, does not yawn learners in any overcrowded classes. The amusing way of transferring information in a midst moment of teaching draws attention to learners and refreshes up their mind that stay awaken to follow the teacher's instruction again.

Practically, the study's findings will add up teachers' willing to scrutinize thoroughly the subject topics and students' learning readiness before teaching. Teachers would be able to manage the use of topic content appropriately to the learners 'personal or acquired ways of understanding facts and judge a situation that suits students' learning attitudes.

The findings of this study will practically enable teachers use the LCs teaching tactics to ensure that the study topics are efficiently accomplished and got well understood to all students within the schemed terminal or annual academic duration. As teaching a crowded class requires higher teacher's attention with restless and tiresome obligations, the accomplishment of the topics to be taught in time would be limited.

Yet, the emerged pedagogy findings will help teachers in subsidizing LCs delayed learning problems. Teachers would be able and ready to find and learn the new effective ways to solve everyday problems in the given time and in the fairest and most efficient manner.

Focusing on administrative management related affairs, the study findings are the tools for alarming the educational stakeholders, particularly policy makers and planners, directorates, and curriculum developers and implementers to explicitly identify and administer the use of new pedagogical directives in addressing Teaching-Learning (T-L) difficulties in schools with LCs. The tools will be useful for the educational quality assurers in validating the T-L effectiveness and efficiency in schools with LCs.

The findings of this study will drive educational quality assurers to derive the beginning of documenting and applying the innovated teaching tactics purposefully in order to use them as schools' inspectors to advice teachers use them according to the teacher's intention.

Significance focusing on the way TPIC can be a tool for educational achievement in developing countries. This study shows that teachers are a potential part of human capital for educational achievement in developing countries, the findings will help the world understand that teaching LCs is meant to be the developing countries' tool for raising learning achievement through the way teachers are driven to be innovative to accomplish their tasks. Purchasing and supplying enough educational resources and materials such as teachers, books and building materials for building new classes in order to adjust schools' class size in most developing countries, is almost an impossible trial in public schools. Teachers' emerged LCs teaching tactics are a helpful means to weaken the LCs related problems.

1.7 The scope

The study has a wide coverage as related to the key educational stakeholders' processes that facilitate the forces contributing to the emergence of LCs, a wide coverage resulted from teachers' role as innovative implementers of the T-L process, and also it involves the school's administrative contribution in addressing the LCs related problems. It encompasses the variable attributes that interact with the teachers' role in managing the overcrowded classrooms in order to promote effective teaching and learning strategies. The study's speculation has gone further in a way that it has realized that the teachers' role contents are ignored and encountered to be addressed only through massive purchasing and allocation of educational facilities for schools with massive enrolment.

The scope in terms of the physical area coverage of the study included the campus of Kihonda, Mgulasi and Morogoro secondary schools where teachers who teach LCs were the data collection respondents as well as students. The overcrowded schools were located and administered under the managerial governance of Morogoro Municipal Council in Tanzania mainland. In case of time consumption, the study was

done through two major phases; the duration of research speculation when a researcher conceptualized what drove him to the need of investigation, writing a concept note and proposal approval, and secondly, the duration of data collection, analysis and research report submission in July 2019.

1.8 Organization of the dissertation

The study is organized into six chapters. Before chapter one, however, there is a prior instructional guide which constitutes the work certification, copyrights declaration, acknowledgements, dedication, list of abbreviations and the abstract, and after the chapters the work provides references and appendices. Chapter one comprises; the introductory problem setting, background of the study, statement of the problem, research objectives, research questions, significance of the study, scope of the study and limitation of the study. The setting of this chapter, generally, directs a reader to conceptualize the rationale set up of the whole study. Chapter Two majors a discussion on the related literature review of the study. It presents the literature reviews which dealt with definitions of the key concepts, theoretical and empirical reviews, research gaps and conceptual framework. The literature, verifying various worldly related issues on the pedagogy impacted by large classes, reveals that there is little information on how learning from teachers' instinctive pedagogy is a kind of inspiring evidence towards creation of appropriate methodologies, techniques and approaches of effective teaching-learning in schools with LCs.

Chapter Three comprises of research methodology which includes; research approach, research design, area of study, instrument of data collection, sampling and sample techniques, validity, reliability and ethical issues. The study design is related to phenomenological approach that the researcher finds it more appropriate as the study explores the lived experience studied from the practices of teaching LCs. Chapter four covers the presentation of findings. The findings analyzed in the chapter include the teacher's pedagogical activities in an overcrowded class, the work of the activities for students' learning and how the activities impact students' learning in those three schools with LCs. Chapter five presents the discussion of the findings presented in chapter four. It attempts to associate the findings and the way the schools' atmosphere of having a crowd of students is managed through the related

model of teaching methods, techniques and approaches teachers have been putting in their pedagogical processes, and chapter six presents the summary, conclusions, policy implications and areas for the possible further studies to be developed. After the chapters, there are references and Appendices' sequence set up to evidence and accredit the study for a better understanding.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter intends to reveal theoretical review where the used schools of thoughts were elaborated, empirical review, and conceptual framework.

2.2 Theoretical review

Postulating the philosophy of this study, the review theorizes on the common universal modality on class size versus LCs in relation to pedagogical innovation and creativity guided by constructivism doctrines. With some reviewed definitions, the researcher, knowing that teaching large crowd of students is a tough task to teachers, has conceptualized the views on why and how are classes large?, why do teachers from different places innovate, create or add up some new pedagogical tactics? Or, what pedagogical circumstances of LCs do drive teachers to innovate?

2.2.1 Reviewed definition and cconcepts of large classes

Teachers' views on how classes are large differ from country to country. According to Baker and Westrup (2000), a large class can be any number of students, if the teacher feels there are too many students for them to make progress. This interpretation is skewed towards teaching and learning materials needed in the teaching session. The issue however is about the capacity of the teacher managing large number of students in a teaching session. It is not convincing for example to think that a class of 1000 students is small and manageable because there are text books or a test tube for each student. It is upon this view that Hess (2001), through his studies made in the western developed countries, refers LCs as the "classes of thirty or more students" (p.2) irrespective of the materials availed to the students.

Ur (1996) suggests that "the exact number does not really matter: what matters is how you, the teacher, see the CS in your own specific situation" (p.302). Todd (2006) expresses almost the same idea that "what is taught influences teachers' judgments of the size of classes" (p.1) which reflects the definition of having more students than the available educational facilities in a classroom. Onwu and Stoffels

(2005:79) have conceptualized LCs in terms of the inconvenient Teaching-Learning physical factors such as insufficient space, overcrowding students, lack of opportunities to participate actively in the learning process, impersonalizing of teaching, illogical teacher demonstrations, excessive workload, limited motivation, poor discipline, minimal safety, least socialization, long turn around homework and assignments which affect achievement during the learning process. However, Mulryan-Kyne (2010) gives a bit differing notion by integrating the nature of the course or skills and the facilities or resources available.

Bearing in mind that a class is 'large' is resulted from the lacking conducive teaching-learning environment, in terms of inadequacy of instructional facilities that limit the teacher's ability to manage. Traynor (2002) identified five classroom management strategies namely coercive, laissez-faire, task oriented, authoritative and intrinsic when theorizing the fact that any effective teaching and learning contributes to the development of both learner's skills and emotional well-being. Probably, he would address laissez-faire and intrinsic approaches as not more applicable to LCs teaching than the remaining three ones.

According to Galton (1994), CS cannot just be a matter of the number of pupils in a class but how that number affects other classroom's teaching-learning processes. The notion is clearly related to the amount of educational resources accessible to teaching and learning process in an educational institute. The required Teacher-Student ratio becomes a definition's criteria; when more consideration is upon the reliability of education equipping facilities such as classrooms, books, limited fund for managing educational process and other pedagogical inconveniences. Galton (ibid) acknowledges the facilities' insufficiency being a criterion to state the meaning of LCs as to the resulted inconveniences.

The American CS research of the STAR project, has defined smaller classes to have 15 to 20 students and regular medium classes to be the ones with at least 21 to 30 students while large classes constitute not less than 35 students. The size decreases according to the decreasing level of education from high schools or secondary school, then elementary level to the pre-school kindergarten level. Hanushek

(1995a), working on interpreting schooling in developing countries, described that the biggest problem noted in LCs is the irrelevant quantity and quality of learning materials available for the students. Likewise, in other studies' it was cleared that class size effects in upper grades were not evident (Fuller & Clarke, 1994). Contrary to the above, despite that CS in the Asian countries is quite large, the students in these countries consistently get highest scores (Biggs, 1999). However, the process of teaching LCs in the developing countries is constant and in an accepted substandard. That is the key and real issue this study wants to express since there is a wonder on the way learning achievement is still observed constant in secondary schools.

The recommended teacher-student ratio and CS for secondary schools in Tanzania is 1:35 to 1:40 per each class stream, respectively (MoEC, 2010), however most schools enroll about 50 students and above. According to Hess (2001), who refers to an ordinary school in the United Kingdom (UK) with at least a conducive teaching-learning environment, LCs refers to the "classes of thirty or more students" (p. 2). However, later on, some studies found very small or no effect of CS for it was found that academic achievement can be obtained as a result of teachers' higher qualification and school's management status (Hanushek, 1995b; Rivkin et al, 2000a; Hanushek, 2006).

2.2.1.1 Large classes in the ancient world

The idea on CS is not new; it dates back to biblical times where few philosophical educators with their followers, students, had established provision of knowledge to many groups through observation and syllogism (Angrist & Lavy, 1996). In case of knowledge about CS from the earliest educational writings of Plato and Socrates, Kutnick (1994) reported that learning was taking place in a group context since the importance of social interaction in learning cannot be overlooked. Such ancient philosophical academies, however the larger number of the admitted learners they had, considered the potentiality of gaining new experience from the alien individuals in a group as well as learning from social interaction circumstances be the instructional materials to facilitate learning in such grouped crowd of follower students respectively.

Referring to the Sub-Saharan pre-colonial societies, the lifelong teaching-learning process had a practical pedagogy whereby every adult member of the society who had a virtue, wisdom and a particular experience was a teacher. Ocitti (1994) noted that the pedagogy of African education embraces orally instructional and manually practical models of learning. A numerous peer group of youths from the villages or chiefdoms who had to be socially initiated or commenced for marriage or adulthood, symbolizing a large class, learnt arts, hunting, valuing cattle, traditional ethics such as respecting social values. Proverbs, myths and observation were the main teaching approaches. Dugard (2003) wrote the well supported argument that metallurgy, skills on copper and iron smelting for making plates, spears and other metal tools, as well as handcrafting and brewing, were transmitted from societies to societies.

2.2.1.2 Large classes in the medieval inventions

By the 14th to 17th centuries, when the Western Europe experienced the renaissance after the Latin civilization, the evolving industrial revolution influenced the beginning of the today's disciplines from the classical philosophical approaches. Ascham (1998) highlighted the importance of the classroom being a caring and comfortable environment for students' learning during renaissance. The highlight marked the beginning of notifying the LCs related problems that may hinder students' learning and thus resulting to teachers' innovations to reclaim the learning environment remain conducive.

2.2.1.3 Large classes in the modern world

The limited availability of the teaching staff and material educational facilities due to budget cuts of governments on education, holding the meaning of large class today, develop teachers' new teaching styles that would accomplish the gap for learning achievement. The 21st century European research evidences, most of them, indicate that the number of students in the classrooms of the medium levels of schooling should be fewer than 20 in order to maximize the beneficial effects (Zyngier, 2014).

Pakistan's remote areas, being one of developing countries with insufficient educational facilities, suffer from the LCs resulted problems. Naz and Murad (2017) suggested that there is much need for institutions to introduce and use such

innovative teaching techniques which would focus on training learners to be a productive part of the society. Teachers should be innovative in their teaching methods and should adopt different strategies to facilitate every single individual of their classroom according to their capabilities and differences of students (Guri-Rosenblit, Sebcova & Teichler, 2007).

The new pedagogical styles mechanically turned the LCs related problems into an opportunity in Tanzanian secondary schools' environment. Benbow, *et al.* (2007) described that large class size is an inevitable feature of the developing countries today. The study found that there is the substandard teaching and learning process in these countries in this case Tanzania is inclusive (Nzemo 2013).

2.2.2 Difference between innovation and creativity

The words innovate and create are the Latin originated ones: the 'creare' means a state of forming something out of nothing, while 'innovare' means a state of renewing or changing something in order to create an effective thing, constructive process or profitable product. The Oxford Advanced Learner's Dictionary defines the word create as make something happen or exist, and the word innovation as the introduction of new things, ideas or ways of doing something. However similar in meaning, still the two words differ, the introduction of 'new things' in innovation involves adaption, to suit a new needy situation in a system, while in creativity there is something new got to be originated or made out of nothing.

While creativity can be perceived as the infinite source of innovation, then innovation can be perceived as the application and implementation of creativity (Craft, 2005; EU, 2009; Ferrari, Cachia & Punie, 2009). Thus, in creativity there is original generation or construction of pedagogical ideas, concepts and processes that aims at fostering an educational gain or product in one hand. In innovation, on the other hand, the pedagogical artifacts of creativity are to be implemented in order to attain more effective achievement as highly demanded by the employees, these are teachers, and customers who are students, or stakeholders and community.

2.2.3 Innovation and creativity model

Creativity originates a phenomenon into something quite new while innovation designs or implements a success on a demanded phenomenon through productive, processing or administrative basis created within an already firm organization system. For active teaching in the classroom a variety of methods are open for use (Herbert, 2010), but if the methods are not used with a successful innovative change, there will be least or no learning achievement. For active learning to happen, there is a need for teachers to be prepared to make students' active responses that cannot be planned in advance (Zaslavsky & Sullivan, 2011), thus the teachers' unplanned make ups improvise or equip learning.

People may find themselves innovative when they struggle to find a solution for the rising challenges or difficulties that seem to delay a trend of success in a business. In the words of Boer and During (2001), "in most cases the main motive for starting the innovation process was the need to develop (a) new product (s), often driven by the demands of just one customer, or the desire to penetrate new markets by developing new products or adapting existing products" (p.14). Innovation presents people with alternative tools and ways of completing everyday tasks and solving a variety of problems in ways not possible without it (Russel and Schneiderheinze, 2005).

2.2.4 Innovation and creativity in activity theory and the power of technology

Contemporary constructivist-based learning principles suggest that students should actively participate in goal-based activities that provide them the opportunity to construct or create knowledge responses to meaningful issues. According to Jonassen, Peck, and Wilson (1999), constructivist learning involves knowledge that is constructed not transmitted, embedded in activity, and anchored in the context of the activity. Knowledge construction can be a part of the how students interact and respond in a classroom (Jonassen, 2000; Lave & Wenger, 1991; Salomon, 1993). Therefore, teachers' pedagogy must invent new approaches to match the competence based constructivists mode.

In case of technology, there is a simplified quicker and wider enactment of students ability to comprehend the new skills and knowledge hence the more advanced

creativity emerge construction of new discoveries to students. Technology has the potential to support students in the development of these higher level knowledge use abilities (Blumenfeld, *et al.* 1991; Pea, 1993). Teachers, therefore, find themselves be more innovative in attempting to apply a technological innovation in the classroom pedagogy and at the same time they naturally find themselves creating, originating or constructing new efforts that help them to reach their goals effectively.

2.2.5 Large classes and constructivism theory

The results of recent studies concerning the effectiveness of LCs teaching methods, that educational constructivists favour, are the learner involving learning methods the competence based approaches can apply through grouping them. The findings of a study by De Caprariis, Barman, & Magee (2001) suggest that the discussion method applied mostly in large classes, produces higher level comprehension that construct new related skills to increase learners' interest and ability in a practical state. Researches on group-oriented discussion methods have shown that team learning and student-led discussions not only produce favorable student performance outcomes, but also foster greater participation, confidence and leadership ability (Perkins & Saris, 2001; Yoder & Hochevar, 2005).

2.2.6 Circumstances driving teachers to innovate and create

Overcrowded classes or the process of teaching in an auditorium are disadvantaged by the circumstances that need teacher's managerial invention to foster learning. Teaching a large group of students can be intimidating for both instructors and students (Jungic, Kent & Menz, 2006). Teachers, therefore, are driven to nurture the appropriate teaching styles that results to effective students' learning. The pedagogical style ensures a teacher that students' learning capacity got to be improved, teachers' pedagogical obligation got to be accurately accomplished, scarce educational resources got to be evenly distributed and effectively utilized, and inventing classroom rules and school regulations in such a way that T-L process will be equipped in all ways, and no teenager student will be able to hide from the teacher's instructional tasks.

Teachers teaching LCs are innovative for they attempt to improve learning ability of the overcrowded students. In the case of working creatively in peer group team hence to generate students' psychosocial welfare, confidence and build their activeness in problem solving matters, for instance, teachers are driven to distribute students into their participatory small team groups in a large class. Researchers have shown that team learning and student-led discussions not only produce favorable student performance outcomes, but also foster greater participation, self-confidence and leadership ability (Perkins & Saris, 2001; Yoder & Hochevar, 2005).

Teachers working in overcrowded classes become innovative for they want to make sure that their obligation got to be accurately accomplished in time on the required field of study within the appropriate time. Such a situation emerges a need of searching for appropriate methods and possible improvements to be applied in the classroom or place of education (Valerien, 1991).

