

**CONTRIBUTION OF SCHOOL INFRASTRUCTURES ON  
STUDENTS` ACADEMIC PERFORMANCE IN TANZANIA:  
A CASE OF SELECTED COMMUNITY SECONDARY  
SCHOOLS IN BUSOKELO DISTRICT**

By

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A Dissertation Submitted in partial Fulfillment of the Requirements for the Degree  
of Master of Arts in Education of the University of Dodoma

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**CERTIFICATION**

The undersigned certifies that has read and hereby recommends for acceptance by the University of Dodoma a dissertation entitled, “*Contribution of School Infrastructures on student`s Academic Performance in Tanzania: A case of Selected Secondary Schools in Busokelo District*”, in the partial fulfillment of the requirements for the degree of Master of Arts in Education of the University of Dodoma.

.....

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## ABSTRACT

The study aimed to assess the contribution of community secondary school infrastructures on students' academic performance. The main objectives were; to assess the status and challenges in the provision of school infrastructures in community secondary schools, to examine the impacts of school infrastructures on students' academic performance, and finally to suggest the appropriate strategies to improve school infrastructures.

The study adopted both quantitative and qualitative research approaches. A descriptive research design was employed. Ten schools were sampled from fifteen secondary schools of the targeted population of the area through probability sampling method whereby one hundred (100) respondents were selected.

Data were collected using questionnaires, interview schedules, and documentary analysis. Quantitative data were analyzed through Statistical Package for Social Sciences (SPSS) version 16.0. Qualitative data was put under themes consistent with research objects and then explained. The findings from the present study revealed that in all community secondary schools studied, schools with adequate infrastructures students achieved good academic performance while those without adequate infrastructures their students' performance most of them were poor.

The recommendation made include; the government to review its focus on the way communities participate in their school contributions. The suggestions for further study research made include; the specific aspect of infrastructure funding such as adequacy, accountability and equity should be established in the same or different districts in Tanzania.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

AIDS	Acquired Immune Deficiency Syndrome
BEST	Basic Education Statistics in Tanzania
CSEE	Certificate of Secondary Education Examination
DFID	Department for International Development
ETP	Education and Training Policy
HIV	Human Immunodeficiency Virus
LISC	Library and Information Services Council
ICT	Information Computer Technology
MDGs	Millennium Development Goals
MEAP	Michigan Educational Assessment Program
MTUU	Mpango wa Tanzania UNICEF-UNESCO
NCLIS	National Commission on Libraries and Information Science
NGOs	Non Governmental Organizations
NHEP	National Higher education Policy
NSGRP	National Strategy for Growth and Reduction of Poverty
PRSP	Poverty Reduction Strategy Paper
REPOA	Research on Poverty Alleviation
RR	Rwanda Republic
SEDP	Secondary Education Development Program
SEMP	Secondary Education Master Plan
SER	School Effective Research
TETP	Technical Education and Training Policy
TLA	Tanzania Library and Information Association
UNESCO	United Nations Education Scientific and Cultural Organization

UNICEF	United Nations Children`s Fund
UK	United Kingdom
URT	United Republic of Tanzania
WASCE	West African School Certificate Examination

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Problem

Secondary school education in Tanzania and in other Sub-Saharan African countries is considered important sub-sector in the education system as well as for the development of the country's economy. For example inputs into higher education and in the labor force in Tanzania depend on qualified outputs from secondary schools. (Haki Elimu, 2007; Koda, 2007; URT, 1995; Wedgwood, 2007). The importance of secondary school education as a sub-sector is also evident in the secondary Education in Africa initiative (SEIA) report. In their report, interests in raising demand for secondary school education to accommodate the children completing primary education are highlighted.

For a number of years the term education has been associated with abilities on the 3Rs (writing, reading and simple arithmetic), as emphasized by a large number educationists like Uwezo (2010) and the MTUU of the 1970s, rather than psychometrical side of learner's skills. Conservatively, some educationist, Nyerere (1975) view education as skills and attitudes necessary for one's survival and mastery of his environment which does not necessarily demand one's ability to master the 3Rs (that is; writing, reading and simple arithmetic) but rather useful for immediate self reliance.

However, education focus and policies in the world has undergone evolution in response to the national need. From the years before colonialist, education in Tanganyika had its orientation on to apprenticeship which demanded no special constructed buildings and desks, but rather work facilities and the mentor to play a

training role. Nyerere (1967) stated that before colonial Africa did not have building schools, except for short periods of initiation in some tribes, they learned by living and doing in the homes and on the farms they were taught the skills of the society and the behavior of its members.

A study by Hannon (2009) notes that one of the many challenges that secondary schools have in common is their struggle in improving a good school environment that is conducive for student's learning, this is due to lack of good School facilities such as latrines, water source, desks, safe classrooms, enough materials in the library, gardens and play grounds.

Sumra and Rajan (2008) stated that since the introduction of ESDP through SEDP1 and II there were improvements of school infrastructure, new classrooms and schools have been built, however toilets and teachers' houses have also constructed in a lower pace compared to new classrooms. Extension and achievement of education relies on infrastructure which affects education access, contributes to excellence learning environment and student success (Crampton, 2003).

UNESCO (2003) denotes that the importance of infrastructure cannot be ignored. If infrastructure is not adequate or not maintained, there will be obstacles in education access and participation especially to the vulnerable groups in society, constructing new schools and rehabilitating existing facilities will broaden access to these groups. This calls for enough funding to avail infrastructure. Adequate levels of fiscal investment in physical infrastructure of schools are essential to ensure that all students and staff have access to school infrastructure conducive to learning that is safe healthy and educationally suitable (Crampton *et al*, 2008)

Despite the fact that most researchers and educationist forwards inadequate number of teachers, inadequate teaching and learning materials (Jones *et al*, 1989; Chedié, 2004; Haki Elimu, 2009; Uwezo, 2010; Kalanje, 2011), it has not been said to what extent does building infrastructure of the schools leads to poor performance of students. It is the therefore the objective of this study to cover up this gap.

## **1.2 Statement of the Problem**

The students' academic performance in secondary schools has kept deteriorating throughout the country (Haki-Elimu, 2009), despite the claim that number of students joining advanced levels and universities increases (MOEVT, 2012) Studies show that Students performance has been deteriorating in secondary schools despite the governments' claims that education is improving. For instance, in 2008 student's performance declined from 15.6% and 41.02% for government and private schools respectively. The performance revealed continued declining to 27.49% and 45.88% in 2009; 49.60% and 47.91% in 2010; and 46.41% and 47.48% in 2011 for government and private schools respectively (MOEVT, 2012). Yet the problem seem to be critical in Mbeya region where students performance has been decreasing in secondary schools such that, about 84.14% of all candidates got Division IV and Division Zero in 2010 while about 87.6% of all candidates in the region got Division IV and Zero in 2011.

In Busokelo district, student's performance in 2010 and 2011 did not depart from the average national performance. It rather revealed itself worst despite the strategic struggles that the region and district have been taking to improve education. According to the Ministry of education and vocational Training (2012) about

84.18% of all students in Busokelo secondary schools concentrated in Division IV and Zero in 2010, while 83.38 fall within the range in 2010.

With the continued declining performance in secondary schools in Tanzania, most Educationist and education stakeholders have outlined a vast number of probable causes including inadequate training of teacher, frequent curriculum changes and inadequacy in the teaching and learning materials including laboratories and poor or inadequate school structures including classrooms and toilets (Dare, 2005; White, 2004; Kingdon, 2005 Haki-Elimu, 2009). Many factors are being the due causes for the situations, it is clear that inadequate school infrastructures have been proclaimed one of the major reasons for the declined academic performance in Tanzania.

While focusing on those common grounds for the prevalence, some educationist have suggested construction of more classrooms and laboratories as the solution to the problem. However, while still very confined to their narrow definition of infrastructures, some have identified supply of adequate teaching and learning materials as the important solutions to the prevailing problem. Yet, besides the plans and strategies identified, the problem has been kept escalating. While the problems persist, very little has been done to assess the contribution of school infrastructures on students' academic performance. The proposed study is an attempt to that end.

### **1.3 Purpose of the Study**

The purpose of this study is to assess the contribution of school infrastructure towards student's academic achievements in Tanzania.

#### **1.4. Specific objectives:**

To achieve the research purpose the following specific objectives are going to be used.

- 1 To assess the status and challenges in the provision of school infrastructures in community secondary schools
- 2 To examine the impacts of school infrastructure on students academic achievements.
- 3 To suggest appropriate strategies that would help to improve school infrastructure for student`s academic achievements in secondary schools.

#### **1.5 Research questions**

1. What is the current status and challenges in the provision of school infrastructures on community secondary schools?
2. What effects do school infrastructures have on students` academic performance?
3. What are the strategies that would assist to improve school infrastructures?

#### **1.6 Significance of the Study**

The findings of this study may benefit all secondary school students and teachers in particular through the effective use of school infrastructures. It is expected that the study will raise the stakeholders` understanding and to allow them to participate in the provision of school infrastructures. Teachers and others may initiate ways on how to practice and utilize proper school facilities to students and using other strategies recommended by the study.

This study contributes to the advancement of knowledge about the implications of school infrastructure on the provision of quality education. The study findings may also contribute to the pool of knowledge, which is vital for the present and future scholars in regard to future education planning and expansion. Likewise, the study came up with proposals that could be useful to policy makers for secondary school expansion

### **1.7 Delimitation of the study**

The study confined it-self to secondary school education, the study targeted community public secondary schools located from Busokelo District in Mbeya region. The students and teachers who were included in the sample were those in session in the respective institutions by the time of study. Those absent were not included.

The study used probability technique to select ten community secondary schools in which fifty (50) students from secondary school in the forms three and four selected randomly regardless of sex and forms, ten (10) school heads of secondary schools were used as key informants of the study and forty (40) teachers were used in the study as informants, all teachers and students in a respective secondary school had equal chance to be selected regardless of sex were chosen purposefully to participate in the study.

### **1.8 Organization of the study**

This research was organized into five chapters. Chapter one identified the research problem with its sub-section; It specifically explained the wants for the study, Chapter two complied the theoretical frame work, conceptual frame work and the

review of related literature with the problem. The aim was to gain insight and establish what others have done in the areas related to the study out of Africa within Africa and Tanzania in particular. This was enabled the researcher to identify the extent to which this area has been studied and to fill the gap that needs to be filled.

Chapter three was purposely for research design and methods which was used to collect data relevant for the study. This chapter tried to show research procedures that was used to carry out the study. It further described ways to achieve the intended research objectives under presenting investigation.

Chapter four dealt with the presentation, interpretation and discussion of the research findings and chapter five presented the summary of the study and summary of the findings based on the objectives of the study, draws conclusions, and ends with recommendations and concluding remarks, finally was followed with references and appendices.

## **1.9 Definition of Concepts**

### **1.9.1 Student`s Performance**

A measure of knowledge gained in formal education usually indicated by test scores, grade, grade points, average and degrees. The achievement level of the student is judged by the marks that the students have scored in the quarterly examinations. Brown (1983) contends that all the test items focus on what has been learned, the student learning that has occurred as the result of experiences and reflections in the classroom is then measured by the achievement tests and or examinations.

Summer (1975) defines the student` performance as the description of scores and how it comes about. The performance goes further to reveal the student learning or

mastery of subjects. The World Book Encyclopedia (1993) argues that tests measure how much a student learns about particular subjects, the task of the teacher is to assist learners to maximize learning so as to improve performance in schools

### **1.9.2 Infrastructure**

Until today it is difficult to denote a clear definition of infrastructure (“infra” stems from the latin word meaning ‘below’ hence “infrastructure can mean “foundation”). Biehl (1986), Nijkamp (1986, 2000), Aberle (1995), All of these formulations have in common that infrastructure essentially material infrastructure is to be supplied by the state.

