**FACTORS AFFECTING THE PROVISION OF QUALITY EDUCATION IN PUBLIC SECONDARY SCHOOLS IN KARATU DISTRICT, TANZANIA**

**HAPPINESS BILAKWATE**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN MONITORING AND EVALUATION (MAME)**

**DEPARTMENT OF ECONOMICS**

**OF THE OPEN UNIVERSITY OF TANZANIA**

**2021**

# ****CERTIFICATION****

The undersigned certifies that they have read and hereby recommends for acceptance by the Open University of Tanzania a thesis entitled;“Factors Affecting the Provision of Quality Education in Public Secondary Schools in Karatu District, Tanzania” in partial fulfillment of the requirements for the degree of Masters of Arts in Monitoring and Evaluation of the Open University of Tanzania.

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...………………..…………

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I, Happiness Bilakwate, declare that, the work presented in this dissertation is original. It has never been presented to any other University or Institution. Where other people’s works have been used, references have been provided. It is in this regard that I declare this work as originally done by me. It is hereby presented in partial fulfillment of the requirements for the award of Master of Arts in Monitoring and Evaluation (MAME).

……………………..………….

Signature

...……………….……………

Date

# ****DEDICATION****

This work is dedicated to my family who had to do with my absence to this end. My profound gratitude goes to my beloved Husband Abel Leonard Chitojo for his steady love, patience, support, and encouragement for the entire period of preparation for this dissertation. Last but not the least, I wish to extend my sincere gratitude to my beloved dear children Faith, Sarah, and Emanuel who patiently endured my absence and closeness while l was busy with the preparation of this dissertation.

# ACKNOWLEDGEMENTS

This Dissertation would not have been possible without the help of the following individuals. My first heartfelt thanks and deep appreciation goes to the commitment and tireless toils of my supervisor Dr. Reguli Mushy. He read and reread the various drafts of this work and put his most valuable time and input into the correction of this dissertation. I am also grateful to my employer the Director General (PCCB) for granting me study leave from work.

I also wish to extend my thanks to Dr. Mollel, E.R., Director of Administration, Human Resources and Communication of Dar es Salaam Rapid Transit Agency for his unlimited advice and encouragement accorded to me throughout the preparation of this dissertation. I am also grateful to my fellow candidates in the Faculty of Social Sciences (M & E) Programme for their constructive criticisms during preparation for this piece of work. Last but not the least, I wish to extend my sincere gratitude to my beloved Husband Abel Leonard Kitojo and our dear children who patiently endured my absence and closeness while l was busy with the preparation of this dissertation.

Finally, I thank God for his grace and mercy for he has lifted me from the mire and set my foot on the rock, let his name be glorified in this piece of work.

# ABSTRACT

Tanzanian Government has taken several initiatives to reform its Education with the objectives of improving its quality. The purpose of this study, therefore, was to assess the factors affecting the provision of Quality Education in Public Secondary Schools (PSS) in Karatu District. The study adopted a descriptive survey design with a sample size of 237. Both simple random and purposive sampling was adopted to select the sample from each department. Both descriptive and inferential statistics were employed to analyze the raw data. The study adopted Context, Input, Process, and Product. Theory by Stufflebeam to understand the factors affecting the provision of quality education in PSS in Karatu District. A pilot study of 20 teachers from PSS in the neighboring District of Monduli was done. Data collection was done through closed and open-ended questionnaires and semi-structured interviews. The findings of this study highlight the fact that inadequate teachers, instructional materials as well as inadequate essential physical facilities are key factors affecting the provision of quality education in PSS in Karatu District. Secondly, though schools have such resources as charts, maps, and globes for teaching and learning materials, schools are missing reference books and specific subjects do not have an adequate number of textbooks and this may negatively affect the achievement of the objectives of quality education. To improve students’ academic performance that may eventually affect the achievement of quality education, it is recommended that, the government of Tanzania recruit enough teachers in all subjects to make the variation of teacher-student ratio low. The policy on the provision of textbooks and other instructional materials in secondary schools should be designed and implemented accordingly.

Keywords: *Education, Quality, Public Secondary Schools, Karatu District.*

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# LIST OF ABBREVIATIONS AND ACRONYMS

DEO District Education officer

EFA Education for All

MoEST Ministry of Education, Science, and Technology

MoEVT Ministry of Education and Vocational Training.

MoHCDGEC Ministry of Health, Community Development, Gender, the Elderly and Children

PORALG President’s Office for Regional Administration and Local Government.