Teachers innovate and create evenly distribution and effective utilization of the scarce T-L resources for they want to achieve the goals despite the resources inadequacy. Such a situation is sufficient justification to search for appropriate methods and possible improvements to be applied in the classroom place of education. Knowing that the solution for the LCs challenges are in the hands of the teachers' pedagogical arts, Onwu (1999), thus, viewed a large class as the "one where the majority of characteristics and conditions present themselves as inter-related and collective constraints that impede meaningful teaching and learning" (p. 126).

With the purpose of behaviour management and transferring to students the cultural values demanded by the native society, teachers invent and create classroom rules and school regulations that sustain learning and achievement in schools with LCs. In the Cote d'Ivoire, for instance, introduction to technology at primary level is achieved partly through the use of traditional techniques, while at the secondary school level it is applied on the observation of agricultural, craft and food storage studies (Valerien, 1991). Using the authoritative strategy, the teacher manages student behaviour by enforcing a specific and reasonable set of classroom rules

(Collette & Chiapetta, 1989 in Traynor, 2002). He notes that the goal of the intrinsic strategy for classroom order is to increase student's control over himself/herself, firm, fair and sensitive policies are the key components in establishing and maintaining school discipline (Gaddy & Kelly, 1984 as cited in Traynor, 2002).

Generally, the emerging learning problems resulted from a crowd of less facilitated students in a classroom, are the circumstances driving teachers to be innovative and creative in an effort to accomplish the tasks one is obliged to.

2.2.7 Pedagogical innovation and creativity for large classes

The word “pedagogy”, according to the Oxford Advanced Learner's Dictionary, briefly refers to “the study of teaching methods”. Loughran (2010) asserts that pedagogy is the relationship between teaching and learning. This study has viewed pedagogical innovation for LCs as the teachers' personal efforts of introducing new ways of teaching styles in accomplishing their objectives when teaching overcrowded classes. Some teaching styles are appropriate for LCs as the committed teachers create an affordable circumstance to enable students' understanding. The word “teaching” unavoidably symbolizes “enabling them learn”. Learning, therefore, is a criterion of the validity of teaching. In this study, the word pedagogy occupies a broader meaning; despite being the methods of teaching, it attempts to mean any teachers' manner of instruction that facilitates students' learning. In other words, it refers to any purposeful, systematic and strategic activity teachers attempt in their efforts to impact acquisition of knowledge and skills to the learners.

The term Pedagogical Innovation, therefore, as applied in this study, refers to invention of a new effective style through renovation, restructuring, remodeling, reorganization or changing the ways, methods, imaginations, devices of teaching that facilitate the effective atmosphere of learning. It occurs when a teacher finds a more suitable and effective pedagogical appliances, whether in a formal or informal alteration, as they are obliged to adapt the task of teaching a multiple number of students in a classroom. Tanzanian teachers, as it may occur in other developing countries with overcrowded students, are applying themselves some instructional and

organizational approaches that have a better T-L solution for restricting or limiting the LCs related problems.

Goettler-Sopko (1990) acknowledges that academic achievement does not necessarily improve with a reduction in class size unless the appropriate learning styles and effective teaching styles are used. Being the case, the application of improved T-L styles generates students' learning in schools with LCs. The pedagogical created efforts can be improved by enhancing the capability of teachers and school leaders to handle this setting and identifying ways for students to be successful (Benbow, Mizrachi, Oliver & Said-Moshiro, 2007).

The role of teachers, in teaching a large number of students who can hardly meet their educational facilities required, has expanded from transferring knowledge to being a facilitator of students' learning. World current reforms related to technological advancement, increasing education cost, political administration and policy interference, resulted from the rapid population increase and public awareness on the importance of education, have made teachers concentrating on developing students' reflective thinking, problems solving, team working and learning to learn rather than remaining the subject matter experts.

2.2.8 Philosophy of phenomenological study on large classes

Being the branch of philosophy that acknowledges on a set of facts or meaning of things in the universe in relation to human life, the phenomenological study of the three schools with LCs in Morogoro Municipality refers to the set of respondents' vital description of the pedagogical lived experience invented by teachers in their efforts to let students learn effectively. The study in this deals with what the researcher can observe, hear through interviews, feel comprehensively and hence describe its meaning in relation to the way learning is achieved in schools with LCs. Balls (2009) acknowledges that 'phenomenology' focuses on consciousness and the content of conscious experience such as judgments, perceptions and emotions. The phenomenological study on LCs, in this study, deals with the informants who are experienced and live in the enactment of the issue investigated by the researcher.

2.2.9 Challenges addressed by large classes' pedagogy

Problems related to inefficient T-L resources, impacted by the enrollment that exceeds the reliable educational facilities, seemed to be limited by teachers' teaching creativity. Through managing the scarce educational resources and structuring students' behaviour, teachers enhance learning in schools with LCs. Teaching each other and learning on the application of modern pedagogical approaches from teachers of the nearby schools with the same challenges are the means to be applied for LCs' learning achievement.

Deprived attendance, occurring in classes with too many students, poses challenge that drive teachers to the need of structuring students' behaviour. The interview study made by Deed (2007), on Students Walking Out During Lectures reports that one of his senior colleagues at La Trobe University in Australia commented that 300 students in his first lecture in February had gradually eroded to 17. In a case study of an Introductory Macroeconomics Course conducted by Snowball and Wilson (2005), the non-attendance attitude of overcrowded students and the instructors' failure to note their truancy and drop out absence, were found to be the most common challenges of teaching a large class. However, some committed and creative teachers have involuntarily managed to make a successful learning outcome by applying behaviour structuring approaches that limit the challenges.

Moreover, there are other students' behaviours that hinder learning in LCs, such as assignment incompleteness, noise making, bullying, and late attendance, drive teachers to create an instructional change that resists the behaviour. Arthur-Kelly et al, (2007) found that behaviour management, can be a significant challenge for teachers. According to Porter (2000), however, behaviour management has two meanings: primarily, it is meant to prevent disruptions proactively, through the teacher meeting the children's needs being educational, social and emotional, and secondarily it means the proactive intervention that the teacher does in order to have students whose behaviour influence learning effectiveness.

There is a threat related to poor academic performance. Some quantitative studies made in Taiwan, on why the overcrowded students of Financial Studies achieve

constant failure, Lin and Chen (2006) found a strong relationship between class attendance and performance in the course of Public Finance. Their findings are in agreement with that of other studies conducted by Thatcher, Fridjhon and Cockcroft (2007) in a Psychology Course Studies' absenteeism, Marburger (2001) on undergraduate truants' performance in LCs, and Romer (1993) on LCs students' attendance. However difficult it is, sustaining students' academic performance have been upon the duty of the instructors for they have adapted the situation by moderating and innovating the modern ways of teaching rather than the mere use of traditional teacher centred lecture.

2.3 Empirical review

This subsection briefly refers to the various research reports about the T-L perspectives of LCs, done by other people from different experience, their objectives, methods, findings and their conclusion. However, most of the literal reviews show little attention on teachers' inventions that renovate the T-L atmosphere in schools with LCs.

2.3.1 Classical studies on large class size

Exploring about importance of maintaining the rate of CS for better education provision in schools was a rare study to be thought about by philosophical scholars in the era of the earlier Greece and Roman world. However, Finn and Achille (1999) traced the analysis from ancient writings of the Babylonian Talmud that specified the maximum size of the classical bible classes to have 25 pupils each.

The study made by Benbow, *et al* (2007) argues that large class size was a cultural feature in the past as it is almost inevitable in the developing countries today. With the case of the pre-colonial education system in Tanzania, elder traditional teachers held little relationship between CS and learners' achievement for they trusted much on practical or manual work performance as a criterion of academic achievement. The study found that there is a substandard teaching and learning process in these countries. This process has been improved by enhancing the capability of teachers and school leaders to handle the manual work setting and identifying ways for

students to be successful. Fuller and Clarke (1994) also contributed a part to this discussion.

2.3.2 Class size studies in the United States

The Tennessee's state project entitled Student Teacher Achievement Ratio (STAR) was a contemporary large-scale study in the United States (US). It targeted to test the effectiveness of Class Size Reduction (CSR) in elementary level for improving educational achievement. Students were assigned randomly to Teacher-Students Ratio of either a regular class of 1:22 to 1:26 or a small class size of 1:13 to 1:17. The findings resulted to a better achievement with the reduced class size. The Class Size Reduction (CSR) enactment in the early grades to almost all over the country took place. The project, then, emerged some additional researches' approval on small classes' success and assessment in middle levels of education with several costs and benefit analysis and some arguments whose conclusions were somehow faulty. President Clinton introduced a nationwide CSR programme in 1998 which was amended by George Walker Bush US presidential administration from 2001 to 2009 to remain as No Child Left Behind (NCLB) programme. The amendment became an appropriate option of fund use in educational costs (Finn, *et al.* 2007). Therefore, there have been almost no studies proposing on the appropriate pedagogy of the LCs in the US class size projects.

On the other hand, the same STAR study concluded that small class size increased the student math performance by about one third of a standard deviation. Many studies of CS reduction were carried out in Wisconsin (SAGE Program) and North Carolina. These studies described significantly higher achievement test scores in the smaller classes than in the larger classes of primary grades/levels (Molnar, Smith, & Zahorik, 1998; Molnar *et al.*, 2000). Likewise, Krueger & Whitmore (2001) conducted a follow up analysis of small class size in the lower grades and concluded positive effects in the later period. Small class size in the lower grades directed to take a college entrance exam with higher probability but to some extent with higher test scores for minority students. All these, however, have almost put aside the CS perspectives as related to the appropriate pedagogy.

The effective American STAR project, however, emerged some pedagogical clues that drove me, a researcher who worked with this study, thinking about studying on the suitable methodologies, techniques and approaches that would favour students in secondary education levels with LCs, especially in the fund limited developing countries, and Tanzania remains the case model. The project would be ever costlier since multiple classrooms would have to be constructed, multiple teachers to be recruited, multiple study materials and massive trillions of money for teachers' salaries would remain an endless nation's burden. Thus, this research has been using the opportunity of teachers' efforts from which information on how they manage to achieve with their inevitable large classes in Tanzanian secondary schools applies.

2.3.3 Class size rules in the Nordic World

Bonesronning (2003), using a maximum actual CS decree of 30 students, investigated the effects of class size on student achievement in lower secondary schools in Norway. Contrary to Fuller and Clarke (1994) whose work ignored the Nordic culture, rules and pedagogy, Bonesronning (ibid) found that the achievement effect varies among student sub-groups. This effect was larger in schools with a higher proportion of students from intact families; however, it was conditional on student effort.

Studies made in some Nordic educational institutions with CS more than the rule of 30 students in a room, Michaelowa (2001) concluded an inverse correlation between CS and learning outcomes. The correlation showed the decreased student learning with the increased CS; however, effective learning was about to be limited once the CS exceeded 62, but when without the increase of the appropriate teaching skills.

Furthermore, Finn (2003) concluded that students become more occupied in the small classes, both academically and socially. Thus the students' strong academic engagement made their academic achievement to improve. Similarly, Lindahl (2005) found the significant effects of smaller class sizes on student achievement. The study examined the effect of CS in natural variation by using longitudinal approach. It used a sample of a total of 556 students in 16 schools in Stockholm. The students were examined by a standardized test in mathematics on three occasions. The average

student's percentile rank was between 0.37 and 0.98 units, depending on model specification, with a reduction in CS by one student. Later on, however, the same Lindahl's study showed that there were more gains for immigrant students from LCs' basis than the native Swedes from the equipped smaller classes.

2.3.4 Large classes in Asian countries

Asian LCs have many students scoring high marks in mathematics than students from the European small classes. Studies made by Biggs (1999) show that LCs in the Asian countries have more students' higher grade scores in international competition of mathematics achievement tests, contrary to what the U.S. project STAR findings express. In India, Singapore and China, students from elite classes get higher scores than the average. Further findings of Biggs (ibid) cleared that Japanese and Chinese teachers' comments have not recognized any relationship between CS and learning outcomes in schools. Moreover, the CS in those Asian countries is always found to be bigger than the world agreed CS average and still their math's achievement levels are above the international scores average. Still, the studies do not acknowledge that the central role of groups in the Confucian heritage in China and Japan is a key T-L approach related to LCs.

Tow (2006) analyzed the cross-sectional and panel data of research study on the school funding and its effects on the student achievement. The study found that CSR was one of the important indicators of student achievement. Most of the studies concluded that smaller CS has significant impact on student achievement (Blatchford & Mortimore, 1994; Mosteller, 1995; Angrist & Lavy, 1999; Finn & Achilles, 1999; Nye, Hedges, & Konstantopoulos, 1999; Krueger, 2001; Michaelowa, 2001; Bonesronning, 2003; Finn, 2003; Lindahl, 2005). However, some studies found very small or no effect of CS (Hanushek, 1995; Rivkin et al, 2000; Hanushek, 2006). Likewise, CS effects in upper grades were not evident (Fuller & Clarke, 1994). Contrary to the above, despite that CS in the Asian countries is quite large, the students in these countries consistently get highest scores (Biggs, 1999). The teaching and learning process in the developing countries is substandard. This is the key and real issue. However, this process can be improved by enhancing the

capability of teachers and school leaders to handle the setting and identifying the ways for students to be successful (Benbow, *et al.* 2007).

2.3.5 The Middle East maimonides rule: Israel

Furthermore, Angrist and Lavy (1999) used a regression discontinuity design to analyze the effect of CS on student achievement. The class sizes were determined by the Maimonides' rule in Israel. According to that rule, the maximum class size is 40. Two classes are automatically created if the total enrolment is greater than 40. Likewise, there will be three classes if the numbers of students is greater than 80 and so on. The study found that CSR has a positive and significant effect on student achievement in reading comprehension and mathematics. Still, the Maimonides' approach does not state the teachers' pedagogical appliances, in its rule of managing the large number of students, when streaming them.

In calling attention to the Maimonides' design, Blatchford and Mortimore (1994) found that students in the LCs desired to spend less time on class assignments as the teacher can hardly monitor them fully. Students in smaller classes, on the other hand, desired to participate more and spending more time on school work. Spending less time on class work, in LCs, enables more time for corrections and participatory demonstration while spending more time delays the completion of the annual syllabus. The CS is reported large in the developing countries and the Asian countries in that regard. Hanushek (1995) describes that one of the biggest problems faced by large classrooms is the quantity and quality of learning materials available to all the students in the developing countries. Still the appropriate pedagogy is not proposed.

2.3.6 Class size in Africa and other developing countries

Fuller & Clarke (1994) described that CS effects in the upper grades were not evident from the data of many countries, including Botswana, Philippines, and Thailand. However, in Tanzania, there was found a positive effect of CS on achievement. Concerning pupils-teacher ratios and CS, research evidence shows that lower values are desirable for better quality education. It is thought that, to a certain limit, lower values on these two indicators are associated with more interaction

between teachers and pupils, resulting in better quality education. Pupils-teacher ratios and CS are also key indicators for checking if expansion in participation rates is accompanied by adequate provision of teachers and classrooms. The findings are like those of Rajani and Sumra (2003:5).

The recommended pupil-teacher ratios and class size for primary schools in Tanzania are 40 pupils per teacher and 40 pupils per class, while in secondary schools is 30 to 35 respectively (MoEVT, 2009). This shows that there is high class size in primary schools in Tanzania which exceed 40 pupils per class as recommended by government policy. However, the researcher observed more than 40, and nearly to 100 pupils in a Standard One classroom at Mzumbe Primary School in Morogoro region in Tanzania. It is obvious that the increase in primary school is likely affecting the increasing increase in secondary school level too. The situation needs newly emerged pedagogy to suit the crowd rather than remaining waiting for the costly CSR programmes of building more classrooms in the primary and secondary schools in the country.

2.4 Prior strategic plan for class size reduction in Tanzania

The basic strategies for reducing CS in secondary schools in Tanzania is enacted indirectly or implicitly through building multiple number of classrooms, training and recruiting teachers for new built secondary schools in every ward division throughout the country. In accomplishing the SEDP (MoEC, 2005a) vision, the government encouraged civilians to contribute for building and start new secondary schools in each ward all over the country while itself providing one quarter of the capital costs. However, community participation in the construction of secondary school buildings remained below expectations, compared to primary school construction, possibly because there is a lack of sufficient mobilization within the community, and lack of sensitization on the part of regional, district and ward level authorities and stakeholders (MoEC, 2005b). Since the LCs related challenges remain endless, the researcher found the necessity of investigating for the appropriate pedagogical skills from teachers' experience to limit the challenges.

In the case of supplying the learning materials, at the secondary school level, one better off objective of Tanzania government for Secondary Education Master Plan (SEMP) was the establishment of a sustainable instructional materials system with a target of one book per student per subject by the year 2005. However, there are financial challenges and rampant increase of students' enrollment despite the multiple classrooms building success of SEDP-I (MoEC, 2005). The researcher, being a senior secondary school teacher for more than ten years, has experienced the need for exploring on some teachers' innovation and creativity that meet the government's SEMP intention that suit the rampant enrolment and LCs needs with affordable fund.