Nijkamp (2000) define infrastructure as material public capital (roads, railways, air ports, and pipelines) and superstructure meaning immaterial public capital such as knowledge networks, communication, education, culture etc.

Infrastructure is defined as the sum of material, institutional, and personal facilities available to the secondary school and which add to realizing the equalization of the compensation of similar inputs in the case of a right distribution of resources that is complete integration and maximum level of economic activities. (Jochimsen, 1996)

### **1.9.3 School infrastructure**

For the purpose of this study school infrastructure refers to the substructure or underlying foundations or network used for providing educational services. Especially the teaching and learning facilities which includes class rooms, Laboratories, Libraries, Play grounds, Furniture, Sanitation, Toilets/ Latrines and other teaching and learning materials such as text books and supplementary books (Ralenala, 2003).

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents a critical review of the related literature from books, internet, journals, articles and periodicals. Also it placed of interest theories assisted to examine issues that came out of the study, and also the section revealed conceptual frame work which formulated a summary on how to advance school infrastructure to influence better performance. There for related literature was done under the following subtitles; types of school infrastructure that contribute to poor performance of students in the CSEE, the extent of student`s performance in secondary schools, the effects of school infrastructure on students` academic achievement, roles played by the, Government in addressing the problem of school infrastructure, the appropriate strategies that would help reduce the problem of school infrastructure among secondary schools in Tanzania.

#### **2.2 Theoretical Context of the Study.**

This study was guided by the Maslow`s needs theory and Levy Vygotsky`s constructivism theory.

##### **2.2.1 The Theory of Abraham Maslow**

The theory is based on human behavior that when the requirements of an individual are not met at work, they have a tendency of not to work effectively and competently. According to Maslow, human beings are motivated by insatiable needs and that certain lower needs have to be satisfied first before the higher needs can be taken off. The theory assumes that there are common types of needs: Physiological, safety, love, esteem, and self-actualization basing on this theory the students have to

satisfy first with the school infrastructure where learning takes place. School infrastructure must be student friendly to encourage learning activities. The needs of human according to Maslow they have to follow the ladder (Maslow, 2003).

Physiological Needs, These include needs to satisfy breathing, food, water, sleep, health and other bodily needs. Physiological needs are the most basic and their fulfillment is crucial for survival in this needs teachers and student's needs to have ventilated and airy classrooms, clean water to drink, enough water to use for hygiene and adequate sanitation facilities so as to be free from contaminated environment that can cause health problem.

Safety needs include security of body, employment, resources, morality, and health. They are needs for freedom from threat, danger or deprivation and involve self-preservation. According to these needs students in order to perform well need to be safe from communicable diseases so as to ensure school attendance, also teachers must be morally acceptable through coming from nearby school houses more over the school have to ensure fences rounding the school environment.

Belongingness and Love needs; these include the desire for affection, belongingness, acceptance, and friendship. These are concerned with an individual's ability to exist in harmony with other people.

Esteem needs include needs for self-respect, achievement, competence, autonomy, self-confidence, status, recognition and appreciation. When these needs are satisfied a sense of adequacy results, but when they are deprived it produces feelings of helplessness and inferiority. Teacher's needs good houses, toilets, sanitation facilities and opportunities to good libraries and laboratories these available

infrastructures can provide status, competence and autonomy to the teachers. On the other hand students in order to perform well they have to be recognized by learning in a favorable environment with non-congested classroom.

A self-actualization need, this means to become more and more capable of becoming it involves morality, creativity, problem solving and lack of prejudice. The secondary school teachers and students just like any other worker has his/her individual motives based on needs, desires and expectations which energizes their behaviors towards the achievement of goals. The primary task of the school administrator therefore is to ensure that the school teacher and student functions effectively and efficiently so as to achieve results (Abraham, 2003).

### **2.2.2 The Theory of Lev Vygotsky**

Vygotsky (1896-1934) is one of the Russian Psychologists whose ideas have disposed the field of educational psychology and the field of education as a whole. Vygotsky`s theory of socio-cultural learning places of interest the role of social and cultural interactions play in the learning process. Vygotsky`s theory states that knowledge is co- constructed and that persons learn from one another, learning happens with the assistance of other people hence contributing the social aspect of the theory.

Wertsch (1985), and Shayer (2002) claims that a fundamental aspect of Vygotsky`s theory is the Zone of Proximal Development (ZPD), which means “a range of tasks that are too difficult for an individual to master alone” but can be mastered with the assistance of adults or more-skilled peers Vygotsky ( 1962). Learning awakens a

variety of internal developmental process that is able to operate only when the child is interacting with people in his/ her environment and in cooperation with their peers.

According to this theory the study is congruent in the sense that, students need to be assisted by their teachers to influence of learning immature. This could be done only if teachers are nearby the school hired at; hence teachers` houses and adequate classrooms with its component such as water supply, toilets/pit latrines, libraries, laboratories and other equipments are important. These infrastructures can help students to solve their problems independently before the more knowledgeable assistance, also games is encouraged by the theory since it strengthens peer relationship that can create smooth learning interaction.

Mediation is another aspect in the socio-cultural theory of Vygotsky, as in Feuerstein`s theory Williams and Burden (1997) claims that Mediation is central to Vygotsky`s socio-cultural theory. Lantolf (2000) denotes that the human mind is mediated he further claims that Vygotsky finds a significant role for what he calls “tools” in human`s understanding the world and of themselves, according to Vygotsky people do not act directly on the physical world without the intermediary of tools whether symbolic or signs. Tools according to Vygotsky are artifacts created by people under specific culture and historical condition. Kozulin (2002) categorizes mediators into two types which are Human and Symbolic.

Hence schools have to ensure the availability of teaching and learning materials such as text-books, supplementary materials, and computers stored in the libraries, also laboratories with enough science facilities that can be used as tools in students learning assistance, acoustic color in the classroom to reduce echo. Also Vygotsky

(1978) cited on Wertsch (1985) denotes the importance of language as a mediator in the academic achievement of students; this also can be mastered through the use of libraries.

According to Donato (1994) explains scaffolding as a concept that derives from cognitive psychology, it states that in social interaction; a knowledgeable participant can create by means of speech and supportive conditions in which the student (novice) can participate in and extend current skills and knowledge to a high level of competence. According to Vygotsky scaffolding can be through More Knowledgeable Other (MKO) that is those who/which have higher knowledge than the particular individual like peers, adults, teachers, computers, and other materials that can help students to learn. The theory insists teachers to settle near the school hence teachers' houses is important, the availability of libraries, laboratories, computers and other helping materials, all these infrastructures have to be complemented by the presence of toilets, water supply, furniture, play grounds with its facilities and other buildings and fences for truancy assurance.

## **2.4 Related Literature**

The Government of Tanzania played a vital role in the improvements of school infrastructure. New classrooms have been built and new schools constructed; more than a thousand new government secondary schools were built between 2003 and 2006 through SEDP. Toilets/pit latrines and teachers' houses have also been constructed, though at a lower pace as compared to new classrooms (Haki-Elimu, 2006).

The quality of the physical infrastructure in which children learn is a critical education capacity factor that contributes to their academic success and well-being, Crampton (2008) reports that adequate levels of investments in school infrastructure are essential to ensure all students and staff has access to a physical environment conducive to learning. Wilson (1982) hold that in academic communities and the circumstance of school infrastructure has a fundamental consequences for school performance specially attendance and drop-out rates.

Schools which deprived from water supply, toilets, fences, libraries and other recreational facilities most students tend to be truancy (Galloway, 1985). A famous moviemaker once said that 70% of success in life is showing up, when determining success in school as it is in determining success in life. The best teachers, the best principals and the best administrators have absolutely no value in improving education if children do not come to school. Children who are absent from school fall behind in their studies and have a difficult time catching up with the rest of the class. (Galloway, 1985; Reid, 1986).

International research indicates that the physical infrastructure in which student learn enhances learning outcomes, Frost (2013) denotes that the learning outcomes happen if; Students are learning in new or upgraded facilities, there is suitable thermal comfort, acoustics and natural light, facility design supports effective teaching, learning and the delivery of a modern curriculum.

#### **2.4.1 School Library**

According to Encarta (2008) School library refers to the collection of books and other informational materials made available at school to people for reading, study or conference. Libraries maintain collections that include not only printed materials

such as manuscripts, books, newspapers, and magazines, but also art reproductions, films, sound and video recordings, maps, photographs, computer soft ware and other media. The central mission of a library is to collect, organize, preserve and provide access to knowledge and information.

School library media centers can contribute to improve student achievement by providing instructional materials aligned to the curriculum, collaborating with teachers, administrators and parents and by extending their hours of operation beyond the school day ( National Commission on Libraries and Information Science [NCLIS], 2008) they further added that the library should no longer school libraries just for books they should be “school library media centers” with computer resources that enable students to engage meaningfully with a wide variety of information. Research has shown that school libraries staffed by qualified library media specialists are needed to have a positive impact on student academic achievement (NCLIS, 2008).

Roscello (2002) stipulates criteria for an effective school library as to be in accessible to the total school community, on site or remotely, should be cost effective because one book is used by many, should provides flexible scheduling and timely access to the collection by all students, should offer a broad range of materials-reference, fiction, and non-fiction, it addresses a broad range of reading levels, it minimizes loss through cost-effective tracking systems, it supports learning to read and reading to learn with informational ad imaginative text and literature, it adds new resources throughout the school year to keep collections dynamic, and finally it creates a sense of ownership that is shared by the entire school community, and states that “School libraries are much more than books”.

Across the United States research has shown that students in schools with good school libraries learn more, get better grades, and score higher on standardized test scores than their peers in schools without libraries. From Alaska to North Carolina more than 60 studies have shown clear evidence of this connection between student achievement and the presence of school libraries with qualified school library media specialists (Roscello, 2002).

The study conducted in Colorado titled the impact of school library on academic achievement reveals that the schools with well-developed library media programs average 10-15% / 18% higher reading scores, and the well-developed programs are indicated by staffing level, collection size and age and expenditures (Keith, 1993). Also the study done by Baughman (1999); Zweizing (1999) reported that strengthening the library collections in terms of quality and quantity had a number of benefits to students who access to school library.

The study conducted in America by Marcia (2003) under the title “The impact of Michigan school librarians on academic achievement and came up with the findings which shows that students who have libraries succeed in their studies, the study was concerned with the comparison of MEAP reading performance for Michigan schools with and without librarians and indicates that those who uses libraries can make a difference in the reading achievement of a school`s students. Marcia (2003) further argued that even the schools which have libraries its performance vary from school to school due to ours of operation and availability, its staff, its collections and their usage.

The research on the Impact of school library media centers on academic achievement between 1999 and 2001 were conducted in Alaska, Colorado, Iowa, Massachusetts, New Mexico, Oregon, Pennsylvania and Texas. All studies revealed its concern to the importance of school libraries on academic achievement (Marcia, 2003).

In the study by Hale (1969); McMillen (1965); Didier (1982) and Yarling (1968) found that students in schools with good libraries and full-time librarians performed at top levels in reading comprehension and in knowledge and use of reference materials than students in schools with minimal or no library service. In the study by Ainsworth (1969) and McConnaha (1972) also reported that the library skills test scores of the high school students who had attended a basic school with both a library and a librarian were significantly higher than those of students who did not have these advantages.

Aaron (1975) and Bailey (1970) studied a group of disadvantaged first-grade students and the group of eighth grade students who participated in a program in which a full-time media specialist was added to the teaching team the result showed the significant improvement in language arts spelling and math calculation. Tanner (1963) looked at whether improved English language skills could be developed at the tenth- grade level through systematic library experiences rather than the traditional emphasis on formal English grammar, the results were those who received systematic work in the use of library references was considerably superior to the groups that emphasized traditional work in grammar and spelling.