2.5 Research gap

The general literature review acknowledgement seems to be too allied to the efforts focusing on CSR for T-L achievement. Despite the STAR project and the CSR studies and policy amendments in the US, UK and other Anglo-Saxon educational system world, teachers' experience studied in India, Bangladesh, China and Pakistan showed that whether the class size was large or small, students consistently got the highest marks. Rivkin *et al.* (2000b) concluded that effective learning and achievement resulted from class size reduction were small, and CSR raised doubts on whether the more spent fund would significantly raise achievement. Rivkin (*ibid*) found that academic achievement can be obtained as a result of teachers' higher qualification and school's management status. Thus, the author and researcher of this study learnt that there is least attention on the appropriate pedagogy to minimize learning difficulties the LCs related challenges validate.

The programmed CSR projects depend on only facilitating education by building multiple numbers of classrooms and recruiting new teachers without simultaneously necessitating on the use of teachers' emerged pedagogical skills. The main area of interest that developed the researcher's critical thinking is the necessity or the need of applying LCs effective teaching methods, techniques and approaches to improve learning achievement despite depending only on the costly CSR projects that may display little success when economic crisis prevails.

From this perspective, the researcher conducted the phenomenological study whose findings would provide the costless teaching approaches to assist some difficulties related to the endless LCs resulted problems which seems not to phase away the unlimited enrollment increase in Tanzania. The cognition and installation of the teachers' own pedagogical roles are thought by the researcher to remain the cheapest tool for learning achievement in developing countries facing the related LCs inconveniences.

2.6 Conceptual framework

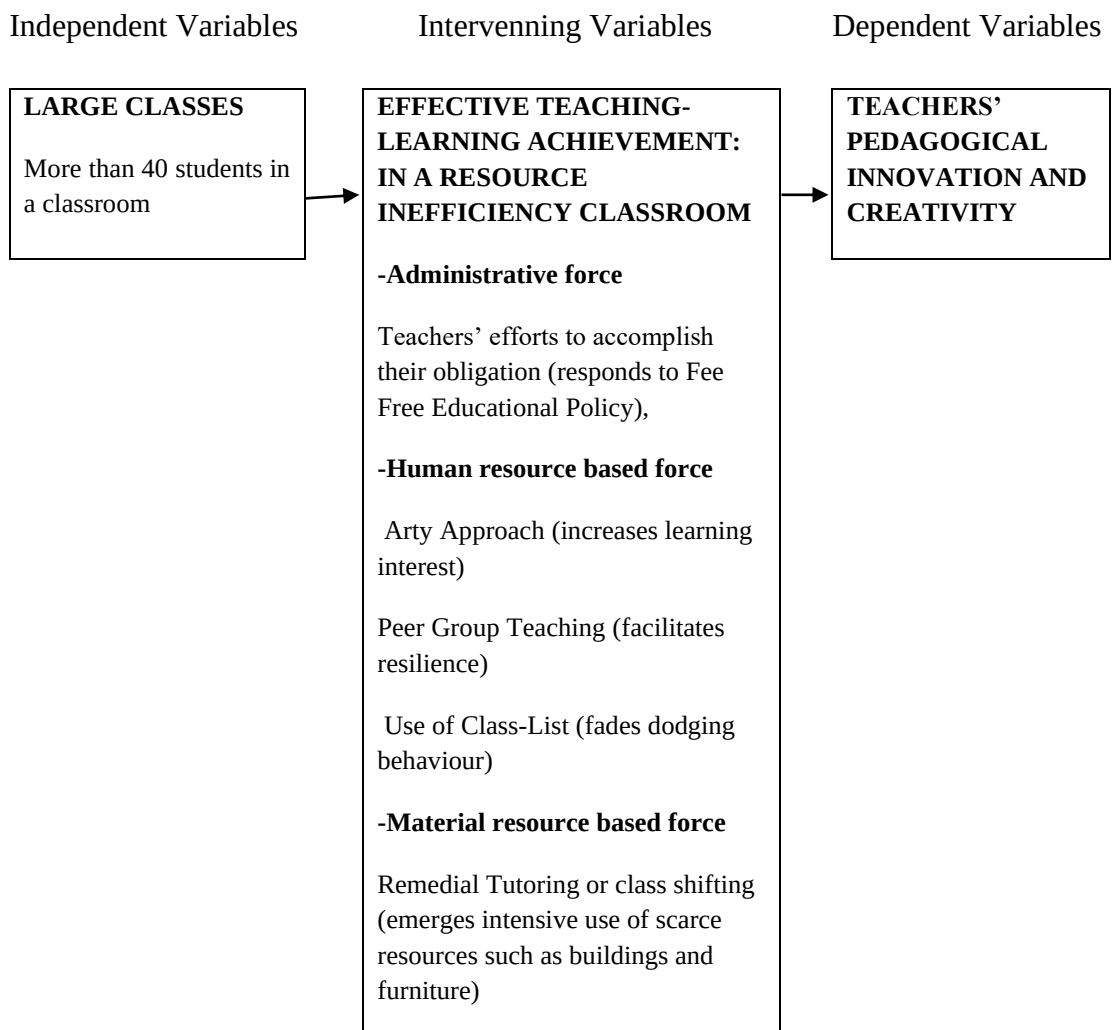
The cognitive theory of learning on behavioural change, likely to take place when an organism faces a difficulty to solve, resembles a way through which a teacher constructs and develops a pedagogical solution befitting a poorly facilitated large class. Resources are mediated by teachers and students, and they are situated within contexts that matter (Cohen, Raudenbush & Ball, 2003). Teachers are thus driven to learn how to solve pedagogical difficulties, then to plan, to organize and apply new methods, techniques and approaches that are appropriate to equip teaching the insufficient equipped overcrowded classes.

There is unique ability that develops in teachers when teaching in schools with LCs. Such new styles occur when they are obliged to teach a larger number of students that exceeds the reliable education facilities in schools. The irrelevance between a big class size and the standardized teaching culture that has insufficient teaching tools emerge the T-L difficulties. The difficulties, the pedagogical related problems, drive a teacher to apply some new methods, techniques and approaches in both inside and outside a classroom in order to improve learning and achievement in a school.

Figure 2.1 illustrates the independent variables, leading to the formation of LCs, be the failure to register a total 40 or less than 40 students in a single classroom. The Education Sector Report (ESR) analysis of Tanzania agreed and cleared that the Teacher-Students recommended ratio of 1:40 was made to lower unit costs as it supported the enrollment increase (URT, 2011a). The intervening variables show the resulted three influencing resource circumstances namely administrative, human and material based in pursuing for T-L achievement. The three dimensional pedagogical

tactics teachers pursue to fade away the LCs resulted incidents that spoil learning. The first MDGs based circumstance, under administrative governance of free education policy, drives teachers to be more active as their obligation towards building the future nation counts. The second human resource based circumstance uses the theatrical pedagogical approaches to enhance learning interest, peer group teaching to facilitate students' resilience and class-list tactics to fade away the teenager students' naughty behaviour hence effective learning is achieved. The third circumstance based on scarce educational material drive teachers to emerge and monitor remedial tutoring and class shifting sessions till dawn in an effort to cease lack of enough classrooms, furniture, computers, text books, stationary or laboratory equipment. The dependent variables illustrate the ultimate outcome of the TPIC influenced by the LCs inconvenient circumstances that teachers have been creative and innovative in struggling to pursue their knowledge transferring tasks.

Figure 2.1: Conceptual Framework



Source: Researcher's Invention

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter consists of ten sub parts that includes the type of the study, study area, unity of analysis, variables and their measurements, sample size and sampling techniques, types and sources of data, data collection methods, validity issues and data analysis methods.

3.2 Research design

The study used a descriptive mixed design for it intended to find out the events, situation or experience that drive teachers to manage effective teaching in LCs' challenging environment. The researcher wanted to describe what existed in the pedagogical disadvantaged overcrowded classes where T-L process was expected to make teachers too busy to manage and students too reluctant to accomplish the given learning tasks. The design, despite being phenomenological and qualitative to an extent, was using mixed approach for it required some documentary data with numerical information to verify its hypothetical views. "Researchers use this design when existing instruments, variables, and measures may not be known or available for the population under study" (Creswell, 2012:543).

3.3 Study area

This study was conducted in three secondary schools in Morogoro Municipality namely Kihonda, Mgulasi and Morogoro secondary schools. The three schools are located in Morogoro town which is found along 6.49 Southern Latitudinal and 37.40 Eastern Longitudinal map degrees in the mainland of the United Republic of Tanzania.

The three schools were selected purposively since the researcher's prior feasibility study observed that they were characterized by being the highest crowded with a relative minimum range of number of students, teachers and classrooms. The researcher wanted to make more valid evidence to assure the reader that there was a

significant comparison that would validate the study's hypothesis. Despite being the leading overcrowded day and public secondary schools, the schools were relatively best performers in Morogoro municipality in the years 2016, 2017 and 2018 National Examinations' Results.

3.4 Study population

The population of this study comprised special varieties of teachers and students from the selected three secondary schools involved in the study, regardless of their gender as they were characterized by their special units of occupations. The researcher had a total of 11 respondents from each school, where 7 were the targeted groups of teachers and 4 were the special selected students. One single and separate informer, a head of a school with a recommended class size was also interviewed individually. The groups' aggregates of teachers composed of the potential variety of the three school's informants; a head of school, a senior academic and a class teacher, who individually were interviewed as they separately performed their duties under the same occupation. Other special group of four teachers was composed of the category of two respondents from social science subjects and two science subject teachers whom the researcher had individually got informed by those four special respondents separately from each school so as to have a wide span of views from the targeted professionals. The aggregates of the potential students were composed of two best performing students and two class leaders from only form four expected candidates.

3.5 Units of analysis, variables and their measurements

This study used both individual and groups unit of analysis. The group unit was used for comparing various views from teachers and students in the schools involved. The variable of interest was how teaching in schools with large classes drove teachers to invent a variety of pedagogical applications that they think are more effective in Tanzanian secondary schools. Teacher-Students ratio was a variable of interest as well as the learning achievement outcomes in their examinations or tests compared to the achievement from other schools with relative Teacher-Students ratio of a standard stated class size.

3.6 Sampling technique and sample size

The study used purposive sampling technique since it was seeking subjective information from the respondents' personal experience. It is basically a qualitative oriented design, with some numerical verification in an attempt to discover a specific concept of the central phenomena. It used a purposeful theory for the researcher wanted to explore on teachers' constructed pedagogy that enhanced students' learning in schools with LCs. A researcher, thus, selected 33 information-rich individuals from the three overcrowded public day secondary schools. One head of school from a single public day secondary school with the recommended class size of 1:40 Teacher-Students ratio in the same educational managed status of Morogoro Municipal Council. The sample choices were made in the prior days when the researcher made a feasibility study to choose the sample that would meet his study's intention.

The sample comprehended the researcher's proposition that the condemned LCs have the power to influence the occurrence of the teachers' newly constructed teaching style for learning achievement. The purposeful sample can lead to information that allows individuals to learn about the phenomenon, or to an understanding that provides voice to individuals who may not be heard otherwise (Creswell, 2012).

Table 3.1: Sample size

RESPONDENTS	KIHONDA SCHOOL	MGULASI SCHOOL	MOROGORO SCHOOL	BUNGODIMWE SCHOOL	TOTAL
HEAD OF SCHOOL	1	1	1	1	4
SENIOR ACADEMIC	1	1	1	-	3
CLASS TEACHER	1	1	1	-	3
SUBJECT TEACHERS	4	4	4	-	12
BEST PERFORMING STUDENTS	2	2	2	-	6
CLASS LEADERS	2	2	2	-	6
TOTAL	11	11	11	1	34

Source: Researcher's work

Under this study, a researcher selected a total of 34 respondents, as in Table 3.1 above. The heads of school, senior academic and class teachers were the special purposive respondents who were individually interviewed for they were the senior educational experts who possess qualities to deliver appropriate needed information. Selection for the informant four subject teachers whose position qualify them to judge in a focus group discussion followed the criteria of selecting two science subject teachers and two social science subject teachers each teaching in form four candidates' classes. Two best performing students and two class teachers were the researcher's deliberate purposive informant from form four classes of the expected candidates. The four selected students were the convenient informers who could argue accordingly.

3.7 Type and sources of data

The study collected the primary data from the concerned individuals with the lived experience on the studied phenomena within the specific selected sites. Other documentary information to verify the studied phenomena was collected from secondary sources of the previous research reports, and some numerical information from the school's administrative officials.

3.8 Data collection methods

A variety of data collection methods was used. The methods were selected with regard of their ability to serve the purposes of the study and the flexibility of using them. Both primary and secondary types of data were collected for the study; the primary data were collected on specific objectives indicated through face to face interviews, observation, and some verifiable documentary reviews, and the secondary data were collected from documents and from existing published and unpublished records such as examinations' result reports, journals and/or articles.

3.9 Validity issues

The validity of the study was based from the fact that teachers and students, a group that directly gets affected with LCs related problems, express and achieve when accomplishing their obligations. The teaching effectiveness and learning outcomes

play the role as the criteria for the TPIC potentiality in the highly populated schools that seriously seek extra pedagogical invention for learning achievement.

The validation of this study was then allied on the very special categories of teacher participants of the same qualification from three different schools, special groups of students who got interviewed on the same topics as they were from the separate schools, and moreover, the data sources themselves provide evidence of the accuracy of the information in the qualitative report.

3.10 Data analysis methods

In an effort to prepare, plan and organize well the collected information, the researcher, first, edited and assigned code labels basing on arranging text-segments of almost similar meanings through arranging, classifying, and figuring them into variable related patterns that respond the research objectives. The codes were grouped together to form broader themes that are used in the study as key findings. After coding the teachers' points of view and classifying them in relation to the specific objectives, the researcher classified and tabulated them for easy expression and interpretation.

3.11 Ethical concern

During and after data collection, the informants' confidentiality was and will always be respected by the researcher. The state of observing informers' personality and respect appropriately to the worldwide standards and African cultural values, as well as the informers' confidential regards were strictly enacted. Despite conveying a phenomenological descriptive design, the study mentions no individual respondent but at least on the data that falls around his or her environmental occurrences, especially where necessary.

CHAPTER FOUR

PRESENTATION OF THE FINDINGS

4.1 Introduction

The beginning of this chapter provides the characteristics of the respondents allied to their levels of pedagogical obligation and working experience. The findings then got associated with the specific objectives on; the emerged pedagogical activities from teachers' lived experience of working with LCs; the function of the emerged pedagogy in addressing the LCs resulted challenges; and the way they impact students' learning in schools with LCs. Along with, the researcher has shortlisted and described some respondents' supplementary points of view connected with school's strategic attempts that extensively sustain TPIC in schools with LCs, outside the respective classrooms.

4.2 Characteristics of the respondents

It is agreed that the higher level of respondent's education and the working duration, experience and involvement characterize one's ability to deliver precise information. This phenomenological study requires a point of view of a person experiencing the essence of the skills related to the topic under investigation, thus the heads of schools, senior academic masters of the school, class teachers, subject teachers and the candidate students are the specific respondents with special characteristics for this study. Connelly (2007) argued that a phenomenological researcher examines the qualities or essence of an experience through interviews, stories or observations with people who are having the experience of the researcher's interest.

4.2.1 Education level and working experience

The findings from the three schools showed that most of the respondents were the degree holders. The respondent students' education levels were characterized by their best performance in the internal annual examination results. The respondent class leaders were also selected from the same form four class as their ability to think and argue was expected by the researcher to add more validity to the information required.

Among 22 respondent teachers; 19 were above ten years of teaching experience and only 3 of them, however, were above five years but below ten years of teaching experience (Table 4.1).

Table 4.1 Respondents' education level

RESPONDENTS	EDUCATION LEVEL			TOTAL
	DIPLOMA	FIRST DEGREE	POST GRADUATE	
HEADS OF SCHOOL	-	2	2	4
SENIOR ACADEMICS	-	3	-	3
CLASS TEACHERS	1	2	-	3
SUBJECT TEACHERS	2	9	1	12
TOTAL	3	16	3	22

Source: Field data (2019)

4.3 Emerged activities from teachers' experience of working with large classes

In this objective, the researcher intended to present the emerged teachers' classroom activities that were effective for teaching in LCs. Most of the observed findings were categorized as the types of dramatic teaching methodologies, techniques and approaches from teachers' lived experience of working with LCs. Those were the parrot mimic or echo sounding maneuver, song-like technique, chant-like recitation or repeatedly rap-like tactic, and many other brain storming games. The T-L tools attracted students' attention and absolutely captured students' involvement in learning.

The researcher observed application of a parrot mimic or echo-sounding teaching tactic. The teacher demonstrated by uttering the instructional words in a mocking style to invite students' oral response when teaching mathematics in the crowded form one class. The teacher-students echoing response, by seeing and hearing the pedagogical emerged activities, was as illustrated below,

Teacher's instruction: "In calculating a circle's circumference we multiply ' π ' by the
'dia ...!'"

Students' response: "...diameter!"

Teacher's instruction: "We can use the value for ' π ' in a form of fraction or decimal
point of three point what ...!?"

Students' response: "... one four!" ...

The above phenomenon of students' echoing loud reply evidenced the way such big classes may influence teachers to emerge such pedagogical activities to enable learning.