A study conducted in Alaska by Lance, Hamilton-Pennell and Rodney (2000) and Lance (1993) showed that student`s test scores tended to increase when library staff

spent more time teaching information literacy to students and planning instructional units with teachers and the surveys provides details on the analysis of school library which indicates that the students with better reading scores were also better at using language and consequently reading scores were used to represent academic achievement. Kuhne (1993) reported that school libraries need to be more integrated into the curriculum and that the school librarian could play a much more distinctive teacher role than he or she does today.

Studies by Kuhlthau (1999); Moore (2000) and Williams (2001) suggested that the school library has a significant role to play in the development of information handling skills and an understanding and awareness of the learning associated with the information literacy enhances the opportunities librarians can provide for higher order learning. Cited on Dorothy (2002) in response to this argument (Library and Information services Council [LISC], 1995) gives UK support for the findings of research from abroad and suggested that where library provision is poor, student's abilities in information handling and research and study skills are correspondingly under-developed.

In the study from California by Farmer (2001) and the study from Scottish by Williams (2001) concludes that students from schools with qualified librarians are performing better in the studies and high in academic performance than those without libraries.

Another daily sketch publication done in Ghana titled "Causes and cures of poor performance at West African School Certificate Examination (WASCE) in 2006 identified problems responsible for student's poor performance to be the problem of

teachers, inadequate of facilities in the schools, parents and government policies, (Ajila & Olutola 2007).

Many studies concerning poor academic performance was conducted such as Paaku (2008), Ankomah (2005) and Adjei (1999) reported that many secondary school students in Ghana performs poorer due to the inadequacy of school infrastructure like libraries and other outdoors facilities, they further argued that students depends on teachers notes and schools has no room for books storage the situation which deny student`s private study.

Reviews of School Effectiveness Research (SER) literatures had usually focused on developed countries, similar attempts driven by the concept of educational production function and cost effectiveness were started in the late 1970s (example, Simmons and Alexander (1978) to review SER literature in developing countries, reviews of a specific factor of school effectiveness example drop outs, (Levy, 1971)

Around 50% of the SER studies those reviewed in Fuller (1987) Lockheed and Hanushek (1988), Lockheed and Verspoor (1991) Plus some addition 40 studies conducted from 1987-1993 in developing countries indicated significant positive associations between academic achievement and school input as well as process variables (e.g. classroom pedagogy and organization school management). However, noted that class size and teacher salaries had inconsistent or no effects on student academic achievement.

In the study conducted in South Africa by Ralenala (2003) indicates that thousands of schools still have poor physical infrastructure and many are on its last legs, dangerous and unfit for human habitation, Ralenala (2003) further noted that schools

has no water on site, or sanitation, hence such conditions do not only restrict the teaching and learning activities of the school but also threaten the learners health as well as educators, these results to absenteeism of both student and educators.

In the study done in five countries in the fifth- graders from Francophone sub-Saharan African countries Burkina-Faso, Cameroon Ivory coast Madagascar and Senegal by Michaelowa (2001) showed that the availability of classroom equipment such as desks blackboard and chalk and teacher`s manual, text-books had positive significant relationship with academic achievement. However, in the study conducted in Ethiopia by Abraha *et al.* (1991) reported that the discrete influence of school characteristics on girl`s performance remained unclear and the class size, number of shifts did not relate to girl`s performance in any consistent manner.

A school must offer facilities for storing and displaying educational reference materials to cultivate the culture of reading and researching, the library room may be centralized room or a corner with shelves within each classroom as a learning resource center, (Rwanda Republican [R.R], 2009).

In Tanzania different studies conducted concerning academic achievement, for instance Laddunuri (2011) did a research in secondary schools in Arusha under the title “Status of school education in present Tanzania” the findings reveals that pass percentage of the students declining from 82.3% to 50.74% since 2006 to 2010 and expressed some of the factors that led to poor performance of the students as lack of trained teachers, poor school infrastructure facilities and insufficient books in the school library.

A study conducted in secondary schools In Arusha by Mlay (2010) the study used qualitative approach in data collection and the findings concluded that students from urban secondary schools performed better than students from rural secondary schools however the variation between schools was very minimal, the findings showed that the reason for performing poor is the inadequate teaching materials, teacher centered approach, overcrowded classrooms and lack of libraries.

#### **2.4.2 Safe Water, Electricity and Sanitation**

In the study done by UNICEF (2008) reported that schools cannot guarantee children health but they should not make their health worse, unsanitary and unsafe learning environments results in injury and illness, girls with drawn from schools that fail to provide separate toilets that undermine students participation in education. UNICEF (2008) postulated that schools should provide safe water and appropriate sanitation facilities, benches, chairs, adequate lighting, access to energy for school electricity and allowing opportunities for physical and recreation these led to better learning condition.

The physical school infrastructure has a strong influence on student`s health for several reasons, it is important to the health of these children that they have clean water to drink, enough water to use for hygiene, adequate sanitation facilities, clean air to breath. Wargo (2002) further stated that a contaminated environment can cause health problems such as infection diseases, respiratory infections or asthma that can reduce school attendance and learning ability which foster to lower academic achievement, (Wargo, 2002).

### **2.4.3 School Buildings, School Location, and School furniture**

In the study conducted in Columbia by Mills (1915) as cited by Baker (2012) denoted that the school buildings should be simple, dignified, and should be built of the most enduring materials procurable to influence high performance. However Baker (2012) stated that schools built during the last decades of the 19<sup>th</sup> century and early decades of 20<sup>th</sup> century were therefore largely standardized , utilitarian spaces that were designed to house as many students as possible which were quite elegant buildings, student were just crowded and impersonal. Baker (2012) as cited from Weisser (2006) found that schools were badly located, exposed to the noise, dust and danger of the highway and unattractive.

On the study of school location and performance by Simmelkjaer (1979), Friedman (1962), Bell (1971), Kostman (1977) and Bell (1975) In their researches showed that educational institutions in the urban share common features of learning impediments such as reading retardation, high absenteeism, drug abuse, student vandalism as well as overcrowding account for the causes of poor performance in the urban schools as compared to schools in the rural areas. However in contrast Ogunlade (1973), Lawin (1973), Obot (1991) and Anwana (1979), all disagreed on this views, they maintained that schools in the urban are well staffed and with good facilities, therefore these factors induce better performance in the urban than rural areas.

Class sizes have also been identified as determinants of academic performance in America; studies have indicated that schools with smaller class sizes perform better academically than schools with larger class sizes. Kraft (1994) in the study of “The ideal class size and its effects on effective teaching and learning” in Ghana concluded that class sizes above 40 students have negative effects on students

achievement. Asiedu-Akrofi (1978) Sadker (2005) reported that good teaching is best done in classes with small number that allows individuals concentration. However, R.R (2009) targets maximum classroom size for 46 students per classroom.

In the concept of the size of the school, Large schools have the advantage of more resources, but they have the disadvantages of being impersonal and having more disorder or crime, on the other side smaller schools are considered better especially for at-risk students (Boyer, 1983).

Earthman (2004) argue that in US temperature rate heating and air quality as the most important individual elements for student achievement, others like Young *et al.* (2003) Buckley *et al.* (2004) mention the importance of temperature rate air quality and the like in their reports and address the needs of particular US states schools that classes have to be ventilated, also Fisher (2001) and Schneider (2002) agrees with these factors as likely to affect student behavior and their outcomes

Greany (2005) showed that there is strong consistent evidence for the effect of basic physical variables (air quality, temperature, noise, and lightning color on learning). Physical environment in the classroom must have some degree of flexibility to save time required for learning, ownership of space and equipment by both teachers and students is important. According to R.R (2009) classroom lighting depends upon the operating times of the classes; typically classrooms require 3 numbers of 15 watt CFL bulbs which are fixed to the level of the undesirable of the trusses or at ceiling level.

Also Adepoju (2001) found that student in urban schools manifest more brilliant performance than their rural respectively. Similar view reported by (Ogunleye, 2002), Ndukwu (2002), Odunko (2002) and Warwick (1992) reported a significant difference in the achievement of student n urban peri-urban areas. However Daramola cited in Ogunleye (2002) and Orji (1997) did not found any significant difference in the urban and peri-urban schools

Fuller and Clarke (1993) on the study conducted in Botswana, noted that the process- oriented classroom cultureless and also in its detailed definitions and indicators relevant to sub-Saharan Africa context the conceptual frame-work relied mainly on research evidence in school effectiveness and asserts that classroom equipment such as “usable blackboard, and sufficient chalk” and enough desk places so that all students enrolled in the class have a place, this could be essential indicators of school facilities that may affect student learning outcomes.

Pennyquick (1993) on behalf of DFID reviewed several interventions considered essential for promoting school effectiveness which are the school physical facilities and provisions of textbooks and learning materials. This also discussed by Velez *et al.* (1993) that educational material such as access to textbooks and reading materials, other instructional materials and infrastructure like electricity, water and furniture. However, school size did not seem to have effect on learning.

Boissiere (2004) and White`s (2004) identified many factors that influence academic achievement among of them are hardware such as school building, classroom and furniture, sanitation that has a strong and positive relationships between hardware inputs and student outcomes.

The republic of Rwanda through its ministry of education outlines the school infrastructure type and standards which are expected to be met by all schools which are;

- Safe and secure classroom with space per student at an adequate quality, internal temperature, ventilation, daylight, acoustics and dust free.
- Toilet and hygiene facilities with separate girls and boys and staff facilities with disabled according to ratio.
- Non-portable water supply with hand washes points and safe drinking water.
- Head teacher's room with adequate space for a table and meeting area.
- School furniture adequate quantity and size for teaching and learning for all rooms.
- Play/ games, students must have access to play areas such as Basketball, Football, Handball, Netball, volleyball, and Table tennis.
- Sanitary materials, Sanitation products and equipment available to keep health.
- Sports equipments according to school need play.
- Laboratory, ICT room with electricity.
- Library/ Learning resource area, allocation of an area to store and display reference material either a library room or an area within the classroom. (R. R 2009).

Schools should have outdoor learning areas which are spaces where formal or informal teaching can take place. These spaces may be directly connected to the classrooms or connected centrally as a court yard, these areas may have a variety of

qualities, and it may enclosures created by vegetation with external furniture (R. R, 2009).

Chediell (2000) conducted a study in mainland Tanzania and came up with the findings which showed that student`s performance decreased in some regions from year to year. In the same year of 1997 and 1998, the performance from Shinyanga increased by 8.04% and for the whole Tanzania student`s performance remained the same for two years. The study revealed that poor performance was caused by inadequate teaching and learning materials, non conducive teaching and learning environment. However, Chediell (2000) noted that better physical infrastructures and facilities were tools for better student`s performance.

#### **2.4.4 School Laboratories**

Wiseman (1973), Sogbetan (1981), and Imoge (2002), conducted a study in Nigeria concerning the factors that influence academic performance of student and identified that student internal state and their environment, adequacy of educational infrastructure like text-books and well equipped laboratories.

The inadequacy and lack of appropriate materials such as chemicals, impact negatively on the performance of students (Ralenala, 1993). It was coincide that Facilities like Laboratory and computer are the most important for our students to part with learners from well- resourced schools for academic achievement (Rammala, 2009).

The study conducted in Moshi by Komba *et al.* (2013) showed that all secondary schools visited in Moshi had no library and laboratories in place, some few books used by teachers for reference are kept in the teacher`s offices where by students had

no time to access books for independent study, which therefore persist low student`s performance. The challenges face many communities secondary school in Tanzania are the absence of Laboratories and libraries (URT, 2010).

#### **2.4.5 Teaching Materials**

Teaching materials refers to the instructional materials used to sustain students and teachers in the entire process of teaching and learning, they include textbooks, teacher`s lesson plans and other related resources accountable to facilitate the teaching activities for the case of this study teaching materials is the teaching aids that classroom teachers uses to help their learners to learn rapidly and comprehensively.

Haki Elimu (2006) asserted that in recent years in Tanzania the provision of books to the school level has increased dramatically, primarily through ‘capitation grant’ the pupil: book ratios have improved, though are yet to reach adequate levels.

#### **2.5 Knowledge Gap**

The literature concerning the effect of school infrastructure on student performance is sparse, but there is a vast amount of research on student achievement. Student achievement has been validly measured in a number of different ways. Perhaps the most popular way to measure student accomplishment is through student test scores (Hanushek, 1994, 1996, 1999; Hedges and Greenwald, 1996; Mosteller, 1999; Demie, 2002). In these studies students scoring high on standardized tests are said to achieve more than those who make lower scores.

Teacher quality and teacher experience have also been the focus of research on student performance with the consensus being that experience increases student

accomplishment. (Brown, 1972, Murnane, 1975, Hartman, 1994) reported that teachers of high quality result in increased attendance. The size of the school has also been shown to have an influence on student performance with smaller schools being positively related to higher test scores (Greenwald, Hedges, and Laine 1996).

Further literature has concentrated on education inequality and the harmful effects that occur in such environment. Kozol (1991) in his book *Savage Inequalities* describes the effects of education inequality in six separate urban areas across the US. After interview of children in dilapidated schools shows that the schoolhouse, the one place of hope for a better life, all too often provides no relief from the World of despair that they live in. descriptions of flooded cafeterias, basements being used as classrooms, rotted walls and ceilings ,leaky roofs, overcrowded classrooms, and ugly schools fill Kozol`s book. Yet despite the findings of Willson and Kelling (1982) and the horrible conditions outlined by Kozol`s offering, quantitative study on the effects of infrastructure on student performance has been largely ignored.

Overcrowded classes can affect teacher`s ability to produce maximum student achievement (Smith and Glass, 1980; Hedges and Stock, 1983; Hartman, 1994; Card and Kruger, 1996). Congested classrooms also may exacerbate drop-out rates. Fitzpatrick and Yoels (1992), McNeal (1997). Such deficiencies may be due in part to a lack of incentive for students to attend such classes

## **2.6 Conceptual Frame Work**

The conceptual frame work that guided the study is CIPP model developed by Stufflebeam (2002). A conceptual frame work is a set of ideas of written or visual

presentation that explains either graphically or in narrative form it includes variables and the accepted relationship among them.

The model comprises three components which reveal the study. The three components in figure one, specifically are Input, Process and Output are explained below.

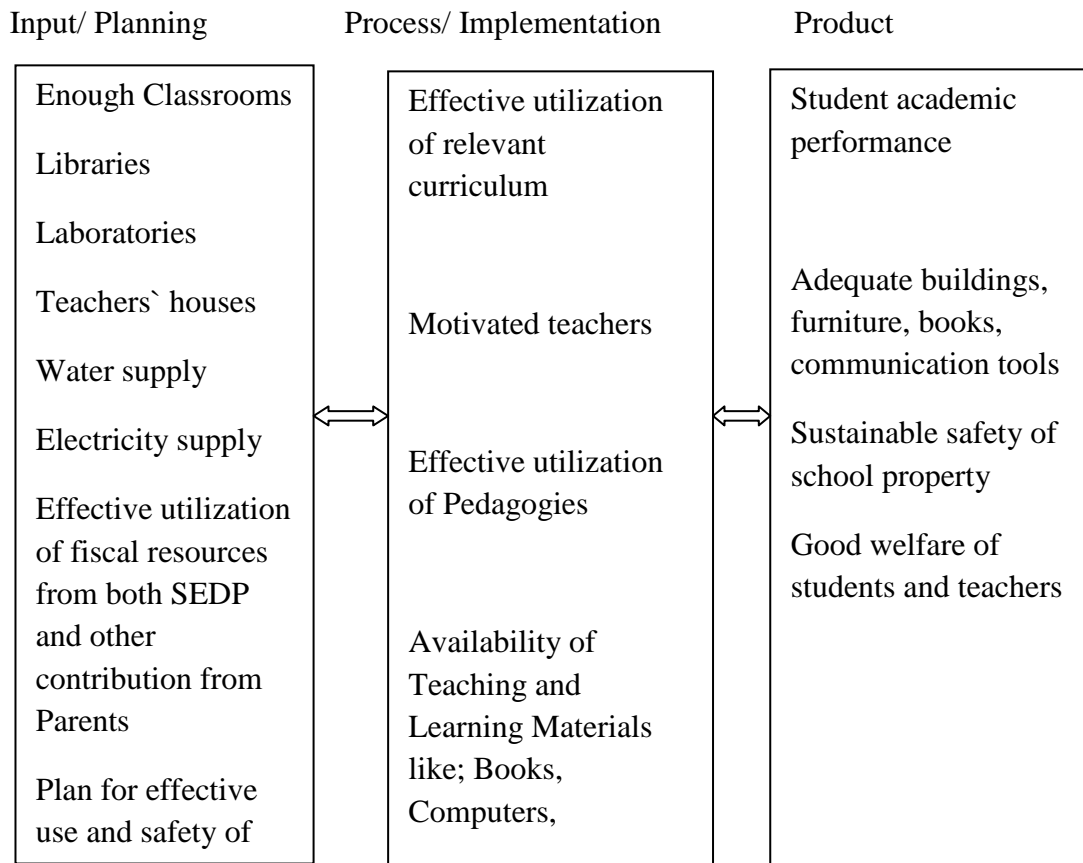
The first component is Input. The board of secondary school and teachers were supposed to plan for the effective use of human resources for both students and teachers and the utilization of financial resources from both SEDP funds and other contributions from the community. The secondary school boards were expected to plan for effective use and safety physical resources. Furthermore the school board and community were expected to plan for the construction of enough classrooms, toilets, libraries laboratories and teachers` houses.

The second element is the process. School board and teachers effectively oversee the relevant curriculum activities, such as buying of teaching and learning materials, school boards advice head masters/mistress to utilize effective teaching and learning pedagogies. Also the motivated teachers and students who have enough school facilities implement the quality education.

The third component is the product. Board of school and teachers achieve the quality education production for students by effective and timely use of relevant curriculum. Secondary schools will have adequate building, furniture, books and communication tools. School property will be safe and teachers and students would have good discipline and welfare. Lastly Input, Process and Output interact with education policies. This implies that the roles and functions of secondary school board and

communities usually change as new educational legislation is introduced and Acts are passed by the parliament. The relevant education reforms in Tanzania are Education Act No 25 of 1978, Education Act No 10 of 1995, Education and Training Policy (ETP) 1995, SEDP I (2004-2009) and SEDP II (2010-2014).

**Figure 2. 1: Conceptual Framework**



Source: Stufflebeams (1971) Modified by the researcher.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The research methodology was concerned with how the data were collected and analyzed. It implied the procedures that were employed in the process of data collection including Research design, Research approaches, and area of study, sampling techniques, sample size, types of data to be collected and the analysis of data (Kothari, 2004). The section was also used to justify the reasons for carrying out the study.

#### **3.2 Research Approaches**

The study used both Qualitative and Quantitative research approaches. The approaches enabled the researcher to collect reliable information from both kinds of respondents. Hornsby (2000) argued that, Qualitative is how good something is, rather than how much of it. Therefore, in this approach the researcher was able to obtain deep description of the data from the area of study through observation, interview, and Documentary Review.

However, Bryman (2001) defined Quantitative as the quantification in the collection and analysis of data. The basis of verification of data is very applicable in scientific studies to separate from the focuses on measurements according to rules. The approach used Questionnaire as a tool for data collection.

#### **3.3 Research Design**

Research design is a plan that shows strategy of investigation conceived by the researcher (Cohen *et al.*, 2000; De Vaus, 2001; and Kothari, 2004). It describes the

type of data needed, the data collection methods and the procedures for data gathering and analysis. Thus descriptive survey design was used in the study. Its ability to provide an in-depth description of events, a set of attitudes and opinions from a fairly larger group of respondents and within limited time (De Vaus, 2001, 1999; White, 2002) makes it useful in providing a real picture on the school infrastructure condition in the study area. Through the survey, data were collected using cross-sectional design, where data were taken in one school at a time. In this present study primary and secondary data were collected by using questionnaire survey, interview schedules and documentary review, moreover stratified and random sampling techniques for the selection of schools and respondents were used

### **3.4 Area of the Study**

The study was conducted at Busokelo district in Mbeya region in a selected community Secondary schools the area is located at southern highland zone of Tanzania. This area was selected due to the availability and easy collection of reliable data in time. Also, the area is characterized by the presence of community secondary schools with inadequate and poor infrastructures accompanied by poor students' academic performance (URT, 2012).

### **3.5 Target Population of the study**

The target population is that population to which the researcher wants to take a broad view of the results study. Mugenda and Mugenda (1999), Orodho (2002) stated that all the subject under concern in any field of investigation represent a universe or targeted population. Frankel and Wallen (1993) noted that, the target population is the larger group to which one hopes to apply findings. For the purpose of this study the target population was fifteen (15) community secondary schools in the district of

study from which a sample of ten (10) secondary schools were drawn for study. The study focused on fifty (50) students, ten (10) head-masters and forty (40) class teachers. Reuben (1992) reported that in research survey studies two categories of respondents are vital; informed specialist and consumers or users.

### **3.6 Sampling technique and Sample Size**

Sampling technique refers to the strategy in the selection of parts of respondents as samples from the whole population to represent the entire population under the study (Peil, 1995). In addition, sampling technique is a finite part of a statistical population whose properties are studied to gain information about the whole. In selecting the samples that were used in the study, simple random sampling technique was used. In this technique, folded papers with written school names were used to select the schools and respondents of the study. Fifteen (15) papers were folded each having the name of secondary school; ten (10) papers were picked randomly to represent the schools that were studied. One (1) Head-master was interviewed from each of the ten school selected, from each school, five (5) students, and four (4) teachers were picked randomly yielding ten ( 10) head-masters, forty (40) teachers, and fifty (50) students. The entire sampling matrix for the proposed study yielded a total sample size of one hundred (100) respondents.

### **3.7 Data Collection**

Different methods and techniques were used in collecting both primary and secondary data. These include observations, questionnaire surveys, semi-structured interviews, and documentary reviews. Combination of data collection methods increased the validity and reliability of the data in the study (Denscombe, 2003; Creswell, 2007; and Gray, 2009). Details for each of the methods were as follows:-

### **3.7.1 Documentary Review**

Documentary review is the selection of available documents (published and unpublished) on the topic which contain information, ideas, and evidence written from a particular stand point to fulfill certain aims or express certain views on the nature of the topic and how is to be investigated (Beri, 2005).

Data collected by reviewing documents gathered earlier for some other purposes are referred to as secondary data (Beri, 2005). These data were obtained by reviewing publications relevant to the study such as, journal papers, books, dissertations and thesis and regulations. These were accessed from libraries, education offices, and ward education offices and from the internet. In this case students` academic performance of the final CSEE was documented from the internet and education offices, in addition related literatures were documented from books, dissertations and thesis.

### **3.7.2 Questionnaire Surveys**

Questionnaire surveys were administered to sampled secondary school teachers and students to obtain primary data, the survey consisted of both open and closed ended questions; Open ended questions intended to give respondents with opportunity to express their views more freely while closed ended questions Self-administered questionnaires were used in order to collect data over relatively larger sample within short time. Malhotra (1999) argued that, questionnaires provide anonymity, and are economical in terms of time and financial costs.

### **3.7.3 Semi-structured interview**

Semi-structured interviews were used to gather qualitative information of the primary data from heads of schools. Interviews of this type are suited to working

with small samples and are useful for studying specific situations or for supplementing and validating information derived from other sources used for making safety diagnosis Laforest ( 2009). The semi-structured interview is a managed verbal exchange and as such its effectiveness heavily depends on the communication skills of the interviewer (Ritchie and Lewis, 2003; Gillham, 2003; Clough and Nutbrown, 2007) and Cohen *et al.* (2007) asserted that, a semi-structured interview encompasses the ability to clearly structure questions and to listen attentively.