Furthermore, the researcher's observed findings were notable by witnessing the teacher's emerged activities through the use of a song-like technique. It was a rhythmic utterance for every student to practice quickly and aloud while teaching English language speaking in a crowded form one class. The phenomenon was heard to be repeated by the students in this way;

Teacher: "Kantai is a Maasai boy!" The teacher uttered quickly and aloud.

Students: "Kantai is a Maasai boy!" Students repeated the words quickly and aloud.

Teacher: "Kantai can tie a tie!" He proceeded.

Students: "Kantai can tie a tie!" They repeated again.

Teacher: "If Kantai can tie a tie why can't I tie a tie like Kantai!?"

Students: "If Kantai can tie a tie why can't I tie a tie like Kantai!?"

The technique encouraged every student to practice uttering the statement for it was fun-like utterance for them to practice. The lesson's specific objectives were attained at its maximum rate for all students dared uttering the statement, hence speaking the second language correctly. The phenomenon indicates the way teachers' activities in a large class have the power to create a quicker and attractive atmosphere of learning in a fine big class.

A rampant 5 minutes' brain-refreshing physical break in the midst of a session was also observed by the researcher at the same Kihonda Secondary School. Students rushed out from their classroom running a quick 20 metres go-and-return race, touching the national flag post and back in the classroom. The last runner back from the post into the classroom was said to be punished. The brainstorming pedagogical technique conditioned students to start afresh in participating the teacher's demonstration, hence learning is achieved.

In the Form Two classroom's side wall, at Morogoro Secondary School, the researcher observed the written statement poster initialized by the first letters of the words of a statement, "Kings Play Chase On Fine Grey Sand, ...", in order to help students in memorizing and learn on the living organisms' taxonomy as a simple way to arrange the biological scientific names to be referred to the first letter of each word as "Kings for Kingdom, Play for Phylum, Chase for Class, On for Order, Fine for Family, Grey for Group and Sand for Species". The initial letters of each word in the statement was an easier pedagogical strategy for such a crowd of students who had only three teachers teaching biology for the whole school.

Students were also interviewed on stating if the teacher's teaching styles made them understand the lesson more effectively. Some of them mentioned the style of interpreting in their mother tongue Swahili Language. Despite the too many encouraging facts stated, one of the interviewed Form Two student stated the following Swahili Phrase;

"Hakuna Hema Lisilo Bebwa Bila Constantino Na Odoyo ..." meaning 'no tent held without involvement of Constantine and Odoyo ...' whereby *"Hakuna"* stands for Hydrogen (H), *"Hema"* for Helium (He), *"Lisilo"* for Lithium (Li), *"Bebwa"* for Beryllium (Be), *"Bila"* for Boron (B), *"Constantino"* for Carbon (Co), *"Na"* for Nitrogen (N), *"Odoyo"* for Oxygen (O), ... (Best Performing Student: Morogoro Secondary School, 2019).

The above pedagogical effort needs teacher's power of talent and commitment to establish. Many teachers in various places with LCs have had different creative teaching tactics to cover the problems taking place.

Another emerged pedagogical activity the researcher observed, on the findings linked to the dramatic teaching style, was what he calls a “laughter recess” that many teachers preferred when working with LCs. A researcher observed a moment of teacher-students humorous talk, an artistic technique got posed in the midst of the lesson discussion with a crowded class. Teaching geography in form one, about the points of the compass direction, one student whom the teacher discovered he could not follow the lesson enough to distinguish “north” and “nose” got him let the class burst into laughter in a moment, as illustrated here in,

The teacher said “You boy, stand up!, show me the north!”.

The boy stood and pointed at his nose.

The above humorous phenomenon, in the midst of tiresome eighty minutes double session, sets minds of the students’ crowd at an ease state, hence learning process remained progressive.

Also, the researcher collected information from teachers through face to face and focus group discussion interviews. Using the Sample Size arrangement from Table 3.1, the 4 heads of school and 3 senior academic teachers were the special individual respondents with whom the researcher conducted a face to face interview; 3 special groups of fives that included 1 class teacher and 4 subject teachers from each of the three schools were interviewed; and other special groups of 4 students including 2 class leaders and 2 best performing ones, from each of the three schools, responded the interview through focus group discussion. The integration was majoring on teachers specializing to teach both pure science and social science subjects.

The researcher interviewed a biology subject teacher who professed to ever have the obligation of teaching about 90 Form Two students congested in a single room. He appreciated teaching by using his own outlined action points and topic hints’ guides in order to save time and be accurate in the easily interrupted large class. “The technique seemed to be easier to accomplish the topic, I had no more choice for it is time saving and efficient, offered students a brief topic package easier for memorizing...” (Subject Teacher: Kihonda Secondary School, 2019). With the

Action Points, the interviewee meant to outline a simple lesson plan like teaching plan with what to start with, what to present and what to end up with. And, with the Topic Hints the interviewee emerges the summarized, but thorough topic headings to work with when working in LCs.

In responding to the interview question on the teacher's emerged activities for the learning of a large class, one interviewed newly employed teacher with the working experience below 5 years, dared say "I have experienced the world in the crowded class, ... it was like a hell!, at times I used gestures and facial signs to alert them remain silent and attention to follow my instructions" (Subject Teacher: Kihonda Secondary School, 2019). The teacher's experience reveals the fact that the crowd of students he had been teaching showed different movements

In responding to the same specific objective, the interviewed teacher affirmed to apply a pedagogical approach of separating a large class into five captained study teams of tens where he refereed a competition for the right answers of the topic related distributed questions. He provided one of his simple questions charts he ever sketched and used in a 40 minutes period to evidence his teaching activity.

Table 4.2: Questions and answers model for the classes' study teams

S/N.	QUESTIONS	TEAM A	TEAM B	TEAM C	TEAM D
1.	What is solar system?	5	-	-	-
2.	Name five components of the solar system.	1	0	1	3
3.	What is solar energy?	-	5	-	-
4.	Name five uses of solar energy.	1	2	-	2
5.	What is the centre of the solar system?	-	-	5	-
6.	Name five layers of the sun.	1	0	0	1
7.	What is the sun?	-	-	-	5
8.	From Mercury, Venus and earth, what are the next five planets in the solar system?	-	-	-	5
TOTAL MARKS (Each Question constitutes five marks)		8	7	6	16

Source: Researcher's collected information

Providing 5 marks for each question, each group had two principle questions to attempt for a total 10 principle marks. Other groups may compete in accomplishing the Questions the other groups have failed and overlap the scoring opportunity of any group that has failed the trial. Obvious, however, Group D had opportunity of

attempting five questions and scored to the range of about 50% higher than any other group.

The above described experience indicates that teachers working with LCs try to innovate and emerge their own tactics to simplify their work when the ordinary approaches of the recommended class sizedo not make an expected achievement in students' learning.

A particular Class Teacher, in response to the same objective under the researcher's interview, stated,

Students' truancy, dishonest behaviour and any sort of dodging resulted from the classes' largeness, as our school campus is not fenced, have been well controlled and managed through our efforts of maintaining the strict use of class lists and class maps when teaching in a classroom... (Class Teacher: Mgulasi Secondary School, 2019).

The multi-printed list of students' names of a particular class, matching with the poster of class map with names in the classrooms' side wall, were prepared and distributed to subject teachers. The subject teachers use the lists to denote and know students' names and they easily let them learn when being taught in their classrooms. Students trying to use the state of class largeness to dodge some tasks from teachers' instructions could no longer hide themselves as the use of class lists and class maps were applied in a wide range of teaching and learning aspects. Despite the use of attendance registers, in teachers' efforts to access students' learning by avoiding truancy and absenteeism, the use of class list was observed by a researcher as absolutely playing the role of an expensive school fence.

The students were also interviewed to find out if teachers punished them during the lesson or after providing a work to do and someone does not do it effectively. "If we do not do a classroom exercise, quiz, assignment, test or examination we are severely punished" was a common reply of the interviewed students' from all three secondary schools: Kihonda, Mgulasi and Morogoro. Frequent and severe corporal or physical exercising punishment is an inevitable act in schools with excessive number of students. The response has been stated by both teachers and students themselves that

“Had it been no punishments, a bundle of class works, home works, assignments, quizzes, tests and examinations would hardly have been done properly”.

4.4 Function of the emerged teaching in addressing learning needs of large classes

The researcher’s phenomenological findings allied to this second specific objective intended to identify the function of TPIC in terms of the role it plays to address the learning needs of LCs. In presenting the findings, the researcher begins by shortly identifying and defining the specific respondent’s response with the research tool applied, giving a short description on how it functions in addressing the related LCs state that seemed to break or threaten the process of learning. The researcher has grouped the functions of the findings in the learning limiting aspects on behavioural controversy, time mismanagement and resources’ insufficiency. Observation and Interview were the dominant tools for data collection.

The study found that keeping the large class with a lot of class work and exercises to do was an appropriate pedagogical means of limiting the outbreak of noises and bullying behaviour hence directing them to study. Responding to the teachers’ group discussion, all the interviewed teachers and students argued that the solution for the easily distracted noise makers and the truants was provision of more class works, home works and assignments. Keeping busy a large class was written to be applied by the teachers in the schools with LCs. And most of the students’ works, except assignments, were corrected by the students themselves under the teacher’s instructional guidance after being ordered to exchange their exercise books.

On the perception of punishing students who ignored completing the class work or tended to misbehave when a teacher was teaching in the classroom, every interviewed teacher from all three schools with LCs did not argue differently from the one who stated; “We punish them when they behave against our instructions, and there is an English Saying stating that if you throw the rod, you spoil the child,...”. Provision of severe punishment in the overcrowded schools promoted not only quicker efficient learning, but also limited noises, deprived class attendance, bullying behaviour, fornication attempts after classes, drugs abusiveness and other immoral

behaviour likely to spread quickly among the students and hinder the progression of academic achievement in schools with LCs. It seemed that punishment was an inevitable quicker means of instruction in teaching in a crowded school.

This research work has found that elimination of LCs' problems, in relation to the learning process, is implicitly applied in a state of unnoticed occurrence among teachers and students in classrooms.

In ensuring learners' disciplinary behaviour that enable learning in LCs, teachers responses have developed schools' managerial strategies on maintaining students-teacher social distance, provision of school rules to observe, provision of reasonable punishment, parents involvement and keeping them active with study works,... (Head of School: Mgulasi Secondary School, 2019).

The teachers' managerial strategies, therefore, are the appropriate pedagogical deals that limit noises, deprived class attendance and truancy, language difficulties, study works incompleteness, bullying and other emerged bad behaviour of the overcrowded teen students.

Students appreciated teachers' humorous technique of teaching, thus they pay attention and learn effectively. The interview responses from the selected schools' students have revealed that they prefer teachers' comic methodologies, techniques and approaches being happy with the lesson increases enthusiasm to learn. Students in the three schools with crowded classes argued that the frequent use of forceful canning or corporal punishment limits learning. The innovation and creativities that students thought to increase learning interest and limit bad behaviour and deprived attendance include pedagogical technique of parrot mimic, laughter moments in the midst of instruction delivery, a technical moments of interpreting the lesson in their Swahili mother tongue or second language, teacher-student social distance limitation, teacher's gestures and body signs instruction technique, use of songs, projector and computer printed downloads, caricature and illustrations.

The phenomena in the following two paragraphs refers to the pedagogical function that made effective students' entrance in the small school's library and laboratory, on the other occasion,

In an effort to minimize the students' congestion in our small library and classrooms, we built the blocks of tables and chairs with cement materials on the school grounds under the trees, ... those are very much helpful since students can use them for completion of their assigned class work during their ample time, ... (Headmaster: Morogoro Secondary School, 2019).

The cement block desks, under the trees next to the school laboratory, are for students who used to gather and study when in need of studying privately in a silent space or studying when waiting for their entrance turn in the laboratory during science subject experimentation study, ... (Senior Academic: Kihonda Secondary School, 2019).

The above two phenomena were found to respond more on addressing the LCs needs related to scarcity of educational material resources including the laboratory apparatus, buildings and other required instructional facilities. Having students' in turn entrance promotes students practical participation when doing experiments in the library. Those staying outside were getting prepared and those in the laboratory will have time to recall on the experiment they have been doing.

The findings the researcher obtained through face to face interview expressed circumstance of scarce materials for facilitating learning and construct an extra pedagogical means to address the needs. The researcher observed on how both teachers and students had collected, printed and held the use of the downloaded texts as their subsidiary study materials hence to minimize the needs related to scarce or absence of reference books.

The need of using a projector for teaching is increasingly inevitable, thus we have been linked to the Municipal Educational Administration ICT integrated appliances, the link has helped to minimize teaching difficulties related to both scarce books and scarce teaching aids reliability. (Headmaster: Mgulasi Secondary School, 2019).

In such phenomenon, teachers' pedagogy has automatically got changed to suit the use of projector in the joint class sessions guided by the teaching approach of topic hints in order to achieve the goal, hence learning would easily be taking place.

The study's findings obtained through interviewing one of the heads of school described on how disciplinary social interaction between teachers and students empowers the learning process in schools with LCs. Maintaining Teacher-Students' Social Distance was realized to be a disciplinary teaching-learning style that puts

students in a system of qualifying teachers' ability to instruct and creating students' readiness to be trained. The disciplinary school's management approaches instructing teachers to abide the rules that hinder closer social distance impact learning achievement in secondary schools. All three schools with LCs abide school rules and disciplinary regulations in their schools' "Joining Instruction Forms" in such a strictness that any student's violation would be penalized by a severe corporal punishment, student's parents/guardian involvement or schooling discontinuity. Teachers find themselves maintaining the deal for it simplifies their instructional tasks, saves time and allows them to monitor, control, command or manage and accomplish his/her obliged tasks for a large class. Long, social friendly, frequent and repeatedly teacher-students oral interactions in an overcrowded class may easily distort and divert a lesson theme and time but the social barrier saves time as it allows more time for knowledge transferring activity.

Teachers' viewpoints on how their pedagogical efforts impact students' learning in LCs have been stated as encouraging students' ability to think as they benefit from the participatory learning approach that enhanced by the learning activities they contribute through their peer teaching groups.

The adolescent students, when in a group of their fellow friends, participate fully as they are driven by their age trait of enthusiasm of being identified to show a sense of personal and social identity that drive them to do well as they are driven to make others appreciate on them. (A Subject Teacher: Morogoro Secondary School, 2019).

The above findings revealed that the use of peer groups approach, anyhow, enables the overcrowded students be able to expose and use their unique capacities polished by the teachers' invented teaching methods. And, they are made to be confident future leaders.

It was also found that the bigger the class, the more students' dodging. Such dodging and hiding challenges under the interview's guideline made one of the class teachers describe on how they managed to limit students' deprived attendance, argued, "Students' truancy, dishonest behaviour and any sort of dodging influenced by the classes' crowdedness have been well controlled and managed through our efforts of

maintaining the strict use of class lists and class maps” (Class Teacher: Mgulasi Secondary School, 2019). It implies that both the class lists and class maps made a teacher’s task of managing a large class easier to carry. The multi-printed list of students’ names of a particular class, matching with the poster of class map with names in the classrooms, were prepared and distributed to subject teachers. Students trying to use the criteria of the class largeness to diverge away from their academic obligations could no longer hide themselves as the use of class lists and class maps were applied.

Through face to face interview, the researcher’s findings show that application of double shift practices of morning classes and evening sessions was a pedagogical strategic approach, resulted from the scarce classroom buildings, a morning session day school and an evening session school. The morning school enrolls students with a parents aided background and a need of straight continuation of the nation’s education system sequence, while the evening school registers the resilient matured students with a delayed continuation of the required education system. The extra paid teachers for the evening overcrowded sessions, invent thorough pedagogical techniques of more reinforcement, presentations, action points and questions and answers methods. The approach, despite been stopped in this year at Kihonda Secondary School, had increased learning in the school.

The interviewee responses exposed the fact that the key rationale for teachers’ active tactics approach, when teaching in an overcrowded class, is rooted from the time wastage difficulty for time saving intention. As said,

It is easier for me when I design an outline of the guiding key points of a sub topic in a separate piece of paper since it directs my instruction activity appropriately to the timely accomplishment of the lesson’s goals, otherwise the participatory students’ audience may interrupt and divert the lesson discourse away from the intended goal (Subject Teacher: Kihonda Secondary School, 2019).

The above essence indicates that the use of teacher’s own outlined brief action points and topic hints guides, in teaching LCs was found to be more helpful, quicker and efficient approach since it arouse the students’ interest, involvement and participation to the accomplishment of teacher’s lesson objectives in LCs in time. The approach

ensures the teacher's work completion on all topic areas to be taught on time in a single session or within the required academic year.

The findings also revealed the teaching techniques that intended to eradicate scarcity of educational facilities in terms of availability of study materials. The need for reference and text books for LCs was addressed by the internet downloaded study materials. The fulfillment of e-Learning vision of Mgulasi Secondary School in Morogoro Municipality, aiming "To raise awareness and commitment in the use of ICT in teaching and learning" have driven teachers' innovation through downloading, printing and photocopying extensive study materials. The ICT implementation has ended the LCs problem related to the scarcity of text books, reference books and other study materials. Teaching using a projector simplifies teacher's work and attracts students' attention, hence learning. The same applies when a communication device related to computer or internet technological preferences become the knowledge transferring equipping agencies.