### **3.8 Validity**

According to Kavale (1996) validity refers to the matters of truth and knowledge. Also validity refers to the quality that a strategy or an instrument used in the study is accurate, correct, true, meaningful and right. The validation of instrument is the process of establishing document evidence, which provides high degree of accuracy that specific process consistently produces its predetermined specification and quality attributes (Cohen *et al.* 2000). For the purpose of ensuring validity of instruments, a multiple data collection techniques known as triangulation were applied in this study (Patton, 1997; Gall *et al.* 1996; Cohen *et al.* 2000) This technique involved the use of more than one method of data collection and hence allows the researcher to combine strength and correct some of the deficiencies of some source of data. This technique helped to overcome the problem of relying on only one method while at the same time increasing the validity of the data to be obtained the study used questionnaire surveys and interviews.

### **3.9 Reliability**

Reliability, on the other side refers to the consistency of study findings Kavale (1996). This means that reliability refers to how consistent a research procedure or tools is. Specifically reliability means the degree of consistency demonstrated in the research. So as to improve reliability the researcher observed the following, the length of the instrument (the longer the instrument, the greater is its reliability), heterogeneity of the subject (the more the heterogeneous the subject is, the more likely reliability will increase). In the present study, in order to ensure reliability of data, the researcher observed the clarity of instructions given to those using the instrument (the clearer the instruction, the higher the reliability will be).

Reliability was tested using the test re-test method; it was administered to a group of respondents in the pilot study. The research test was then administered to the same respondents after two weeks. The scores were then computed to establish Pearson`s Product Moment Correlation Coefficient using the formula

$$R = \frac{\sum XY}{\sqrt{\sum(X^2) (Y^2)}}$$

### **3.10 Ethical Issues**

The ethical part of research process involves obtaining informants informed consent, observing their right to privacy, protecting them from harm which may be physical or emotional by the way a researcher asks questions and report findings (Punch, 1994 cited in Dach, 2000).

Before going to the field for data collection, the researcher sought research clearance letter from the Director of postgraduate studies from the University of Dodoma. The

letter stated the purpose of the study and its importance in order to justify the need for data collection. The clearance letter was then taken to the District Education Officer of Rungwe, who provided approval letters to the head of Schools. Then the head of schools permitted the researcher to collect data in their schools.

While in the study, before starting data collection participants were informed about the aim of the study, its significance and the way they would be involved in the study. The participants were asked to volunteer in the process of data collection and they were assured of confidentiality of the information they provided. Confidentiality also was considered in making research sites anonymous to ensure confidentiality. Fraenkel and Wallen (1990) commented that the anonymity of the respondents must be maintained to respondents and the data gathered from them must be treated as confidential. Moreover, in the present study, the willingness of the respondents to participate in data collection was highly given priority in order to protect them from any harm. Respondents were assured that the results of the study would be disseminated for use by educational stakeholders for academic purposes and not for any other purpose.

### **3.11 Data Analysis and Presentation**

According to Lumona (2009) data are instruments which carry information. Thus data analysis refers to the condensation and compilation of data to find answers to the project problem or survey (Mayenga, 2005), Orodho (2009) stated that before stating the compilation and coding of the data, one has to make sure that each question is answered and the answers must be properly recorded. He added that correctness of the answers should be checked followed by a check for consistency in interpretation of the questions and multiple choice answers. In the present study, the

quantitative data collected from the field through questionnaires were coded and entered into the computer for analysis using the Statistical Package for Social Sciences (SPSS) version 16.0 for windows to obtain frequencies and percentages. Martin and Acuna (2002) stated that SPSS is capable of handling large amount of data and given its wide variety of statistical procedures purposely designed for social sciences. On the other hand, Qualitative data were collected through interview schedules then were read, coded and summarized to obtain major themes, All the obtained data was analyzed quantitatively using descriptive statistics. The findings were presented using tables of frequency distributions, percentages, pie charts and bar graphs.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND DISCUSSION

#### 4.1 Introduction

This chapter presents an analysis of data that was collected during the field research. It also presents interpretation of the research findings. The analysis and interpretation of the research findings therefore have been done within the framework of the core objectives of the study. These are: To assess the status and challenges in the provision of school infrastructures in community secondary schools, to examine the impacts of school infrastructures on students' academic achievements, and finally to suggest appropriate strategies that would help to improve school infrastructures in order to raise students' academic performance in secondary schools.

#### 4.2 Response Rate of the Respondents

The study was conducted in Busokelo district in Mbeya region. The respondents included 10 head masters of community secondary schools, 40 teachers, and 50 students of community secondary schools. See Table 4.1.

**Table 4. 1: Response Rates for Teachers, Students and Heads of Schools**

Teacher`s responses			Students` responses		School heads responses	
Category	f	%	f	%	f	%
Response	38	95%	47	94%	10	100%
Non-response	2	5%	3	6%	0	0%
Sample	40	100%	50	100%	10	100%

**Source: Field Data 2014.**

The information in Tables 4.1 shows that teachers response rate were 38 (95%) out of 40 sampled teachers while that of students were 47 (94%, n=50) out of fifty 50 students and those of school heads were exactly 10 (100%, n=10) respectively. This is because 2 (5%) among the teachers and 3 (6%) among the students did not fill in the questionnaires in a manner that would worth for suitability of analysis. This implies that students and teachers were more involved in the study because these were the ones who effectively utilized school infrastructures to influence students academic performance and in the provision of reliable information concerning the study. Heads of schools were used as key informants because were the one who reports school infrastructures in the higher authorities.

**Table 4.2: Students` Class**

Class	Males		Females		Total	
	f	%	f	%	f	%
Form Three	14	56%	11	44%	25	53.2%
Form Four	12	54.5%	10	45.5%	22	46.8%
Total	26	55.3%	21	44.7%	47	100%

**Source: Field Data 2014.**

The findings showed that 25 (53.2%) out of 47 students who participated in this study were from form three and 22 (46.8%) students were from form four classes, again male students were 26 (53.3%), while female students comprised by 21 (44.7%) out of 47 who return the questionnaires, this mean that all form three students returned their filled questionnaires

### **4.3 Demographic Characteristics of the Respondents**

The main demographic features of the respondents included this study were; sex, academic qualifications, and age.

### 4.3.1 Distribution of Respondents by Sex

According to the study results, each demographical variable had a varied response rate. In this study, sex is an important variable in a given social situation which is can be affected by any social or economic phenomenon. Hence the variable sex was investigated for this study (see Table 4.3) where the researcher administered questionnaires in which the respondents were asked to indicate their sex. This was done for all categories of respondents in the study.

**Table 4. 3: Distribution of Respondents by Sex**

Category of Respondents	Male		Female	
	f	%	F	%
School heads	8	80%	2	20%
Teachers	21	52.5%	19	47.5%
Student	24	48%	26	52%
Total	53	53%	47	47%

**Source: (Field Data, 2014).**

Results of data analysis shown in Table 4.4 indicate that male students were 24 (48%, n=50) while females were 26 (52%). For the case of heads of schools, males were 8 (80%, n= 10) while females were (20%). As for the case of teachers about 21 (52.5%, n=40) were males while (47.5%) were females. Generally in average majority of respondents (53%) were males while (47%) were females. This indicates that most respondents participated in the present study were males than females. More participation of males than females in the present study may probably be due to the differences in the characteristic patterns of behaviour and personality associated with sex or gender (Hofstede, 1991). However, at school level the composition for respondent's sex differed from school to school.

### 4.3.2 Heads of Schools (Head Masters/Mistress) Educational background

#### Characteristics

Education is one of the most important characteristics that might affect the person's attitudes and the way of looking and understanding any particular social phenomena. In a way, the response of an individual is likely to be determined by his educational status and therefore it becomes imperative to know the educational background of the respondents. In the present study, with regard to the school heads questionnaires, respondents were asked to indicate their educational qualifications. The findings indicated that 7 (70%) of the sampled school heads had bachelor degrees in education, 2 (20%) had Diploma in education while 1 (10%) had Masters in education (See Table 4.4).

**Table 4.4: Heads of Secondary School Academic Qualifications**

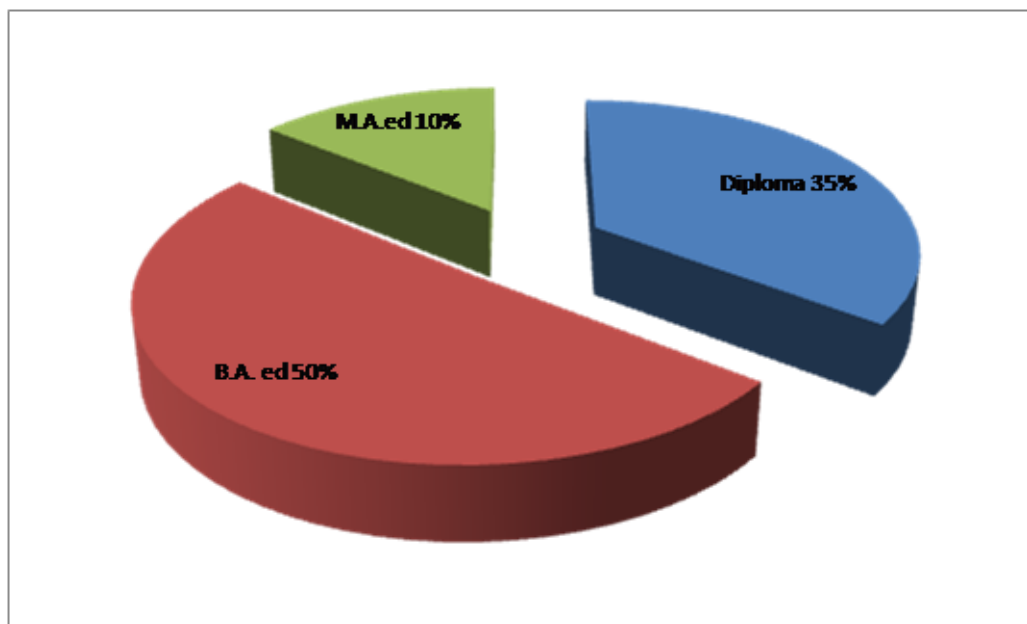
Category of education	Frequency	Percentage
Diploma	2	20%
B.A ED	7	70%
M.A ED	1	10%
Total	10	100%

**Source: Field Data 2014.**

Also, the finding in Figure 4.1 shows that 20 (50%) of teachers had bachelor in education degree, 14 (35%) of the teachers had diploma in education and 4 (10%) had masters in education; this indicated that the level of literacy in the study area was significantly high and adequate to enable them to respond rationally on matters regarding school infrastructures. According to Education and Training Policy [ETP] ,1995) high level of literacy has an implication of the magnitude of consolidated and

broadened scope of ideas, knowledge, skills and concepts to clarify the world and hence provided reliable information.

**Figure 4. 1: Class Teachers Academic Qualifications**



**Source: Field Data 2014.**

#### **4.3.3 Distribution of Respondents by their Age**

Age of the respondents is one of the most important characteristics in understanding views about the particular problems; age indicates the level of maturity of individuals, thus, age becomes more important to examine respondents' responses. According to the results in Table 4.5, respondents aged between 15 - 24 years old consisted of an average of 47 (94%, n=50) of students while teachers with age differences from 15-24 years old comprised of 7.5%, (n= 40) of all the sampled teachers population. Also, the age group between 25-34 years old comprised of 42.5% teachers and 20% heads of schools out of all ten (10) school heads used in the present study. However, the age group of between 35- 44 years comprised of 35% teachers and 70% heads of schools while those of above 45 years age group

comprised of 10% for both teachers and school heads respectively. Generally the findings showed that the majority of respondents were aged between 35-44 years old this age seemed to be matured enough to provide reliable information of the study.

**Table 4. 5: Respondent’s Distribution Based on Age**

Respondents` category	F	Respondents` age			
		15-24	25-34	35-44	45+
		%	%	%	%
Heads of Schools	10	0	20	70	10
Teachers	38	7.5	42.5	35	10
Students	47	94	0	0	0
Total of respondents	95	33.5	20.5	35	6.4

**Source: (Field Data, 2014).**

#### **4.4 The Current Status of School Infrastructures.**

One among the objectives in the present study was to find out the current status of school infrastructures in ten community secondary schools in Busokelo district. Heads of secondary schools were asked on the status of school library, laboratory and ICT facilities of their schools. One headmaster (10%), out of 10 school heads responded to have all school infrastructures such as ICT facilities, laboratories and library facilities while two headmasters (20%) out of 10 school heads said that they have library and laboratory facilities and not ICT facilities respectively. Other school heads (70%) out of 10 heads of schools responded to have no laboratory, library and ICT facilities in their schools. The findings imply that the study area characterized by the absence of library, laboratory and ICT facilities this may influence poor students` academic performance When teachers and students asked on the status of school library, laboratory and ICT facilities 76 (89.4%, n=85) from both teachers and students responded that their schools have poor library, laboratory and ICT

facilities while 9 (10.6%) respondents had an access to library, laboratory and ICT facilities (Table 4.6).

**Table 4. 6: School Library, Laboratory and ICT facilities Questionnaire Responses**

F	Library status		Laboratory status		ICT facilities status	
	Good	Poor	Good	Poor	Good	Poor
85	%	%	%	%	%	%
	10.6	89.4	10.6	89.4	10.6	89.4

**Source: (Field Data 2014).**

The findings from school heads showed that, there were variations in the availability of school facilities among community secondary schools selected in the present study in which one facility was possessed by one or more secondary schools (seen in Table 4.7 below).

**Table 4. 7: Distribution of School Infrastructures in the Study Area**

School infrastructure	Schools with infrastructures		Schools without infrastructures	
	Number of schools	Percentage %	Number of schools	Percentage %
Library	1	10%	9	90%
Enough classrooms	8	80%	2	20%
Enough toilets/ pit latrines	5	50%	5	50%
Laboratory	1	10%	9	90%
Enough teachers` houses	3	30%	7	70%
Electricity supply	7	70%	3	30%
Water supply	6	60%	4	40%
ICT rooms	1	10%	9	90%
Hostel	3	30%	7	70%
Sports and Games	8	80%	2	20%

**Source: Field Data 2014.**

Thus the above findings show that majority 9 (90%) of secondary schools in the study area had no library and laboratory facilities whereby, only 1 (10%) secondary school has ICT facility (Table 4.7)

The general observations from the above findings show that, this was the clear indication of the fact that, students did not attend science practical learning or training because of inadequate library and laboratory facilities and also they did not have an access of ICT technology. In addition this situation gave little chance for students to have private study by using library services and only depended on teachers` notes which limited them to expand their thinking capacity. These results are contrary to those reported by Keith (1993), Baughman (1999), and Zweizing (1999) who reported that strengthening the library collections in terms of quality and quantity had a number of benefits to students who access to school library. Also Williams (2001) asserted that students from schools with qualified librarians are performing better in their studies and attain higher academic performance than those without libraries.

Furthermore, the heads of community secondary schools (headmasters/headmistress) were interviewed on the status of teachers` houses and hostels in their schools. The results indicated that there was low availability of teachers` houses and hostels in the study area, since only 3 (30%) out of 10 secondary schools sampled had enough teachers` houses and hostels while the majority of school heads 7 (70%) responded that they had no such facilities. Again, when teachers and students were asked on the same question, results showed that 58 (68.3%) out of 85 respondents said that they have no such facilities while only 27 (31.7%, n= 85) have adequate teachers` houses

and hostels, despite the fact that the availability of such facilities differed from school to school.

It shows that, school teachers and students live out of their school environment. And the experience shows that travelling long distance to and from schools for teachers and students leads them to arrive at schools late and makes them tired. Moreover, teachers may be late to attend their teaching periods and sometimes may lead to postponement of their periods. Hence, this may result to poor students` academic performance. According to Galloway (1985) students from schools with inadequate school infrastructures tend to be truant and fall behind in their studies. This gives difficult time to catch up with the rest of the lessons.

Majority of school heads further showed that 5 of them (50%) had enough toilets, 6 (60%) of them had water supply and 7 (70%) of them reported that they had electricity supply in their secondary schools. These results were further supported by the questionnaire responses from teachers and students from the respective secondary schools on the status of such facilities. This means that the availability of important school infrastructure was a problem in the study area and the findings the prevalence of eruption of communicable diseases in schools and hence absenteeism which leads to poor students` academic performance. These findings differ from those reported by UNICEF (2008) which argued that schools should provide safe water and appropriate sanitation facilities, benches, chairs, adequate lighting, access to energy for school electricity and allowing opportunities for physical and recreation these led to better learning condition and thereby improve academic performance.

Again, the results (see Table 4.7) showed that the majority of secondary schools (80%) of school sampled had with play grounds for sports and games and enough classrooms. Classrooms are very crucial in the process of facilitating teaching and learning process. Enough space in the classrooms allows freely students-teacher, students-students and students- materials interaction. The researcher observed that the ratio of students to classrooms in majority of secondary schools were 1:40. This was encouraging, since the proportion was found to match with those reported by Krapf (1994) in the study of the ideal class size and its effect in Ghana. According to him, class sizes of above 40 students have negative effects on students` academic performance. Also these results are in congruent to the targets of the secular of Rwandan Republic indicated that the maximum classroom size should be 46 students per classroom (R.R. 2000).

#### **4.4.1 Challenges Facing School towards Improving School Infrastructures**

In the present study, respondents were asked to respond to the challenges facing community secondary schools towards improvement of schools infrastructures in order to improve academic performance. Results from teachers were based on multiple responses whereby one respondent were allowed to choose more than one challenge showed that, poverty among communities 36 (94.7%, N = 38), delay in releasing government subsidizes 30 (78.9%), resistance among communities 27 (71.1%), resistance among school heads 25 (65.8%) and inadequate government support 32 (84.2%) were the major challenges reported by majority of respondents (See Table 4.8) although responses obtained from each of the identified challenges had great variation between and within schools. The significance of each was found within the challenge itself rather than the percentage of respondents who identified it.

**Table 4. 8: Challenges Facing School towards Improving School Infrastructures  
(Responses were based on Multiple responses)**

Challenges	Responses	
	N=38 f	%
Delay in releasing Government subsidize	30	78.9%
Inadequate Government Support	32	84.2%
Resistance among communities	27	71.1%
Resistance among school heads	25	65.8%
Community Poverty	36	94.7%

**Source: Field Data (2014).**

The findings in Table 4.8 above shows that 36 (94.7%) out of 38 teachers responses reported that community poverty were the major challenges in the process to improve school infrastructures. They argued that construction of school infrastructures were done in core-partnership with both the government and the community which caused failure of communities to offer their contribution in the construction of school infrastructures because of their poverty.

These results were supported by the majority of heads of schools (100%, n = 10) (headmasters/headmistress) who argued that most parents were unable to pay for their children's school fees. Failure to pay school fees for the parents was an indication for their failure in the contribution to the improvement of school infrastructure that leads to poor academic performance to students. As explained by one among headmasters here under;

*...In my school, the government has been providing teacher's house project construction since 2006, but due to the government secular of the community secondary school construction, the community is required to contribute part of the construction expenses, we failed to start the project on time because the*

*community delayed to bring their contribution. Until 2012 when the community brought back to school their little financial contribution which was even not enough. This resulted to consequential failure to accomplish the project because many of the community people did not contribute...*

According to Twaweza (2008) the economic well-off of the society and the education development of that particular society have great relationship. According to him, the economic development determines community's ability to supply necessary learning and teaching materials, and afford necessary charges for development. The findings of the present study relate to those reported by REPOA (2007) states that poverty has remained high throughout Tanzania despite the implementation of a number of strategies to alleviate it. It is argued further that income and poverty are twins problems that have a strongly correlation. Hence, it is clear that community secondary schools in the study area have no longer independent and sustainable plans for enhancement of future availability of teaching and learning infrastructures.

Furthermore, inadequate government financial support had 32 (84.2%, n=38) which means that the government does not provide enough money on the construction and repair of school infrastructures. The results were not different from the responses of headmasters/mistress who argued that inadequate government support was one of the challenges that deteriorated the provision and maintenance of school infrastructure and education development in the study area. When one of the school head asked to explain how the government supports provision of school infrastructure he said that;

*...The government does not incur the full cost of the entire project established at the school, especially in the construction of school infrastructures. For instance in the year 2002, the government introduced the project of library construction in this school and*

*granted parts of the costs and other part of the cost to be supplemented by the community through contribution of both financial and manpower to accomplish the project. The community again delayed payment of parts of their costs which in turn delayed affected the progress of the project...*

Chediell (2000) asserted that, the ministry of education does not as yet have the financial capacity to meet the demands for construction of school infrastructures to enhance academic performance and yet relies on the communities. Because communities on the other hands have no enough funds to support this exercise, thus development of school infrastructures delayed which lead to the total drop in the academic performance of schools in the area.

In response to results for the delay in Releasing Government Subsidizes, 30 respondents (78.9%) out of 38 said that the government delay in releasing their funds to the school expenditure and due to the fact that school grants pass through various government sections in order to reach the school, this makes difficulties for the school to perform the construction and repair of infrastructures on time. However, failure in on time construction and repair of school infrastructures results to poor school academic performance.

In addition one school head was asked to state how failure of the government to release its subsidize to secondary schools affects the provision of school facilities and repair, he commented that;

*...Since the establishment of SEDP I and SEDP II, the government provides subsidizes to the community secondary schools known as Capitation, this passes through many departments from central government which then delayed to reach to the users particularly secondary schools for infrastructural expenditure...*

These findings relate to those reported by Chedié (2000) that, the government's grant is given in two forms, the first form was the development grant and the second was other expenditure. The grant is deposited in the district deposit account and expenditure is passed through the office of the District Executive Director (DED). The DED transfers grants from the District Deposit Account into the District Account, which is operated by the District Education Officer (DEO) and finally the grants is deposited to the school account where headmasters/mistress have to seek permission of utilizing the fund from the District education officer. These long processes affect the smooth provision of school infrastructure and hence school academic performance.

Moreover, 27 (71.1%, n=38) of respondents revealed that some communities reject to participate in the development process of secondary schools. Majority of heads of selected secondary schools used in the present study argued that, some of the parents and community were reluctant to participate in the school development activities. They then narrated that, some parents from various community members were engaging in the construction and repairing of school buildings and contributing to fiscal resources but others were not ready to participate in all school development activities. They considered that education is essentially the task of the state. These results were supported by Gaynor (1998) who reported that not all parents and community members are willing to get involved in school activities, some have had negative schooling experiences they do not feel comfortable talking to teachers and getting involved in any kind of school activities. Some headmasters narrated that it is important to understand community contexts, characteristics and the degree of community participation in some activities in society.