The findings revealed that application of new technological communication devices for teaching LCs is very important. Through interview, the researcher was informed by the Headmaster of Mgulasi Secondary School that the school, in the Municipality, was connected to ICT Integration Roadmap programme where ten teachers were trained to train others on the application of computer devices and projector for T-L processes in their respected schools. Despite students' strong interest on learning from the devices' delivered information, it was approved that both the new technology and the observing of the enacted study materials through the moving pictures and the real environment granted students high interest state of understanding and memorizing the lesson. However, teacher's task remained very easy to express and accomplish the lesson's objectives in the LCs.

All in all, concerning the teacher's responses, learning how to teach LCs seems to be a result of the associated difficulties, The above experience refers to cognitive constructivism approach whereby human beings construct a learnt solution or technique to sustain his/her goal when facing a hindrance, difficulty or challenge. Teaching LCs results to resources inefficiency and time consuming difficulty that

hinders learning accomplishment. Thus, many teachers are found automatically driven to construct and apply their own techniques to quicken learning in an overcrowded classroom.

4.5 Teachers' perspectives on how their techniques impact learning

Class teachers and subject teachers had many opinions on how their pedagogical efforts impact students' learning in schools' with LCs when the researcher was interviewing them. In one hand, their viewpoints were based on the facts that grouping the large class was the best way of enacting the student-centered participatory approach. The approval on their views on how TPIC techniques impact learning in schools with LCs, on the other hand, was agreed to be proved through the criteria of the comparative evaluation of at least the last three years released NECTA results.

One of the interviewed teachers, basing on the opinion of grouping the teen students, insisted,

It is obvious, the technique of grouping the teens into study teams will reinforce the adolescent students to study hard, thus when in front of the crowd or a separated small group of their fellow friends, will participate fully as they are driven by their teen age show off personality traits. To be having a show off personality, so that others may appreciate ... in that way, learning will be highly impacted (A Subject Teacher: Morogoro Secondary School, 2019).

Despite impacting learning, the above phenomenon would postpone the classroom buildings' scarcity too. The use of peer groups approach, anyhow assembled, modelled or monitored, would enable the overcrowded teen students expose and use their unique abilities polished by the teachers' invented technique more efficiently. Hence learning will be effectively impacted.

In case of the technique related to the use of available cheaper teaching aids that replaces the scarcity of the readymade T-L facilities, a biology teacher declared to use one's own made teaching aids available in the surrounding environment at a cheaper cost. In a Focus Group Discussion interview with four subject teachers, she had the following to say,

I can no longer wait for the large Manila Sheets, Colour Prints or Marker Pens for drawing a monocot and dicot leaf samples for the sub-topic's teaching aid, but I can pick the available green leaves of a beans plant with some few beans and the green leaves of a maize plant with few seeds into the classroom for a biology lesson when teaching the distinctive characteristics of the monocotyledonous and dicotyledonous plants is a simple, enjoyable and costless technique I always use for the big class I teach. (Subject Teacher: Mgulasi Secondary School).

It is obvious that the above teacher's approach would capture every student's attention on the topic theme in an overcrowded class, since the replacement of expensive pictorial or imaginary sketched plants leaves not available in the students' geographical environment could not help enough in such a large class. Students' appreciation of the teacher's approach is the measurement that many teachers have agreed to be effective for teaching the crowded classes to impact students' learning.

Also in supplementing on the same objective of teachers' perspectives on how the techniques impact students' learning, the five interviewed respondents have agreed that the participatory student-centred approach impacts students' learning and the learning outcome. One teacher with teaching experience of more than 20 years argued,

We have greatly ever applied the innovative student-centred ways in teaching LCs and improved students' behaviour of involvement, leadership ability and readiness for practicing the lesson in ones' future being. Such our efforts have contributed to the way they transform students in not only being able to learn in a large class but also being able to apply the lessons in the future world of their real life... (Class teacher: Mgulasi Secondary School, 2019).

The study shows that teachers of the overcrowded schools have highly improved pedagogical experience. And shows the way the schools have already had their students as civil servants and many university graduates within their minimal teen ages since they were started as the Public Ward Secondary Schools, despite the congested students' classes and the scarcity of teachers and few class buildings.

Teacher's arguments referring to the perspectives on how their emerged techniques of teaching LCs impacted students' learning, was basing on the fact that the public day secondary schools with the highest number of students enrolment are the ones having the highest achievement compared to the school with the lowest enrolment in

Morogoro Municipality. The above expressed teachers' perspectives on their methodologies, techniques and approaches they prefer in LCs have been found to capture students' attention, raise their interest to learning and build their learning behaviour. In that way, there is an increase of students' performance in the schools' national examinations results despite the prevailing LCs related problems.

The three public day secondary schools with LCs referred to in the Tables 4.1, 4.2, 4.3, and 4.4 below are among the top 10 higher achieving public secondary schools in Morogoro Municipality. The Secondary School's form four results of 2016 to 2018 years of NECTA have revealed the fact that there is higher achievement in many public day secondary schools with LCs than in schools with small classes. The study ranked the results for Morogoro Region from which the researcher has worked with the case studies of the three schools with LCs in Morogoro Municipality.

Studying the following paragraphs, with illustration referred to the analyzed information studied from the National Examination Council of Tanzania (NECTA), one would verify the teachers' perspectives on how their pedagogical strategies impact effective learning in public day secondary schools with LCs related problems,

Table 4.3: Teacher-Students Ratio per available classrooms in the year 2019

SCHOOL'S NAME	ALL TEACHERS	ALL STUDENTS	AVAILABLE CLASSROOMS	TEACHER:STUDENTS RATIO
Kihonda School	88	2,091	41	1:51
Mgulasi School	55	1,235	22	1:56
Morogoro Sch.	110	2,065	29	1:71
Bungodimwe Sc.	20	230	07	1:33

Source: Author's field data, (2019)

Studying from Table 4.1, it is clear that Kihonda, Mgulasi and Morogoro schools have had LCs with the Teacher: Students ratio being above 1:50 while Bungodimwe school has the 1:33 below the 1:40 recommended CS ratio.

Table 4.4: Schools' comparative GPA rank per candidates in the year 2016

SCHOOL'S NAME	NUMBER OF CANDIDATES	SCHOOL'S GPA	REGIONWISE RANK
KIHONDA	419	4.1	43/174
MGULASI	266	4.5	111/174
MOROGORO	245	3.8	34/174
BUNGODIMWE	52	4.7	169/174

Source: Researcher's field data as from NECTA 2016 year results (2019)

Referring to Table 4.2, there were a total of 174 Secondary Schools, whose candidates were categorized with the examination centres having more than 40 students, sat for the 2016 examinations provided by the NECTA. The four schools are all public day schools in the same Morogoro municipality environment. Despite having the recommended class size, Bungodimwe School's GPA and rank could not show a satisfactory achievement if compared to the three schools with LCs.

Table 4.5: Schools' comparative GPA rank per candidates in the year 2017

SCHOOL'S NAME	NUMBER OF CANDIDATES	SCHOOL'S GPA PASS	REGIONWISE RANK
KIHONDA	419	3.9	43/139
MGULASI	209	4.1	61/139
MOROGORO	332	4.2	85/130
BUNGODIMWE	29	4.5	79/93

Source: Researcher's field data as from NECTA 2017 year results (2019)

The above Table 4.3 reveals the fact that the three public schools with LCs have a satisfactory GPA and higher rank than the school with the recommended class size of students below 30.

Table 4.6: Comparative GPA rank per candidates in the year 2018

SCHOOL'S NAME	NUMBER OF CANDIDATES	SCHOOL'S GPA PASS	REGIONWISE RANK
KIHONDA	400	3.9	54/159
MGULASI	216	4.2	97/159
MOROGORO	320	3.8	46/159
BUNGODIMWE	26	4.4	71/76

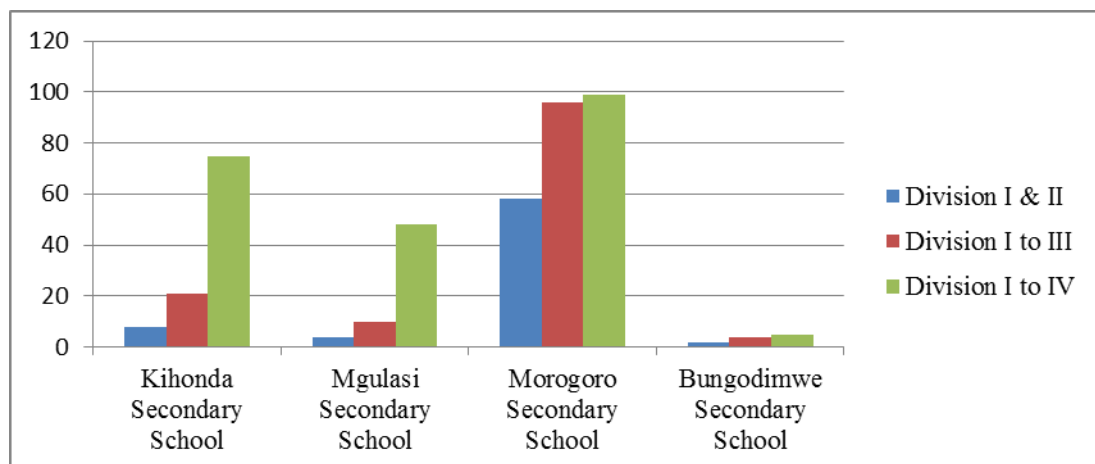
Source: Researcher's field data as from NECTA 2018 year results (2019),

Table 4.4 above, realizes that the small class size of Bungodimwe school do not achieve higher than the three schools with LCs unless it employs TPIC ever being practiced in Kihonda, Mgulasi and Morogoro schools.

4.5.1 Schools' percentile performance increase

It has been found that the three schools with LCs have had a higher performance when referring to the form four National Examination Council of Tanzania (NECTA) results compared to Bungodimwe secondary school's results, being the only public school with the smallest CS in Morogoro Municipality. Despite having the recommended CS, Bungodimwe school has been proven to show lesser satisfactory results of Division One to Division Four passes as compared to the three public schools with LCs in the municipality. The reason behind, a researcher has found, is that teachers in schools with LCs have had teaching difficulties that have been influencing them applying their pedagogical innovation and creativity to achieve their goals that they could not believe to achieve in the state of having the LCs related problems. In other words, the T-L difficulties resulted from LCs have driven them to construct the pedagogical innovation and creativity that made them dare to perform higher than the same type of school with Small Classes.

Figure 4.1: Schools' comparative percentile performance in the year 2016



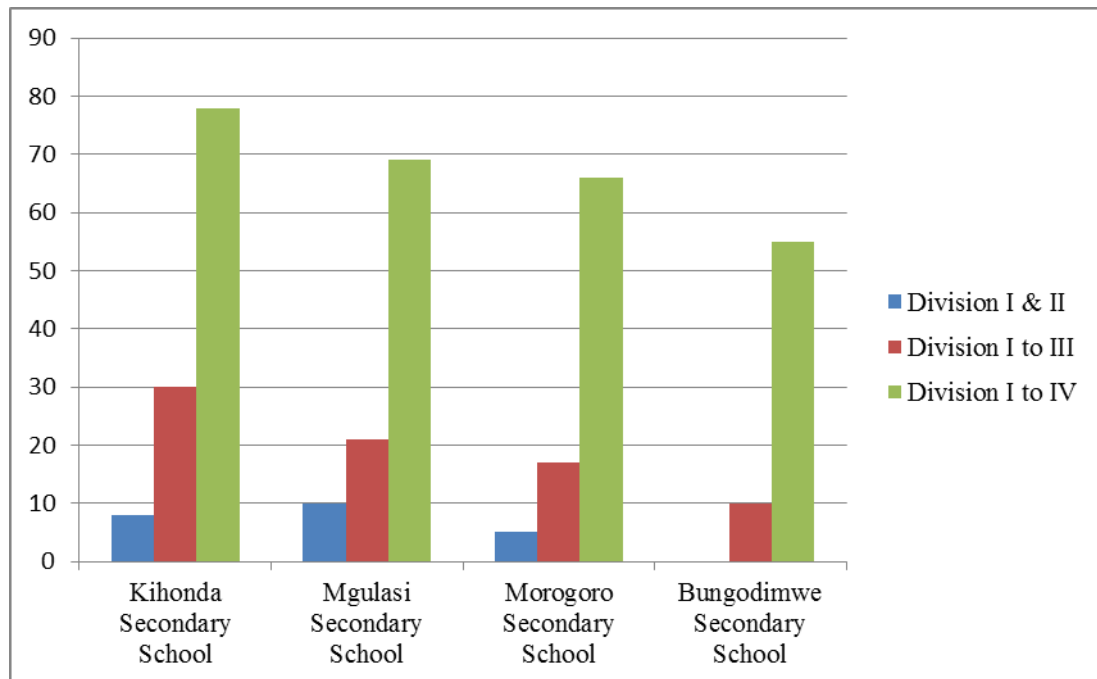
Source: Author's analysis of NECTA 2016 year results (2019).

From the above Figure 4.1 showing the year 2016 performance review, the study acknowledges that most of the public day secondary schools which performed well in examinations were those mostly had LCs related problems.

Below, Figure 4.2 illustrates the 2017 year general performance increase in division III and IV grades compared to the previous 2016 year, with some exceptions seen

from Morogoro School. Moreover, there were no students scoring division I and II from the school with small classes despite the increase on the other pass grades.

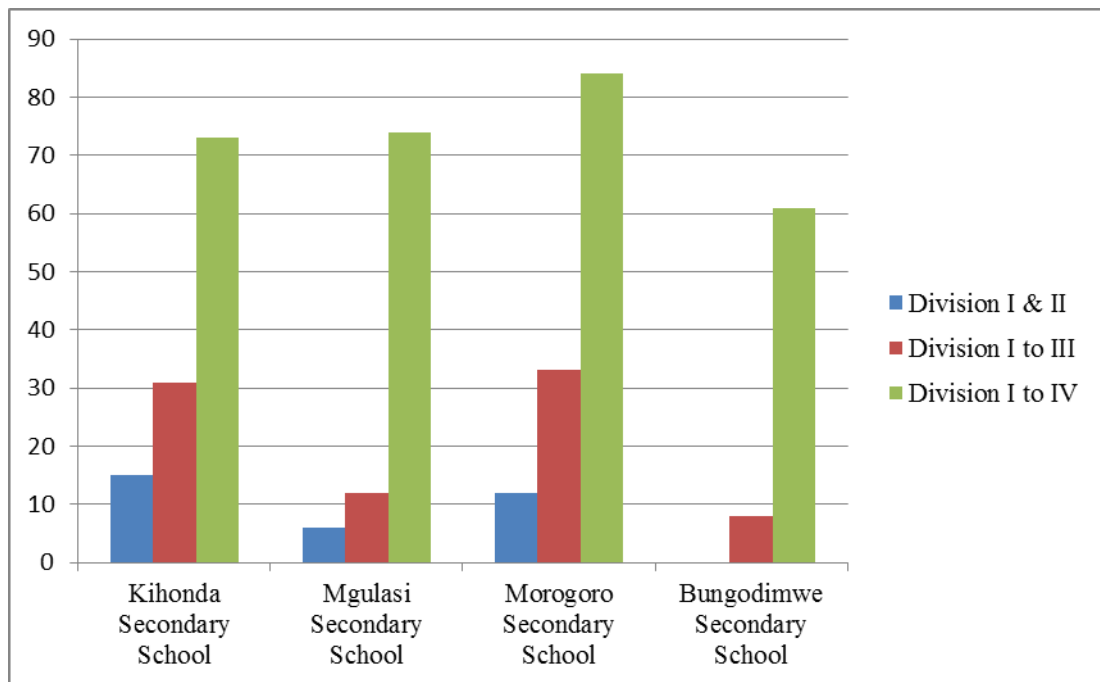
Figure 4.2: Schools' comparative percentile performance in the year 2017



Source: Author's analysis of NECTA 2017 year results (2019).

Still in 2018, as referring to Figure 4.3 below, the simple and clear statistics expresses the fact that there is a higher performance in the three public day secondary schools with LCs than the only school with the recommended class size in the municipality. Despite having an examination centre with candidates below 30, and teaching a class with students below 40 since 2014 year, the only school with small class size in Morogoro Municipality had neither division one nor division two scorers consecutively from 2017 to 2018 years. Moreover, the school's performance percentage increase has neither ever exceeded nor been at the same rate with the performance grades of the three overcrowded schools with plenty of the LCs related problems.

Figure 4.3: Schools' comparative percentile performance in the year 2018



Source: Author's analysis as referred to NECTA 2018 year results (2019).

4.5.2 Students proceeded with high school and higher learning studies

In responding to how the teachers' pedagogical efforts in such a congested school impacted students' learning, one of the purposive interviewees approved that,

Despite the LCs challenges, this day school has had the satisfactory amount of students proven to proceed for the higher learning studies, more than 50% of the Form Four Leavers from this school, each year, proceed with high school studies and college studies, ... (Head of School: Kihonda Secondary School, 2019).

The above phenomenon expresses the impact of the teachers' efforts ever been made.

Representing other schools with LCs challenges in Tanzania, where teachers work with difficulties that could totally block the trend of academic achievement, the learning outcomes from the schools still contribute to the nation's economic promotion.

Having the successful alumni, was the key agreed response from most of the interviewed teachers since they have mentioned an evidence on how TPIC impact learning in schools with LCs. It was found that the alumni from those schools under the case study of this work have been proceeding with other careers effectively and got to be well employed despite the LCs insufficiency in their basic education sectors. In that way, however, the teachers' pedagogical efforts are clearly revealing their necessity.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter discusses about the findings concerned with the way LCs influence TPIC effectively. The discussion was guided by the researcher's designed pattern focusing on the three specific objectives of the study, with some cases supported by the reviewed literature. The specific objectives focussed on; finding out teachers' emerged classroom activities in schools with LCs, identifying the work of the emerged teaching practices in addressing learning needs resulted from LCs, and expressing from teachers' perspectives on how the emerged techniques impact learning and educational achievement in schools with LCs.

The researcher's authored descriptive pattern paradigm, as developed from the findings of the three specific objectives, namely the 3-Pedagogical Instinctive Features for LCs (3-PIFL). The paradigm was made in order to guide the discussion in a way that expresses the effective appearance of the emerged pedagogical tools for enhancing learning in schools with LCs. The paradigm features, preliminarily; are going to be discussed in relation to the teachers' emerged classroom activities. Intermediately; are going to be identified in a way they function when addressing the LCs learning needs. And, far along; are studied from teachers' perception of the respondents that certify the way teachers' innovation and creativity impact students' learning in schools with LCs. The following three paragraphs below, each introduces one of the three specific objectives labeled under the 3-PIFL dimensional paradigm as summarized in Table 5.1.

The researcher labelled the preliminary dimension as Teacher's Unique Constructed Techniques (TUCTs). Despite following the principle teaching techniques, teachers seemed to use their lived experience to achieve the topic's objectives when teaching in crowded classrooms. Principles of teaching and common sense are inseparable ingredients of success in teaching (Chand, 2008:9). Significant teachers' innovation

and creativity applied in the crowded classrooms, the use of teacher's common sense, seemed to occur when LCs resulted chaos was about to block learning.

The intermediate feature refers to the teacher's activities related to Eradication of Learning-Inconvenient Behaviour (ELIB) emerging among the overcrowded teenagers. Its occurrence is made to support learning process towards the teenagers' preferred approaches that settle the concentration divergence. In addition, giving teenagers instructional choices allows them to take responsibility and achieve a sense of ownership over their own learning (Deubelbeiss, 2010).

And, the far along dimension is largely enacted through the Large Class Macro Managing Tools (LCMMTs) the school based administration team structures it in order to acclimate, monitor and solve problems related to educational resources' inefficiency resulted from the irrelevant ratio between the number of students and the reliable facilities. As Bandur (2008) suggested on the importance of implementation of School Based Management (SBM), that giving authority to the schools' administration to decide on educational issues, schools with LCs in Indonesia managed to have hard working teachers, reduce LCs related problems, and increase academic achievement.

Table 5.1 TPIC three dimensional paradigm

3-PIFL		
PRELIMINARY PEDAGOGICAL FEATURE (TUCTs)	INTERMEDIATE PEDAGOGICAL FEATURE (ELIB)	FAR ALONG PEDAGOGICAL FEATURE (LCMMTs)
LAUGHTER MOMENTS	CUTTING LCs INTO SETS	SCHOOL'S ENACTED
ECHO MIMING	-Peer Teaching	-Remedial Classes
CARICATURE	-Team Groups	EXAMINATIONS
CLASS LIST/MAP	-Groups Topic Tasks	-Pre-Mock Exams
VOICE INCREASING	SIMPLE QUESTIONS	-MAMBO Exams
ACRONYMIC SLOGANS	CLASS DEBATE	-Mbuzi Challenge
BODY LANGUAGE	OUTDOOR STUDY	-Pre-National Exams
INTERPRETING	REMEDIAL CLASSES	
SINGING	ETHOS AND PATHOS	

Source: Researcher's descriptive discussion on the findings

5.2 Teachers' own constructed activities considered as effective teaching-learning practice in a large class

Being preliminary categorized as the Teacher's Unique Constructed Techniques (TUCTs), this first feature of the 3-PIFL paradigm discusses on the automatic pedagogical practices that enable students' learning in the LCs challenging atmosphere. A teacher mechanically applies one's own tactic to monitor the overcrowding resulted chaos. Such a unique ability is rather a teacher's hidden professional talent than a secular educational skill studied from a college. It refers to a sum of teacher's untaught acts but just a teacher's personal attuned phenomenon.

The laughter moments in the midst of teaching a large class creates a recess that refreshes students' minds and invites them back to the lesson. Fun moments act like a sort of mental cure that releases boredom or tiresome, it is the unknown and implicitly amazing teaching tool that convinces students' response eagerly to the studied materials. It made the atmosphere of students' crowd respect for their teacher, encouraged an atmosphere of openness, developing their thinking and recalling them to relate the teacher's humorous technique with the theme studied. Joyce, Weil and Calhoun (2008) argue that psychological fun approaches are models of teaching that provide vital learning environment.

The oral echo-miming tactic needs teacher's personal artistic attitude to enact students' attention when teaching. Teachers whose instructional speeches were recalling for students' response, by repeating together the last word or last syllable, like the parrots, found themselves turning the large class awaken. Repeating the last words of the teacher's instructional statements were studied by the researcher as a sort of enjoyable and tireless style that increased students' attention and learning throughout the period. Emmer, Evertson and Worsham (2006) illustrate the class managing fact that builds positive T-L climate through maintaining appropriate students' attitude.

The sketched cartoon caricature were said to be used for describing an incidence related to the topic the teacher was teaching. Teachers teaching English as a second language declared to be driven to the use of facial cartoons' exaggeration for the

speaking lesson about expressing feelings, in a large class they were teaching. The observed lesson plans were commented that the lesson was enjoyable students of the large class could express feelings in English in their daily social interaction.

Since teaching LCs poses a difficulty for the subject teachers to know and call students by their names, the use of class lists arranged according to the class sitting map simplifies the teacher's task of managing it. Teachers were attracted to apply the strategy for they found that students could hardly try to hide in the crowd of his/her fellows from any given learning task.

Teacher's voice increasing, in a way that a teacher uses to capture students' attention, matters when teaching in a large class. In efforts to avoid students' noises or an ongoing tension that divert learning in LCs, teachers usually find themselves increasing voice or use a voice in an appropriate way so as to be heard, manage the class and hence effect learning. The technique plays an important role to facilitate any teaching style that a teacher may use. Being public speakers in LCs, teachers should be spontaneous instructional, communicable or loud enough, pedagogical, theme focused, theoretical, linguistic competent, topic competent, logical, students involving. Moreover, Zidar and Tatjana (2006) hold that a successful public speech, speakers must observe the three basic modes of persuasion tied directly to rhetoric- logos, ethos and pathos.

Creating some acronymic shortened slogans or funny phrases was invented by the committed teachers. A creative teacher teaching Chemistry in a Form Two large class constructed a Swahili fun phrase with words whose first letters could be arranged according to the periodic table formula with a sequence that enabled students to remember and arrange the symbols and valences accurately. Since teaching LCs requires more tools to facilitate learning and save time, teachers found themselves driven to construct new means of enhancing their students' memory ability on a topic materials with a guiding formula to be used in learning.

The interviewed Form Two student stated the following Swahili Phrase; *Hakuna Hema Lisilo Bebwa Bila Constantino Na Odoyo ...* meaning 'no tent held without involvement of Constantine and Odoyo ...' whereby *Hakuna* stands for Hydrogen

(H), *Hema* for Helium (He), *Lisilo* for Lithium (Li), *Bebwa* for Beryllium (Be), *Bila* for Boron (B), *Constantino* for Carbon (Co), *Na* for Nitrogen (N), *Odooyo* for Oxygen (O), ...

Teacher's body language is an art of communication in a classroom, and it becomes so much helpful in managing an overcrowded class while teaching. "Showing a frowning face, eye blinking, smiling, hands movements gestures ..., whether mechanically or purposeful, adds students an information." (Mathematics Subject Teacher: Mgulasi Secondary School). In some occasions, managing a crowd of students by a commanding high voice may lead to time consuming. Moreover, the use of teachers' movements in the classroom, standing straight, turning around quickly, smiling, making eye contact, and adopting other different poses, turn to be an important part of the teaching technique for students' learning in a large class.

Application of the teenagers' psychology in peer group teaching matters a lot. Knowing the causes of such teen behaviour helps teachers to make pedagogical choices, such as peer group teaching and team work presentations, and that suits both the LCs challenges and teenage students' emotional status. The solution, according to Deubelbeiss (2010), is to create a very warm, inviting, and risk taking atmosphere in the classroom and to reflect on whether the lessons help or hinder peer bonding.

Interpreting some terms into learner's mother tongue is another means that the researcher observed in an overcrowded class. English, being a second language, is the media of instruction in secondary school level. Being competent and fluent in Kiswahili as both first language and mother tongue, teachers used to translate some statements, themes or words to ensure that the lesson is well understood. The necessity of the interpreting act occurs spontaneously once teachers find it more convenient, easier to understand and helpful for time saving when illustrating some technical terms in a large class.

Asking many oral objective or closed questions in a large class is an approach that have been facilitating teaching by motivating students' curiosity about the topic and directing them to assess students' understanding on the studied materials in a quicker way. Experience from many teachers teaching LCs have shown that the new

preferable way for LCs enable students to define, distinguish and think about advantages and disadvantages of the key ideas being taught. However, the questions should be many and enough to reach every student, considering their level, specific, promoting quick thinking capacity, and clear.

5.3 The function of pedagogical innovation in eliminating the learning-inconvenient behaviour

It was observed that there are pedagogical inventions that address the emerged troublesome students' behaviour in schools with LCs. The sum of the teachers' approaches for Elimination of the Learning Inconvenient Behaviour (ELIB) dimension, holding features under the 3-PIFL paradigm, constitutes the managed teaching styles that keep the crowd of students more busy and active for learning than making noise. The researcher discusses on how the teenagers' learning-interacting behaviour is managed when teaching in their large classes. As teenagers build their identities, they have to deal with peer pressure from their social group (Walqui, 2000). Failure to handle the mass have accessed to the inconvenient carefree students' attitude that disturbs learning.

There is a pedagogical approach being applied through cutting LCs into sets. It has been studied as part of teachers' attempt to make the learners' crowd into minimal self-guarded groups that can be easily managed when teaching. The researcher interviewed teachers and observed various students, sitting on the *vimbweta* benches of cement built desks under the trees just outside next to their classrooms, doing their class work during break time. The approach lets the truants postpone dodging because in their doing so they are going to be noticed. As an added benefit, collaborative, interactive group work requires a learner-centred approach, in which the teacher assumes the role of facilitator instead of lecturer, and this promotes student engagement (Meltzer and Hamann, 2004).

The peer teaching, stated by the interviewed teachers, was a participatory teaching approach that enabled more than a half of the students in a large class gain an interest for contributing his/her own views by instructing the fellow students on the given subtopic task to comprehend. In doing so, repeatedly and with a purpose, students

increase more interest and behaviour to learn rather than making noisy communication without studying.

Some teachers used a list of simplified questions to be answered orally by the named team groups already set up with the brighter captains selected by the subject teacher. The number of students in each team depended on the number of the questions available for each team group, and the wrong answer skips the opportunity turn to another group. The loser group occurs to be those who have made wrong answers during their opportunity turn. However overcrowded the class would be, almost each student seemed to develop behaviour of studying and gets more interest to participate and contribute his experience to win the game than hiding in a crowd of students from. In that way, a crowd of students remain busy in studying for it was shame upon the loser groups.

Doing corrections of the past examinations, question and answers approach, topic hints teaching, and provision of more exercises increased students' struggle for studying and built confidence and readiness for doing better their last national examinations. The form four classes expected to sit for the national examinations were exempted from the schools' morning assembling parade and school campus cleanliness activities since they entered classes an hour earlier than the other students. And usually in the afternoon, after classes, some subject teachers were teaching the remedial classes by the feedback topic points' approach, demonstrating on the topic areas not well understood according to the need of the learner rather than the restricted school's curriculum bases.

Being too numerous for few teachers to accomplish, the five to ten grouped students had been given the topic tasks to study, discuss and teach their fellow students as the topic presenters. The class audience would be sharing through asking or adding their experiences on the presented topic. The innovated approach minimizes teacher's obligation and encourage students' close follow up on the lesson presented by their peers.

The interviewed teachers mentioned the importance of applying a class debate participatory approach in a large class. They design, set up and release a topic related

motion for oratory in the coming period, especially for the knowledge on the advantages and disadvantages of the studied issue. In seeking the points to express, students study hard and learn in a participatory manner during the discussion in order to defend and win for their opinions. The approach, however, increases the effective attitude of learning in schools with few teachers.

Despite being an excellent participatory approach, debate drives every student in a large class trying to follow the theme and hence a full participation is observed. Learning through debate develops speaking skills, critical thinking, and acts as an effective tool of studying through collecting information for arguing on the floor, and it develops confidence of speaking in front of the audience.

Giving students a lot of studying activities emerge teaching approaches that intended to give no chance for a crowd of students being idle in the classroom. Teachers created the state of no hiding from accomplishing their obligations in the midst of many others. The means creates a kind of ‘far-reaching pedagogy’, some of the teaching styles reach the classrooms’ outdoors, thus contributing to the teachers’ ability to manage an easily stranded large class.

Teachers who volunteered for the remedial classes made after lunch hours, with students expected to sit for their last examinations, developed the approaches of guiding students to attempt the past examination question papers. The lecturing, discussion or participatory approach that constitutes the teaching methodology of three stages for each question task; comprehending the question or task, reviewing and memorizing on the related study materials, and attempting the question accordingly, offer a completion of reviewing several topics.

The researcher observed the process of teaching taking place in a large class with students who failed to score the required average. Teaching them needed more time, of 40 to 60 minutes for a single period, attention drawing voice, use of songs or inspiring words, attractive aid, and other approaches full of talents.

Being in neither formal class periods nor formal school days, in a casual and enjoyable manner with no school rules and curriculum bounds, teachers and students agreed to attend classes for at least five hours from morning to noon on Saturdays. In an effort to accomplish the LCs teaching burden, teachers' instructional approaches to be applied were more strategic summative and multiple teaching styles of their own preference, with students of the same academic level in the school's assembly hall. The lecture method accompanied by a good use of the board, loud speaker and a copy of already printed topic summary were the effective use of the means of instruction to manage the crowd of students. In some cases, the so called Weekly Saturday Tests were given and the corrections of the previous tests were done.

Participatory teaching approach attempted by most teachers' LCs pedagogy involved verbal persuasion that intends to capture the audience's attention towards a certain goal. Zmavc (2008) states that classical rhetorical theory considers ethos, that is an effective demonstration of a speaker, and pathos which refers to the emotional state of the listener's response, are the ancient Aristoterian systematic definition on the art of speaking to an audience applied in order to achieve the speaker's goal. Teaching LCs pedagogy must have fallen into the ancient rhetoric-logos mode where the use of verbal persuasive tools of debating and singing, bring about emotional listeners' response that increases students' learning.

As peers prefer joining their fellows, teaching through singing creates a successful support in learning in whatever bigger the class is. Singing promotes learning through social inclusion among the teen students, engages their emotions, and builds students self-confidence. Cury (2007) argues that the objectives of using music are to slow down thought, to alleviate anxiety, to improve concentration, to find pleasure in learning, and to educate emotion. Since teenagers are the soon stagers into adolescence from childhood, it is obvious that doing things playfully is still

characterizing their personality. They are also highly emotional, fond of fame, want to be noticed and driven to have good times with their peers. Though not ordered to do so, teachers found themselves preferring the use of participatory demonstrative to grouped teams and dramatic learner-centred approaches in the LCs they are assigned to teach.

Application of Pavlovian theory of learning can materialize when teacher's teaching style takes a position of reinforce. The purpose of applying either positive or negative reinforcement, in teaching LCs, is to change the learner's behaviour that hinders learning. LCs' Students' behaviour that disturbs learning sustenance are deprived attendance whereby students drop out or do not attend school regularly, class work incompleteness, noises, bullying and other unethical behaviour.

With negative reinforcement the behaviour that hinders learning is stopped in response to an unpleasant stimulus. In an overcrowded class, students' deprived attendance is stopped by the teacher's pedagogical approach of encouraging learning by punishing the irresponsible dodging study groups. Punishing learning failures or adding something unpleasant to the irresponsible lazy learners, will change their learning delaying behaviour to the adoption of the learning behaviour

When students' correct responses are orally frequently acknowledged by the teacher's verbal appreciation of "yes", "correct", "excellent", "that's right" or provision of a present after scoring higher in a test, a crowd of students easily build behaviour of trying harder in order to arrive at correct responses. When achievement is reinforced, then both learning achievement and learning behaviour improve.