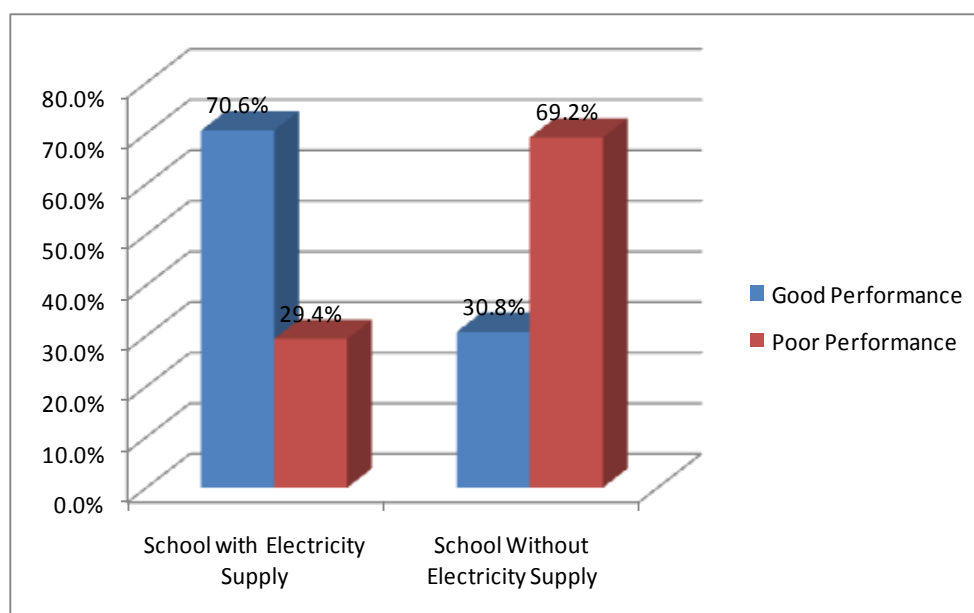
The findings from the present study also found that 32 (84.2%, n=38) of teachers responses (Table 4.8) commented that some headmasters/headmistresses were not comfortable when parents and community people visit schools for any purpose either for the school development activities or follow up to their students academically. Other remained 6 teachers (15.8%) out of 38 did not find any reason for headmasters/head mistresses' reluctance of the community members' participation in schools developmental activities. The majority of teachers (84.2%) further commented that school heads loose authority within schools and fear to be asked the way they are using the community financial contributions. Gaynor (1998) in her study of teacher's management with a focus on the system of decentralization of education argued that many parents in many countries would like to be more involved in selecting and monitoring teachers. Gaynor stressed that the headmasters/mistresses feel threatened by parental involvement, believing that it will diminish public regard for their professional status. In this case headmasters/mistresses act as the obstacles in the provision of adequate and repairing of school infrastructures for the improvement of academic performance in secondary schools.

#### **4.5: The Impact of School Infrastructures on Students' Academic Performance**

In the present study, electricity supply, availability of library, laboratory, hostel, ICT facilities and teachers' houses were studied to examine whether they have any impact to students academic performance. The regional mock examination results of the sampled students in community secondary schools were used as assessment criteria in order to determine students' academic performance. The student's performance was based on Division I-III as good academic performance and Division four and Zero as poor performance. The results revealed that 24 (70.6%,

n=34) of sampled students from community secondary schools with electricity supply had good performance while only 10 (29.4%) out of 34 sampled students had poor performance (see Table 4.9). However, the majority 9 (69.2%, n=13) of sampled students from community secondary schools without electricity supply had poor academic performance and the rest 4 (30.8%, n=13) had good performance. The overall average of 28 (59.6%, n=47) of the sampled students in the study area have good academic performance while 19 (40.4 %, n=47) had poor academic performance (See Figure 4.2). This indicates that students who were supplied with and accessed electricity had the highest academic performance when compared with those who had little and or no supply of electricity. The results suggest that, electricity supply is very crucial in the process to ensure higher students academic performance since students get chance to learn more even during the night hours. However, many secondary schools particularly in villages in Tanzania do not have access to electricity. This causes students to achieve performance below the standards. The findings conforms to the report done by UNICEF (2008) which argued that adequate lighting, access to energy for school electricity led to better learning condition.

**Figure 4. 2: The Impacts of Electricity Supply on Students` Academic Performance**



**Source: (Field Data, 2014).**

Considering the data collected from various students regarding the impact of library on academic performance. Results indicated that three 3 students (60%, n=5) out of each sampled students from community secondary schools who had an access to library, obtained good academic performance while only 2 (40%) of selected students with an access to library had poor academic performance. The overall performance in the study area revealed that 17 (36.2%, n=47) of students selected had good academic performance while 30 (63.8%) had poor performance (see Table 4.9), it is clear that the worse performance of students in the study area was caused by the absence of library facilities. From the sampled schools, the findings showed that, students depend on teachers` notes. The results reported by Dorothy (2002) and LISC (1995) conformed the findings of the present research who suggested that where library provision is poor, student`s abilities in information handling and research and study skills are correspondingly under-developed. A lot of secondary

schools in Tanzania particularly from Busokelo district lack school libraries which might be the cause of student's poor academic performance in their final examinations.

**Table 4. 9: Impacts of Library on Students Academic Performance**

Identification of school infrastructures	Performance				f
	Good		Poor		
	f	%	f	%	
Presence of Library	3	60	2	40	5
Absence of Library	14	33.3	28	66.7	42
Total	17	36.2	30	63.8	47

**Source: Field Data 2014.**

With regard to the impact of laboratory on student's academic performance, the findings from various documentary reviews revealed that only one secondary school has adequate laboratory room with facilities. In consideration of the sampled students, the findings also showed that, 4 (80%, n=5) attained the highest academic performance while only one 1 (20%) had poor performance. On the other hand the findings revealed the highest percentages of poor students academic performance 31 (73.8%, n=42) from schools without laboratory while 11 (26.2%) from the same schools had higher academic performance. The general performance of the mock examination in the study area denoted that 15 (31.9%) out of 47 of students sampled had high academic performance while the majority lied below the required academic performance 32 (68.1%) out of 47 sampled students. These results indicated the fact that it is difficult to perform well in the science subjects when the teaching and learning is done theoretically than practically. The area of study was featured by the absence of laboratories which affected student's academic performance especially for science subjects. In addition when teachers and headmasters/mistress were asked

to state the effects of laboratory on students` academic performance, they argued that is difficult for students to perform well especially for science subjects when there is no laboratory, the findings conformed with the results reported by Ralenala (1993) advocated that inadequacy and lack of appropriate materials such as laboratory chemicals, impact negatively on the performance of students (See Table 4.10).

**Table 4. 10: Impacts of Laboratory on Students Academic Performance**

Identification of school infrastructures	Academic achievements N=47				f
	Good		Poor		
	f	%	f	%	
Presence of Laboratory	4	80	1	20	5
Absence of Laboratory	11	26.2	31	73.8	42
Total of Respondents	15	31.9	32	68.1	47

**Source: Field Data 2014.**

When sample students and teachers were asked to state how hostels impact student`s academic performance. The findings showed that, 72 (84.7%) out of 85 sample students and teachers said that lack of hostels affects their students` learning capabilities, while 13 (15.3%) argued that, presence of hostels have no any impact on students academic performance. On the other hand, heads of schools (headmasters/headmistress) also suggested that presence of hostels is important to raise student`s academic performance in community secondary schools. Hostels built nearby schools minimize distance to and from schools. The minimal distance reduces tiredness for students since tiredness results to lowering of thinking ability. Hence it is difficult for students to capture learning while tired. Also one of the students explained that;

*... The presence of hostels without effective matrons was common in community secondary schools. These influence students under performance. The absence of hostels especially for girls were the cause of drop out and truancy, in absence of hostels force female students to be in disciplined since they may be free to conduct any bad behavior especially sexual practices in their way to and from home by opposite sex peer group and other womanizer which in turn result to the increase in girls pregnancy and lower academic performances...*

To avoid this problem the government and other educational stakeholder they have to ensure school hostels are available to both girls and boys.

When teachers and heads of schools were asked to state on the impacts of teachers' houses on student's academic performance, the majority stated that the absence of adequate teachers' houses had negative impacts to students' academic achievements, one teacher narrated that;

*...There were no teacher's houses at school even in the nearby school, so I rent a house far from the school at about 7km, every day I used to walk on foot from home to school. Definitely it is a long distance but no way, I have to walk, I have no money to buy even a bicycle. But often I arrive at school late and tired; it gives me difficult to attend the classroom especially for morning lessons. I always leave the lesson untaught while getting rest for the tiredness due to the long walking distance...*

This problem is a characteristic of many community secondary schools in Tanzania especially in Busokelo district where the scarcity of teachers' houses was found to be a big problem. Due to this, school teachers were living far away from the school they failed to provide close assistant for students learning in schools. This response was similar to the fact put forward by Crampton (2008) that, adequate levels of investments in school infrastructure are essential to ensure all students and staffs have access to a physical environment conducive for learning which has a great

effect on the permanent positive behavioral change to enhance academic performance.

#### **4.6 Approaches/Strategies Adapted to Enhance the Availability of School Infrastructure.**

The researcher wanted to understand the future plans and approaches that community secondary schools implemented to enhance the availability of sufficient infrastructure for provision of functional and quality education. In the present study, the findings showed that, mobilization of community participation 12 (31.6%; n=38); introduction of construction subscription fees 6 (15.8%); student's contribution of physical infrastructure 7 (18.4%, n= 38) for instance tables and chairs; mobilization of government subsidies 9 (23.7%) and seeking of external aids 4 (10.5%) were the major approaches which schools used in order to enhance academic performance (see Table 4.11).

**Table 4. 11: Approaches/ Strategies to Increasing Amount of School Infrastructure**

Strategies/ Approaches	f	%
Community participation	12	31.6
Introduction of construction fee	6	15.8
Students contribution of physical infrastructure	7	18.4
Mobilization of government Subsidizes	9	23.7
External Aids	4	10.5
Total of respondents	38	100

**Source, Field Data 2014.**

Regarding the findings obtained in the Table 4.11 above, it shows that, mobilization of community participation was the best approach as suggested by the majority of

respondents (31.6%) in this study. This becomes one of the important strategies to ensure that school infrastructures are maintained and student's academic performance is also enhanced. However, the major problem that was identified from the field study was lack of community education on who are responsible in the construction and rehabilitation of the school infrastructures, more importantly, communities are deprived of their feedback on how their contribution have been used. Therefore it is better for the government and other stakeholders to keep communities informed about their contribution and the provision of education. Other respondents (heads of schools) (60%) suggested that there should be introduction of construction subscription fee which can influence the increase in sufficient infrastructures. However, most schools depend upon students' school fees as their means to increase infrastructures. These results were revealed from the majority of secondary schools that school fees were the major income in designing, purchase and or construction of school infrastructures. One of the headmasters commented that;

*...Our school does not have durable and wide range of sources of income for school development except school fees. It is for everything you expect and see in the school environment...*

The implication is that infrastructural development of schools in the study area is largely dependent on student's fees. Most school have their efforts on ensuring that more students are enrolled to obtain enough school fees and other subscription fees rather than ensuring that education provided was to become a strong tool for future development of individual student and the nation at large.

Introduction of Construction Subscription fee as suggested by (50%) was identified to be of beneficial in the construction of school infrastructures not only construction

but also purchasing school infrastructural facilities such as laboratory equipments, iron sheets, ceiling boards and others. The introduction of this strategy can alleviate the problem of currency devaluation and the government of transactions. Also the findings showed that student's contribution of physical infrastructures as stipulated by the (70%) was suggested to be highly insisted by all education stakeholders especially during the commencement of form one students. When they are aspired to join any community secondary school they should be required to contribute the stated physical infrastructure such as table, chairs etc. Therefore, in order to ensure adequate school infrastructure close repair is important.

## CHAPTER FIVE

### SUMMARY, CONNCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter provides a summary, conclusion and recommendations that were encountered during data analyses and discussion with regard to the contribution of school infrastructure on student's academic performance.

#### 5.2 Summary

The study aimed at assessing the status of school infrastructure and to identify challenges facing school and school communities in their target towards enhancing school academic performance, to examine the impacts of school infrastructure on students` academic performance and finally to suggest appropriate strategies that would help to improve student`s academic performance in community secondary schools.