5.4 Teachers' views on how the emerged large class macro managing tools impact students' learning

The Large Class Macro Managing Tools (LCMMTs), portioned as the far along dimension, is the part of the 3-Pedagogical Instinctive Features for LCs (3-PIFL). The researcher has defined the LCMMTs into two divisions; the school's enacted management that supports the LCs teaching activities, and the other division is based on the factors verifying the performance achievement impacted from the teachers' pedagogical invention. Enacted through the school's set up rules and regulations

structured for adjusting, monitoring and solving problems related to educational resources' inefficiency, the tools ensures the fact that the invented pedagogical activities impact students' learning in schools with LCs.

5.4.1 School's enacted management supporting the large classes teaching

The Remedial Classes done after a days' timetable completion where students study or do their homework in order to prepare themselves for the next days' topics to be taught. Teachers assigned for remedial classes were using the approaches for teaching the basic concepts students needed. The teacher may teach by directing students on how to study effectively. The remediation provides an extra help to students who had experienced difficulties in their last topic or previous lessons.

The Pre-Mock Examinations plays a great role in supporting learning. Teachers programmed a school's internal mock examinations with which students are taught on how to attempt national examinations. The preparatory examination helps learners be ready for the coming regional mock examinations whose completion would increase students' interest to learn, and confidence for the last national examinations.

Through Pre-national examinations, teachers in LCs taught by identifying students' weaknesses on attempting questions and correct them. The teaching approach includes teacher's motivational instructions that enable students trying harder to grasp the taught subject hints that have been emerged by the process of teaching.

The '*Mbuzi*' challenge exams. In an attempt to increase students' learning attitude, one of a schools with LCs had organized an annual inter-school examination competition between girls' teams and boys' teams from each class. The School Board, funding the examination costs, fulfills the proposals made from the parents meeting that agreed to grant some amount of rice and a goat as a present for the winner team. The Swahili term '*mbuzi*', occupying the title of the challenge games, means 'a goat'. It symbolizes the name of a cup to compete for. The two boys' and girls' teams from form one to form four had their own examinations whose averaged from each classes' gender results decide who is the winner to be granted the Mbuzi cup. In that way, the large number of students is kept busy for learning and students' truancy is limited since each gender is got to be more interested to win the game.

The schools' names' initials acronym the title of the exams. Mafiga, Mgulasi and Bondwa (MAMBO) secondary schools have organized the comparative joint examinations for the purpose of measuring, assessing and assuring themselves on the standard of teaching-learning process they manage in their schools. The three schools' examinations' board prepared, moderated, printed, supplied, marked and released the results. The examination results became a potential measurement that indicates the needed adjustment on the school's pedagogical standards in efforts to achieve higher.

The class shifting scheme instruction required students to score the average that will grade them into three main categories of students according to their academic ability. Students with the highest average rates were grouped in streams A and B LCs, the medium average could be balanced in streams C, D and C of the recommended class size whereby the lowest scored average could be distributed into the remaining streams F, G and H small classes, accordingly. The teaching approaches in the best performers' classes were more participatory and the medium averaged streams received the medium students-centred approaches, while the lowest performing classes of slow learners received more drills, simple frequent exercises, question and answer approaches, and the like. However, the scheme existed in three main annual intervals after every three months. From January to march, after the Mid-Term break examinations, there was a change whereby some students who achieved higher were promoted into the higher average streams.

5.4.2 Performance achievement impacted from teachers' pedagogical innovation

Despite having LCs resulted rules and regulations, students who face difficulties in studying some topic areas declared to seek a teacher's extra help during ample time. Supported by the culture of the Sub-Saharan Bantu people on having no restrictions on time use for minor communication occasion, has benefited the emergence of the pedagogy. During break time, afternoon departure at around 18:00 hours, or on weekends, a teacher may be found demonstrating something to a student or a small group of students on the subject topic such as a mathematics equation or social study that they have failed to comprehend.

Teachers were found to use a question and answers technique or the topic hints guidance in a competing manner in order to increase students' interest in learning. Students, though being in the crowded classrooms, study hard for preparing themselves for the expected coming examinations. Provision of more exercises, tests, and varieties of mock exams keep students busy and more active, hence learning in a school with LCs would remain effectively taking place.

CHAPTER SIX

SUMMARY, CONCLUSION AND POLICY IMPLICATION

6.1 Introduction

This chapter is composed of the summary, conclusion and policy implication with limitations of the study and areas for further research. The chapter postulates views that guide readers to develop researches for the potential solution on educational challenges resulted from the nation's insufficient fund resources. It illuminates the importance of draining our human capital resource to produce the appropriate modern and scientific educational system that suits our economic status.

6.2 Summary

The summary is based on the respondents' responses under the three specific objectives of this research work. It briefly expresses on the teachers' lived experience related to the effective pedagogical activities when teaching LCs, the work or function of the pedagogical activities in addressing the LCs related learning needs, and showing from teachers' viewpoints on how the activities impact students' learning in schools with LCs.

6.2.1 Teachers' experienced classroom activities for large classes

It is agreed that teaching overcrowded classes is pedagogically not appropriate since a teacher would hardly apply the approach to overcome problems related to different students' background, abilities, needs, motivational state, language use levels, interests, career and goals. However, in respect to the pedagogical initiatives teachers have been employing in public day secondary schools with LCs in order to fulfill their obligations, a satisfactory students' achievement has been pertained to an extent that exceeds the performance of schools with the required standard of TSR.

Motivating students, by instructing with the use of some extra attractive teaching facilities and techniques, has been a kind of Pedagogical Innovation teachers employ in most secondary schools with large classes. Demonstrating a topic with a relevant and traditional teaching aid, that reflects the phenomena happening in the students' environment, brainstorm learners' mind frequently in a way that increases

enthusiasm hence motivating them to learn. Despite the negative stimulant related to punishment, teachers are driven to motivate students by telling them on the importance of studying a particular discipline for a particular profession as a stimulant a student responds to it by studying hard on the area one is attracted to expatriate in the future.

Guiding the crowded students to work in groups of fives to tens, constituting a balanced number of reluctant and active members, has been a pedagogical incentive that keeps reluctant learners hiding in an overcrowded class active too. In some cases, creative teachers have been proposing pair work with simple tasks that in a large class do not offer the lazy students a place to hide during a session.

In the case of having scarce learning facilities; referring to the required reference or text books, papers, rulers or drawing materials, not evenly distributed for each student when being taught. Teachers found themselves composing some study groups of fives or tens, accordingly, with a temporary chosen group leader, creating a sort of instructional illustration, applying a good use of a writing board, asking a lot of the lesson related short simple questions orally in a way that students became more attentive to receive and practice the skills being taught in a particular session.

As engaging students' learning activeness in LCs is not an easy task, teachers in some crowded classes were driven to propose some classroom by-laws with rules that limit unnecessary students' movements and communications. A set of rules and regulations that would guide the overcrowded class in a system that enhance their learning was observed with more emphasis.. Handing out mobile phones, snacks, drinks or other materials that may draw students' concentration would have a regular time to be performed before or after a lesson. In order to maintain discipline in large classes, teachers prescribe class rules and regulations related to the class management approaches. Responding to teacher's questions orally in a classroom, for instance, needs a student who knows the answer to raise his or her hand and standing up to answer the question correctly. The rules played a great role of minimizing high stress due to the emergence of noise making, bullying or truancy that a teacher would find so difficult to handle when teaching an overcrowded class.

In maintaining discipline between a teacher and a student, teachers may remodel a sort of social gap behaviour that keeps large class under the teacher's control. In most cases, teachers with closely social interaction will find themselves in a hard time when instructing a large audience.

In trying to refresh and conquer students' attention, when teaching in highly congested LCs, teachers found themselves posing a mental or physical recreation approach by offering at least a one minute leisure time activity. It was frequently noted that teachers would eventually create a joke to recess and refresh students' mind in at least five seconds to capture their attention and the interest in learning while teaching.

Changing desk placement seems to be applied by teachers who experience difficulties to manage a crowded class when teaching. Placing the resilient students and slow learners in the front seats, for instance, was expected to be a helpful means that a teacher may use for an appropriate organization, planning and presentation of a lesson for a better understanding. Moreover, the incentive encouraged learners with special difficulties and the marginalized ones feel obliged to accomplish the given tasks in a large class.

Most teachers teaching LCs in Tanzania were found to apply corporal punishment, a negative reinforcement, as a means of driving students to accomplish any given exercise or assignment, a means that seemed to quicken students' understanding, a means that drove them to put more efforts in comprehending to what is being taught for fear of being punished once found to have been delaying work completion or giving incorrect answers/responses for a given exercise.

Teaching LCs seemed to create a necessity of using a question-answer game approach. With questions subjected to accomplish a topic objective, two groups had to compete through arguing. The game encouraged each learner to become an active group fun who struggles to win a point by searching and thinking about a correct answer for one's group victory.

Posing a study topic to debate was another pedagogical innovation teachers applied in a large class. Splitting the class into streams with the active and inactive students is a kind of grouping a crowded class into panels whose attention would be taken in accordance with the approach that suit the split varieties.

Developing the culture of a child-elder respect was a potential approach for enhancing teachers' ability to manage and teach large classes effectively. Many students valued the African culture of respecting elders, regardless their higher number in a classroom. The culture was so active in accomplishing the task given by a teacher whom they respect. In maintaining discipline between a teacher and a student, teachers develop a sort of social gap that keeps large class behaviour under the teacher's control. In most cases, teachers with closely social interaction would find themselves in a hard time when instructing a large audience. Such Tanzanian social ethics behaviour would be a major concern as it emerges an effective learners' response when teaching large classes.

Establishing a delegation of power among active students to instruct their fellow students was a pedagogical innovation that many teachers preferred when working in an outnumbered class. Usually, the qualified committed teachers, by any means, were driven to enable slow learners' learning attitude. However large the class was, the approach involving an active learner in enhancing others' understanding stimulated other learners' attention and readiness to study so as they recognized the achievement of their fellow learner.

Recently, after the advancement of information and communication technology, some teachers or schools have dared establish an academic blog, WhatsApp, wiki or email where students or/and teachers would effectively communicate and exchange some Teaching-Learning perspectives.

A sort of Teacher-Student oral echoing response, being among the teachers' inborn resourceful arts, occurred when teaching the overcrowded class was distracted by the interacted condition of the surrounding. Instantly, on one hand, a teacher found himself uttering his demonstrational statements with the last syllable of the last word left to be a 'together loud response' made by the whole class. The same

inventiveness, on the other hand, was applied with the absence of the last word that the class crowd would collectively respond for it aloud.

Teachers motivated the crowded students as they were always driven to tell them on the importance or objectives of a particular discipline or topic for a particular profession.

Teachers demonstrate by illustrating, repeating, reinforcing or revising the lessons with a frequency of exercises and assignments that put more emphasis on a potential topic or skill to learn about.

6.2.2 The function of the pedagogical techniques in addressing learning needs in large classes

As subjected to be an important part of seeking knowledge in this work, TPIC has been verified to facilitate the Teaching-Learning incentives in accomplishing the learning goals. On the teachers' side, the innovation and creativity postulated an effective teaching process in terms of behaviour management and hence students' disciplinary response in learning.

Beyond the significance related to the teachers per se, the school's management team and supervisors would have had more effective opportunity to minimize or limit the LCs related problems on the Teaching-Learning facilities scarcity and cost, consecutively. On the other hand, referring to the significance related to what students benefit, TPIC improved students' attitude of participatory learning that assists enthusiasm to comprehend a subject matter in an overcrowded classroom and hence perpetuating their interest to learn. The strategic programmed learning events through songs, group games and joint class activities made the teens' spirit of showing off and trials of seeking to be noticed in front of the audience, made learning in an overcrowded audience remain more meaningful and effective. It was obvious that students' crowd of teenagers became attracted to follow teacher's instructional incentives. In case of limiting the LCs related problems, it was discovered by the researcher to be logical and obvious that the increase of students' interest to learn resulted to elimination of students' truancy, dishonesty and hence academic achievement was observed.

Enhanced teachers' pedagogical constructivism in the process of educational provision as teachers gain more advanced experience of teaching, through facing LCs related problems in an effort to overcome them. The teachers' pedagogical incentives simplified instruction in an overcrowded class. Teacher's creativity helped to control students' restlessness, promoted his resourcefulness and capability in an effort to minimize the challenges related to LCs, involves reluctant students who dodge behind the active ones. The phenomena enabled students' understanding on the lesson and amplified their inquisitiveness.

6.2.3 Teachers' perspectives on the way those pedagogical techniques impact students' learning

Teachers' viewpoints on how their efforts have impacted students learning, as from all of the three schools of the case study, have mentioned the use of modern Information and Communication Technology as a knowledge supplying agent. With observation, interview responses denote that there has been a rampant and inevitable change in teaching styles and students' learning attitude in schools with LCs as affected by the new technological invented devices. The change requires purposeful recommendation accompanied by explicitly programmed pedagogical workshops to allocate the way it has to be managed appropriately to the schools' enrollments.

Some of the lucky or committed academic seniors have had a planned activity of receiving and working on the requests for the study material articles or notes from the subjects' Senior Department Teachers.

As a school organization administered by the educational sector of the Municipal Administration, we are granted with the ICT Roadmap services whereby in each year ten teachers from this school are going to be trained on the application of online T-L devices (Headmaster: Mgulasi Secondary School, 2019).

This denotes that the ICT integrated appliances helps teachers to do download, print, and photocopy the subject topic hints, study materials and other teaching aids in an effective and simplified way that a manual library could not hold. The downloaded

study materials can be printed, photocopied, distributed or arranged in a way that a projector type of instructional presentation may be applied.

On the other hand, the T-L activities assessment expressed by students' and teachers' opinions through the lesson plans' space for recommendation, express the fact that the invented teachers' approaches effectively impact students' learning in schools with LCs. About a three quarter of the teachers' comments and opinions written in their lesson plans' conclude that the lesson was well understood. "Almost all students have understood the lesson for they have answered the given questions correctly, and the few who did wrong will be taught correctly in the next period, ..." (Most Teachers' Lesson Plans' comments from the investigated schools of the case study).

There have been a weekly signed checkup of the teachers' collected lesson plans, schemes of work and log books to the academic office whom, with the head of school's signature, mostly comment the teachers' weekly work report to have a 'done' or 'seen' signed mark at the senior's recommendation column. The checked teaching reports of the subordinating teaching staff verifies the fact that learning, at the schools with LCs was effectively taking place.

Students' attitude of being busy with academic issues in a school, as the researcher observed, implied the fact that learning was taking place. Responses from the interviewed students claimed to have too many home works and assignments provided to them by the subject teachers.

We are given a lot of history, Geography, Civics and biology notes to write while there are too many home works and exercises from the teacher of mathematics, English language and the tests and examinations to be done by... we, the same students ... (A girl student: Morogoro Secondary School, 2019).

The interviewed teachers from all the three overcrowded schools, also agreed that students' restless attitude on academic issues is an obvious impact of the fact that learning is taking place in a school.

The above summarized sample incidents illustrates that there is an extensive change of our educational environment that requires serious innovations and management, appropriately. The application of ICT in the crowded secondary schools' teaching, for instance, is being done coincidentally especially when a teacher feels that he or she has ample time to manage. Purposeful, well planned and explicit recommended pedagogical strategies will address the LCs related problems extensively.

6.3 Conclusion

A comparative glance between our pre-colonial cultural education bases and the intruded western education system we are swallowing, without our environmental relation and without a vital measured innovation and creativity of our experience, results to provision of education that meets no employment to our students whose education focused the fulfillment of the western ideas through the western management wave of small classes. The post-independent state of the prevailing system of the Western Europe oriented teaching style, relying on the insufficient supply of educational resources and facilities we face, has subsequently resulted to the teachers' own initiatives in instinctive attempts to elude the inopportuneness. This study has shown on how the great Indo-China Asian elites have emerged and achieved to an excellent achievement in mathematics, for instance, despite the LCs they have. We are ought to cope with their bearings in a mode that suits our status to reach an advanced target.

There should be a sort of an independent sector dealing with educational issues assessment, just the way the NECTA sector and the Tanzania Institute of Education (TIE) do work. The free educational sector, doing more and more practical researches under the main objective of holds a 5 years interval meeting at "National Level", where various constructional efforts related to the emerging societal needs for educational achievement in a country will be heard to be enacted.

For the development of teachers' pedagogical innovation and creativity in Tanzanian schools with LCs, some purposeful efforts through which teachers will be sharing experience to each other should be constructed. The effective modern and

technological strategies should be taught to teachers on encouraging development of teachers' new devices.

Since the general responses of all respondents have agreed with a provision of a fair punishment for students who do not study well, the researcher urges the concerned educational policy sector to amend and generate new principal school rules and regulation that will work significantly according to the global socioeconomic and technological advanced changes.

6.4 Policy implications

The impact of the policy of starting up the numerous Ward Secondary Schools in Tanzania in 2005 year made some potential changes in the curriculum which went simultaneously with the application of the contemporary student-centred or competent-based approaches of teaching. The Ministry of Education, considering the burden of facilitating the capitation funds, building more classrooms to suit the multiplied number of the prior increased students, employing more teachers and decentralizing educational administrative services by empowering the municipals' and councils' directorates on the matters of some minor education management processes, could hardly consider the task of directing teachers on the appropriate pedagogical approaches, techniques and methods for the inevitable LCs related problems.

Understanding the form, the proper time for Agenda Setting, application of Policy Window Opportunity is another way of addressing the inevitable state of LCs in developing countries. Kingdon (1995) uses Multiple Streams' theory by referring to Policy Window of Opportunity social condition of, for instance, delaying or directing a rising problem to the stream reaching the state of needing a solution. This is through structuring the new agenda that people will soon draw attention to it, and hence it will sound to be in a need of finding a solution as it will address other problems for a solution.

Therefore, in case of educational policy related to management of LCs, the researcher suggests that the concerned national educational policy sector, by involving the class-teaching subject teachers from secondary schools, should work

and propose the researchable and appropriate pedagogical rules, regulation and guides that will encourage their innovation so as to reach the required educational achievement to sit a such inefficient educational facility developing country. And not unquestionably depending on applying and living in the educational rules and regulations experienced from the economic advanced western powers. Application of almost every aspect of educational systems of the educational facilitated states, without considering to our economic status and environmental social-cultural perspectives, will hardly lead us to fulfill the need of our less educational facilitated developing state. “Many efficiency driven measures, including pressures to increase teacher work loads, increase class size and introduce double shifts in urban schools must be weighed carefully by policy makers and planners in developing countries, because they are rarely associated with improvements in quality, equity and providing an all round education to children” (Mosha, 2006:67).

6.5 Study limitations and areas for further research

This study was highly based on identifying and finding the effectiveness of the vital teachers’ own emergence of teaching methodologies, techniques and/or approaches’ from teachers and students’ perspectives when facing LCs resulted inconveniences. The researcher, in his previous feasibility proposed that there is no far-reaching success on a too expensive CSR achievement without involvement of individual teachers’ pedagogical enactment to address LCs related problems. Thus the study has been limited to mainly on exploring how active effective are the pedagogical instincts enacted by teachers in the environment of LCs inconveniences.

In one hand, there are new areas to study as arisen from the comprehended particulars of this study’s findings. Classes are endlessly overcrowded, the key pedagogical methodologies, techniques and/or approaches are hardly renewed to all teachers, especially in the overcrowded schools, to fulfill the LCs needs. TPIC empowerment needs to be enacted and targeted to the socio-economic status and requirement of the nation so as to match the global socio-economic changes and needs.

However, this mixed method designed study is limited in terms of having no wide areas related to the LCs pedagogy findings to be researched. There is a need of developing quantitative LCs related investigations to verify the described findings. Areas for further numerical correlations and triangulation based appraisal reviews for each of the LCs techniques found in this study will open up a new way of dealing with LCs simultaneously with the enacted expensive CSR on the move.

Further studies should also be developed on the science and art of teaching, pedagogy, in various newly innovated means that address the education imparting constraints applicably to our today's teaching-learning environment and economy. "There are other operational difficulties that are faced by teachers such as maladministration, harassment of different forms, lack of staff development, together with the blanket abuses society hurls against them" (Mugenyi, 2013:53).

Moreover, as limited to only secondary school level, this study offers a starting point for further related researches to be proportionally done in pre-school, primary, elementary, or higher learning educational levels. Once being tested in all those levels, the study will also address rational comparisons and scientific application for proper educational facilities planning, appropriate curriculum development and management for educational achievement that suits our economic status.

On the other hand, the study encountered some limitations associated to data collection process and limited time issues. According to the researcher's schedule, the documentary report, observation and interview had to take a whole working days' week for each of the three schools, unexpectedly it took only two days in one school and successfully 10 days in the other two schools, Kihonda and Mgulasi Secondary Schools, with 5 days for each.

Data collection process was delayed in about a week by the official bureaucracy for the release of a permission letter to collect information from the targeted area of study. The delay limited the researcher's time to an extent that the respondents in Morogoro Secondary School, as they were scheduled to be the first selected informants, could provide information in only two days for they were extremely busy with examination programmes and about to start their April mid-term break. The data

collected from that school, however, was hurriedly and successfully obtained. In general, the continuous follow-ups helped the study's completion since the researcher worked in day and nights until effective completion of analysis and discussion of the findings.

All in all, the study was 'respondents' interest capturing' for they seemed to be curious to contribute their opinions once they comprehend the research title's notion. Talking about how the crowd of students in a classroom would limit teaching and what would be done to adjust students' atmosphere towards learning, was absolutely a kind of topic that no teacher could tolerate to remain not contributing on it. Thus, the whole research study got well progressed since the topic it holds is hot in the educational perspectives in Tanzania and as it seems to be in the educational world of developing countries today.

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APPENDICES

APPENDIX I

FACE TO FACE INTERVIEW GUIDE FOR THE HEADS OF SCHOOL AND SENIOR ACADEMICS

FORM NO Date of the interview

Name of Institution Place

I, **MKULU DIONISI**, a student teacher pursuing a Master of Arts in Education at Mzumbe University (2017/2018 to 2018/2019 years), wish to conduct a study on **The Influence of Large Classes on Teachers' Pedagogical Innovation and creativity: A Phenomenological Study of Three Secondary Schools in Morogoro Municipality**, would like to ask for your participation in this study as a respondent to the research interview questions.

Please note that your precious response or any involvement will be appreciated and protected in a way that it will not cause any harm since whatever information provided remains anonymous and strictly confidential.

Would you please sign below as an indicator of your consent and voluntary participation in this study?

Signature of respondent/Participant

Signature of researcher

Date.....

Date.....

Part I: Respondent's Personal Information

Instruction: Kindly complete the introduction sheet by ticking the appropriate spaces provided;

1. Educational level

- i. .Diploma ()
- ii. First Degree Education ()
- iii. Post Graduate Degree ()

2. Working experience

- i. 0- 10 years ()
- ii. 11 – 20 years ()
- iii. 21+ ()

Part II: Specific Study Information

Objective 1: Finding out the emerged classroom activities teachers consider, from their lived experience of teaching LCs, as effective methodologies, techniques and approaches.

Would you freely respond to the following key hints for our interview please?

1. How many students are registered in your school in this 2019 year?

.....

2. What do teachers usually do, in terms of their own teaching methodologies, techniques or approaches, to accomplish the lessons' objectives in an overcrowded class?

.....
.....
.....

3. From your own lived experience of teaching LCs what have you been doing, in terms of your own created methods, techniques, maneuvers, procedures, tactics or any approaches in an effort to accomplish the lesson objectives effectively and efficiently?

.....
.....
.....
.....

4. What effective teaching-learning activities do you think any teacher may abruptly emerge in order to deal with a tough work of teaching the crowd of students?

.....
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.....

Objective 2: Identifying the work or function of the emerged methodologies, techniques, and approaches in addressing learning needs related to LCs.

1. Advantages of the TPIC on LCs resulted problems

(Having the LCs resulted problems, appropriate technique for the problems:
Respondent will have to state on why they think the technique is appropriately important)

LCs RELATED PROBLEMS	TEACHING THAT ADDRESS THE LCs RELATED PROBLEMS	ADDRESSING THE LCs PROBLEMS
TEACHING-BASED EMBARRASMENTS	-	-
- Heavy Teaching Load	Application of ICT and modern computer devices,	
- Inadequate Assessment	Use of modern computer devices, Students' exercise books' exchange for marking,	
- Class Management Strain	Dramatic teaching techniques, Peer group teaching approach, Use of Class-List and Class-Map, Moments of laughter recess, Class leaders' power delegation, Use of loud speaker, Class rules and regulations, Disciplinary punishment, Providing much more class work and exercise to do,	
- Insufficient Environment	Interpreting some new terms into mother tongue, Enacting joint class sessions, Interclasses forums, Dramatic teaching approaches, Provision/supply of enough T-L facilities, Class-shifting sessions,	
- Lacking Skills' Updating Opportunity	Inter-school academic interaction, Attending Seminars, refresher courses and Workshops, Learn and use techniques that other teachers apply	
- Teacher-Students Cruelty State	Warning and provision of punishment	

LEARNING-BASED EMERGING PROBLEMS	-	-
- Students' Deprived Attendance (Dodging)	Use sport-like and dramatic teaching approach, Use of class-list sheets and class maps to trace the dodgers, Providing punishment, Giving more study works, home works and assignments,	
- Bullying and Noise Making	Use of class-list sheets and class maps to pick and warn the inconvenient ones when teaching,	
- Adolescent Naughty	Use the class list and punish the naughty ones, Apply some dramatic teaching approaches,	
- Assignment and Class Work Incompletion	Provide corporal punishment, Adjust for a teaching style that will arouse students' interest	
- Drop Out Increase	Use class list to note the truancy trend	
- Decreasing achievement	Increasing pedagogical strategies at Schools' Macro Managing State	
- Resilience Impact	Use student centred approaches and guidance and counseling approaches	

Objective 3: Expressing, from teachers' perspectives, on how the emerged methodologies, techniques and approaches impact students' learning in schools with LCs.

1. (a) Do you think the teachers' invented tactics of teaching LCs enhance learning in this school?

....., if not, give the reasons;

.....
.....
.....

- (b) Are the teachers in your school aware that their students' learning is enhanced by their extra efforts they emerge despite the LCs related awkwardness?

....., if they are not aware, give the reason;

.....
.....
.....

2. Have this school ever got students' pass marks of Division one to division three pass grades in the last year of the 2018 Form Four National Examinations results?

....., if not, state why;

.....
.....
.....

3. Can you give examples of some government civil servant workers, any famous men such as political leaders or sportsmen, farmers or business men said to have been the product of this school?

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APPENDIX II

FACE TO FACE INTERVIEW GUIDE FOR THE CLASS TEACHERS AND SUBJECT TEACHERS

FORM NO Date of the interview

Name of Institution Place

I, **MKULU DIONISI**, a student teacher pursuing a Master of Arts in Education at Mzumbe University (2017/2018 to 2018/2019 years), wish to conduct a study on **The Influence of Large Classes on Teachers' Pedagogical Innovation and creativity: A Phenomenological Study of Three Secondary Schools in Morogoro Municipality**, would like to ask for your participation in this study as a respondent to the research interview questions.

Please note that your precious response or any involvement will be appreciated and protected in a way that it will not cause any harm since whatever information provided remains anonymous and strictly confidential.

Would you please sign below as an indicator of your consent and voluntary participation in this study?

Signature of respondent/Participant

Signature of researcher

Date.....

Date.....

Part I: Respondent's Personal Information

Instruction: Kindly complete the introduction sheet by ticking the appropriate spaces provided;

1. Educational level

- iv. .Diploma ()
- v. First Degree Education ()
- vi. Post Graduate Degree ()

2. Working experience

- iv. 0- 10 years ()
- v. 11 – 20 years ()
- vi. 21+ ()

Part II: Specific Study Information

Objective 1: Finding out the emerged classroom activities teachers consider, from their lived experience of teaching LCs, as effective methodologies, techniques and approaches.

Would you freely respond to the following key hints for our interview please?

1. How many students are registered in your school in this 2019 year?

.....

2. What do teachers usually do, in terms of their own teaching methodologies, techniques or approaches, to accomplish the lessons' objectives in an overcrowded class?

.....
.....
.....
.....

3. From your own lived experience of teaching LCs what have you been doing, in terms of your own created methods, techniques, maneuvers, procedures, tactics or any approaches in an effort to accomplish the lesson objectives effectively and efficiently?

.....
.....
.....
.....

4. What effective teaching-learning activities do you think any teacher may abruptly emerge in order to deal with a tough work of teaching the crowd of students?

.....
.....
.....
.....

Objective 2: Identifying the work or function of the emerged methodologies, techniques, and approaches in addressing learning needs related to LCs.

1. Advantages of the TPIC on LCs resulted problems

(Having the LCs resulted problems, appropriate technique for the problems: Respondent will have to state on why they think the technique is appropriately important)

LCs RELATED PROBLEMS	EMERGED TEACHING TACTICS THAT ADDRESS LCs RELATED PROBLEMS	FUNCTION OF THE TACTICS IN PROMOTING LEARNING IN LCs
TEACHING-BASED EMBARRASMENTS	-	-
- Heavy Teaching Load	Application of ICT and modern computer devices,	
- Inadequate Assessment	Use of modern computer devices, Students' exercise books' exchange for marking,	
- Class Management Strain	Dramatic teaching techniques, Peer group teaching approach, Use of Class-List and Class-Map, Moments of laughter recess, Class leaders' power delegation, Use of loud speaker, Class rules and regulations, Disciplinary punishment, Providing much more class work and exercise to do,	
- Insufficient Environment	Interpreting some new terms into mother tongue, Enacting joint class sessions, Interclasses forums, Dramatic teaching approaches, Provision/supply of enough T-L facilities, Class-shifting sessions,	
- Lacking Skills' Updating Opportunity	Inter-school academic interaction, Attending Seminars, refresher courses and Workshops, Learn and use techniques that other teachers apply	
- Teacher-Students Cruelty State	Warning and provision of punishment	

LEARNING-BASED EMERGING PROBLEMS	-	-
- Students' Deprived Attendance (Dodging)	Use sport-like and dramatic teaching approach, Use of class-list sheets and class maps to trace the dodgers, Providing punishment, Giving more study works, home works and assignments,	
- Bullying and Noise Making	Use of class-list sheets and class maps to pick and warn the inconvenient ones when teaching,	
- Adolescent Naughty	Use the class list and punish the naughty ones, Apply some dramatic teaching approaches,	
- Assignment and Class Work Incompletion	Provide corporal punishment, Adjust for a teaching style that will arouse students' interest	
- Drop Out Increase	Use class list to note the truancy trend	
- Decreasing achievement	Increasing pedagogical strategies at Schools' Macro Managing State	
- Resilience Impact	Use student centred approaches and guidance and counseling approaches	

Objective 3: Expressing, from teachers' perspectives, on how the emerged methodologies, techniques and approaches impact students' learning in schools with LCs.

1. (a) Do you think the teachers' invented tactics of teaching LCs enhance learning in this school?

....., if not, give the reasons;

.....
.....
.....

- (b) Are the teachers in your school aware that their students' learning is enhanced by their extra efforts they emerge despite the LCs related awkwardness?

....., if they are not aware, give the reason;

.....
.....
.....

2. Have this school ever got students' pass marks of Division one to division three pass grades in the last year of the 2018 Form Four National Examinations results?

....., if not, state why;

.....
.....
.....

3. Can you give examples of some government civil servant workers, any famous men such as political leaders or sportsmen, farmers or business men said to have been the product of this school?

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APPENDIX III

INTERVIEW GUIDE FOR TWO BEST PERFORMING STUDENTS AND TWO CLASS LEADERS

FORM NO

Date

Name of School Place

I, **MKULU DIONISI**, a student teacher pursuing a Master of Arts in Education at Mzumbe University (2017/2018 to 2018/2019 years), wish to conduct a study on **The Influence of Large Classes on Teachers' Pedagogical Innovation and creativity: A Phenomenological Study of Three Secondary Schools in Morogoro Municipality**, would like to have your participation in this study as a respondent to a not less than 30 minutes research interview I have prepared.

Please note that your precious free response or any involvement will be appreciated and protected in a way that will not cause any harm since whatever information provided remains anonymous and strictly confidential.

Would one of you like to sign below, on behalf of others, as an indicator of your consent and voluntary participation in this study?

Signature of respondent/Participant

Signature of researcher

Date.....

Date.....

Part I: Respondent's Personal Information

Instruction: Kindly complete the introduction sheet by ticking the appropriate spaces provided;

1. Age:

- i. 12 – 15 ()
- ii. 16 – 20 ()
- iii. 21+ ()

2. Educational level

- i. Form I ()
- ii. Form II ()
- iii. Form III ()
- iv. Form IV ()

Part II: Interview Guiding Questions for Collecting Phenomenological Information

Objective 1: Finding out the emerged classroom activities teachers consider, from their lived experience of teaching LCs, as effective methodologies, techniques and approaches.

Would you freely respond to the following key hints for our interview please?

1. How many registered students are you in your class in this 2019 year?
.....
2. What do teachers usually do, in terms of their extra own teaching styles to accomplish the lessons and make you understand more the topic taught in your overcrowded class?
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.....
.....
.....
3. From your own lived experience of learning in your class what have your teachers been doing, in terms of their own personal maneuvers, procedures, tactics or any style in an effort to make you understand the lesson?
.....
.....
.....
.....
4. What effective classroom activities do you think any teacher may abruptly emerge in order to make you understand well the lesson?
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.....

Objective 2: Students will be required to identify the work, importance or function of the emerged teachers' methods, maneuvers, styles, techniques, procedures, tactics or approaches that ensure learning progression in their congested classes.

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Do you remember any teacher's good teaching maneuvers?

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Have you ever noticed or seen any other impressive teacher's teaching styles you find so impressive?

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Objective 3:

1. How do your teachers fix their new tactics of teaching in order to help you learning and pass your examinations in this school with LCs?

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.....

.....

2. Are your teachers aware that your learning is enhanced by their extra efforts they emerge despite the awkward naughty and other disturbances that you ‘classroom crowded’ students cause to them?

.....

3. Have your school ever got students’ pass marks of Division One to Division Three or to Division Four pass grades in the last year of the 2018 Form Four National Examinations results?

.....

4. Can you give examples of some government civil servant workers, any famous men such as political leaders or sportsmen, farmers or business men said to have been the product of this school?

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