The findings shows that majority of the respondents involved 50 (52.6%, n=95) were between 15 and 24 years old, while 21 (22.1%, n=95) were in the age group of between 35-44 years old. Moreover, the age group between 25-34 years old comprised of 19 (20.1%, n=95) and finally 5 (5.2%, n=95) were above 45 years old. On the other hand the sampled 53 (53%, n=95) respondents were males and 47 (47%, n=95) were females, signifying almost the sex of respondents was considered in the study area. The findings shows also that, about 47 (47%, n= 95) of respondents in the study area were students who were the catalyst of school infrastructures. While 38 (38%, n=95) were teachers and the rest 10 (10%, n=95) were both head masters and head mistress (heads of secondary schools).

The research result shows that, the infrastructure status in the area of study was not adequate which reflects the under performance of the students. For instance, the results indicated that schools in the study area had no libraries, laboratories and ICT facilities only one school out of ten sampled schools have either laboratory, library or ICT facilities respectively. Moreover the findings showed that schools in the study area were deprived of teachers` houses, hostels and toilets/ pit latrines. Also, Teachers and students were at distant areas far from schools and so were travelling a long distance to reach schools. From the study, it was found that there is a very close relationship between student`s performance and the availability of school infrastructures in the schools. However, the result shows further that; situation of educational infrastructures depend on the national vision and philosophy which guide the provision of education in a particular state.

### **5.3 Conclusion**

The study concludes that there is a very close positive relationship between school infrastructure and the student`s academic performance in all schools studied. The findings showed that the area of study experienced inadequate school infrastructures particularly libraries, laboratories ICT rooms and teachers` houses on the other side classrooms and electricity were fairly good. Schools with adequate school infrastructures their students had higher academic performance and those schools which lack school infrastructure their students had poor performance, hence the study concluded that it is better for the government and other educational stakeholders to ensure the availability of school infrastructure in community secondary schools.

The findings revealed that poverty among communities were the major challenge which hinders the smooth provision of school infrastructure, other challenges were resistance among communities, unsupportive school heads towards communities and inadequate government support hinders smooth provision of school infrastructure. Since community secondary schools were established by communities and the government supplement or top up of what the communities established, the study concluded that the government has to make sure that the communities are free from poverty by providing entrepreneurship loans to community members and the government has to support enough financial base in community secondary schools.

Again delay to release government subsidizes resistances among community members in school development activities and manpower, in adequate government financial support and resistance among heads of secondary schools were found to be other challenges in the provision of school infrastructure. Therefore the study concluded that the government must provide education to community members to participate in activities and financial contribution concerning schools. Also the government has to ensure adequate provision of grants for school infrastructures.

The findings suggested that mobilization of community participation as the one way to achieve adequate school infrastructures, therefore the study concluded that sensitization education to community members on the provision of school infrastructures must be emphasized to all community members this can arise the spirit of ownership of secondary schools to community members.

Mobilization of community participation, Student`s contribution of physical infrastructure and mobilization of enough financial base from the government could

influence teachers` motivation, availability of teaching and learning materials as a result secondary schools could experience adequate buildings, furniture and sustainable safety of school infrastructures and therefore high Student`s performance.

#### **5.4 Recommendation**

Based on the findings, the study forwards the following recommendations:

Community, stakeholders and government should cooperate to enhance the availability of academic and school infrastructures which can help prepare students to play better chance of performance in school academics

The government should review its focus and devise the national focus on the way community participate fully in their school contributions, by allowing them to contribute their manpower in the provision of school infrastructures.

The nation should incur all financial cost of the community school infrastructures provisions and rehabilitation, instead of looking other cost to come from the communities and the government waiting for finishing cost only.

It is recommended that community participation in the provisions of school infrastructures should be emphasized; communities have to be given education on the importance of contributing of their energies in school infrastructures provisions.

The government should stop over relying on communities` contributions as their subsidize sources of funding for the school infrastructures development.

#### **5.4.1 Recommendation for Further Study.**

The study proposes further study on:

- The replication the same study in other districts in Tanzania to establish whether similar findings are obtained.
- The specific aspect of infrastructure funding such as; Adequacy, Accountability and equity should be established in the same or different district in Tanzania.

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## APPENDICES

### Appendix 1: Questionnaire for Teachers

Dear sir/madam,

This questionnaire is planned to assist collecting information on the Contribution of School Structural Infrastructure on Student`s Academic Achievements in a Selected Secondary Schools in Rungwe District. Kindly answer the questions attached as accurately as possible. The information provided will be treated as private. The researcher will not reveal the individuality of the respondent under any situation, and data gathered will be used for academic reason only. The findings of this study may help the Government and other stakeholders to improve its teaching and learning competently.

Section A. Personal Information;

1. Circle the appropriate answer.

- I. Sex..... (a) Male (b) Female
- II. Age ..... (a) 15-24 Years, (b) 25-34 Years, (c) 35-44 Years, (d) 45+ Years.
- III. Education.....(a) Diploma (b) B.A ED (c) M .A ED

Section B, Content Questions

2. In the table below identify the available school infrastructure in your school by circling the appropriate letter. (You can circle as many as possible and adding which misses from the table).

A	Enough and favorable Classrooms.	I	Water System supply.
B	Enough and good Toilets/ Pit Latrines.	J	Hostels.
C	Library Room with facilities.	K	Play Grounds with facilities.
D	Laboratory Room with equipments.	L	Electricity supply.
E	Adequate and conducive Teacher`s Houses.		Other infrastructures.....
F	Teaching and Learning Materials.		.....
G	Sanitation Equipment.		.....
H	ICT Rooms with computers.		.....

3. What are the challenges facing school communities in the target towards enhancing enough school infrastructure?
4. What are the impacts that could result from the sufficiency of the identified school infrastructure?
5. Suggest the appropriate strategies that would assist to improve school infrastructure and hence achieved student`s academic performance in secondary schools.

## Appendix 2: Questionnaire for Students

Dear Students,

This questionnaire is planned to assist collecting information on the Contribution of School Structural Infrastructure on Student`s Academic Achievements in a Selected Secondary Schools in Rungwe District. Kindly answer the questions attached as accurately as possible. The information provided will be treated as private. The researcher will not reveal the individuality of the respondent under any situation, and data gathered will be used for academic reason only. The findings of this study may help the Government and other stakeholders to improve its teaching and learning competently.

Section A. Personal Information;

1 Circle the appropriate answer.

- I. Sex..... (a) Male (b) Female
- II. Age ..... (a) 15-24 Years, (b) 25-34 Years, (c) 35-44 Years, (d) 45+ Years.
- III. Class..... (a) Three (b) Four

Section B, Content Questions

- 2 In the table below identify the available school infrastructure in your school by circling the appropriate letter. (You can circle as many as possible and adding which misses from the table).

A	Enough and favorable Classrooms.	I	Water System supply.
B	Enough and good Toilets/ Pit Latrines.	J	Hostels.
C	Library Room with facilities.	K	Play Grounds with facilities.
D	Laboratory Room with equipments.	L	Electricity supply.
E	Adequate and conducive Teacher`s Houses.		Other infrastructures.....
F	Teaching and Learning Materials.		.....
G	Sanitation Equipment.		.....
H	ICT Rooms with computers.		.....

- 3 Do school infrastructures have an impact on student`s academic achievements? (a) Agree (b) Disagree.
- 4 Does the school have a fence?
- 5 What are the impacts of the identified school infrastructure?
- 6 Suggest the appropriate strategies that would assist to improve school infrastructure and hence achieved student`s academic performance in secondary schools.

### **Appendix 3: Interview Guide Questions Headmasters/Mistress**

Dear sir/ Madam,

This questionnaire is planned to assist collecting information on **the Contribution of School Structural Infrastructures on Student`s Academic Achievement in a Selected Community Secondary Schools in Busokelo District, Tanzania.**

Compassionately answer the questions attached as accurately as possible. The information provided will be treated as private. The researcher will not reveal the individuality of the respondent under any situation and data gathered will be used for academic reason only. The findings of this study may help the Government and other stakeholders to improve its teaching and learning competently.

#### **Section A. Personal Information;**

1 Circle the appropriate answer.

- I. Sex..... (a) Male (b) Female
- II. Age ..... (a) 15-24 Years, (b) 25-34 Years, (c) 35-44 Years, (d) 45+ Years.
- III. Education..... (a) Diploma (b) B.A ED (c) M.A ED

#### **Section B, Content Questions**

- 2. What is the status of school infrastructure in your school?
- 3 Identify challenges facing schools and school communities in their target towards enhancing school infrastructure
- 4. What are the trend of student`s academic performance in the National Examination Council of Tanzania since 2008 to 2013.

5. What are the impacts of school infrastructures identified on student`s academic performance?
6. Suggest the appropriate strategies that would assist to improve school infrastructure and hence achieved student`s academic performance in secondary schools.

## Appendix 4: Permission Letter for Data Collection-UDOM



# THE UNIVERSITY OF DODOMA

## DEPUTY VICE CHANCELLOR ACADEMIC, RESEARCH & CONSULTANCY

### OFFICE OF GRADUATE STUDIES

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EMAIL: ahmed\_ame@yandoo.com

REF/UDOM/GS/2014/044

Tuesday, 11<sup>th</sup>, February 2014

**To Whom It May Concern:**

**RE: INTRODUCING MR. SEMECK MICHAEL. M**

The above named student is enrolled at the University of Dodoma for the degree of Master of Arts in Education with registration number HD UDOM/108/T.2011

An essential requirement of the study programme is that each candidate is required to submit a dissertation report on a project undertaken within industry and supervised by a member of the University's academic staff. Where possible this project should relate to a practical situation in an organisation or firm selected by the candidate. Students are expected to use their own initiative to identify a possible project and negotiate access with a local firm or organization. The title of the study is **"THE CONTRIBUTION OF SCHOOLS STRUCTURAL INFRASTRUCTURE ON STUDENTS ACADEMIC ACHIEVEMENT IN TANZANIA: A CASE OF SELECTED SECONDARY SCHOOL IN RUNGWE DISTRICT"**.

The work may take the form of a survey, ethnography, case studies, etc. Where the report may contain confidential information and its publication could be harmful to the organization, confidentiality is assured by the University. Such reports will be seen only by the Supervisor and Examiner for examination purposes.

I would be grateful if you would provide the student with this opportunity to further his studies while at the same time gaining some useful input for your own organization through the results of the project report.

Sincerely,

*Edsen L.M*  
Prof. Ahmed M. Ame  
/Director for Graduate Studies



**Appendix 5: Permission Letter for Data Collection-Busokelo DC**

EDUCATION DEPARTMENT,

P.O.BOX.02.

5<sup>TH</sup> FEB.2014.

THE HEAD OF SCHOOL,

KABULA, NTABA, MZALENDO, IKAPU, MBIGILI, LWANGWA, KYEJO,  
MWATISI, ISANGE & MWAKALELI

BUSOKELO DC,

**RE: INTRODUCING MR. SEMECK MICHAEL, M.**

The above named student is enrolled at the University of Dodoma for degree master of Arts in Education (MAED) with registration number **HD/UDOM/108/T.2011**

An essential requirement of the study programme is that each candidate is required to submit a dissertation report on a project. The title of study is “**THE CONTRIBUTION OF SCHOOL**

**STRUCTURAL INFRASTRUCTURES ON STUDENTS ACADEMIC ACHIEVEMENT IN TANZANIA: A CASE OF SELECTED COMMUNITY SECONDARY SCHOOL IN BUSOKELO DC**

I would be grateful if you would provide the student with this opportunity to further his studies while at the same time gaining some useful input for your own organization through the results of the project report.

Sincerely,

*P.P. Mchami F.L.*  
.....

MCHAMI.F.L.

DISTRICT SECONDARY EDUCATION OFFICER

BUSOKELO

APISA MCHAMI SEKONDARI  
MCHAMIFL  
BUSOKELO