RTE Right to Education

URT United Republ ic of Tanzania

SDG’s Sustainable Development Goals

SEDP Secondary Education Development Program

UN United Nations

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the Research Problem

Quality education has been the pillar of development in most parts of the globe. The best working tool a nation can give its youth is education, and a healthy society is nurtured through the supply of quality education that's accessible and relevant (Digolo, 2006). That’s why; the globe has been on the stress of quality education, which has made it possible for the resolution that needs countries to extend budgets to a minimum of 6% by each year (UNDP, 2006). As such, geographical region countries particularly, as an example, are on increase on education budgets to about 1%, and this was offered in some ten years ago (1990-2000), to about 3% to six (2005-2012) (UNESCO, 2008). Hence, while the budgets are on increase in most countries, the query remains on the standard of education in most of the countries, especially in developing countries.

Quality education refers to skills and knowledge that's potentially able to reflect the amount of attainment of the intended objectives (Norman, 2007). It refers to what that level of education can support the intended course of action. In this regard, in line with Norman as an example, if standard one pupil, consistently with the designing of the program must know how to read and write, then the standard of education is that the ability of the pupils to demonstrate the attainment of reading and writing ability at that individual level (Norman, 2007).

In this view, one can declare that every level of education should back a manifestable level of the flexibility pegged to the scholars. Although several factors purport to be supportive for the offering of quality education, yet the thrust of quality education remains on the demonstration of the flexibility of the tenants of that level of education in handling problem-solving associated with the extent of education attained therein particular level. Report of the International Journal of Learning & Development (IJLD), UNESCO (2008) revealed the role of exams to students on will gauge student’s ability as planned within the curricular and in and of itself, they're not set to disapprove students, no, but to approve them.

Additionally, a study by Organization for Economic Cooperation Development (OECD), (2005) on the colleges Factors associated with Quality and Equity in Education defined Educational quality employing a conceptual framework that depicts education within schools as a productive system within which school inputs are transferred into outcomes. The findings from this study discovered that the tutorial effectiveness approach analyses the impact related to school factors that are most readily amenable to policy on educational performance levels after adjusting for previous student performance and other fixed background conditions of scholars. However, data on students’ earlier performance weren't available and so value-added analysis wasn't optimal therein particular study. Educational performance per them can therefore be measured in terms of student scores on the reading, writing, and scientific literacy scales.

Moreover, in South Asian countries, a study dispensed by Hunt (2008) on quality education confirmed that newly established institutions are at higher and low level faced challenges within the provision of quality education. The study discovered that to boost access to basic education, most governments and native authorities in South Asian countries kicked off the indiscriminate establishment of colleges in every town and native authorities. It’s therefore worth noting per Hunt (2008) that schools supported by central governments were particularly susceptible to offer a lower quality of education as compared to varsities managed and pass by local authorities.

Accordingly, Hallinan and Sorensen (2001) disbursed a study in American schools to determine the effect of the college on quality and academic performance. The study was motivated by the present inequalities within the education sector among the American population. The study findings found that almost all of the research administrated there focused on school syllabus similarly as physical facilities whereas it ignored the college environment. This study therefore established that the college environment in terms of its location and immediate environment influenced the tutorial performance of learners. The bulk of the newly established schools were primary schools intended to serve the local population (Mugambi, 2006). Therefore the bulk of the learners had undergone their transformational studies within the adjacent grade school and this study seeks to ascertain if this affects their entry behavior and quality of education provided within the Gymnasium.

Moreover, a study drained Nigeria by Akiri (2013) revealed that the newly established schools faced a myriad of challenges within the provision of quality education. Among the foremost common included lack of teaching and learning resources, lack of teachers and thus schools had to recruit their teachers, lack of physical infrastructure among others. The study findings further discovered that the local authorities in Nigeria are unable to send teachers to those schools for fear that the faculties won't be sustainable and thus left recruitment of casual teachers to the local communities and once the teachers’ body gauged the college as viable it might send government teachers to those schools after some years.

Besides, Hanushek, Kain and Rivkin (2008) applied a study on the roles of college, teachers, and academic performance in Kenya. Here, the effect of teaching and learning materials was tested with the amount and quality of teaching materials on learners. The study revealed that the standard of teaching and learning materials includes a positive effect on the tutorial performance of learners. That’s to mention, schools that had more teaching and learning materials per learner have better results compared to varsities that had fewer materials per learner.

Likewise, because of the importance given to education worldwide, the United Nations (UN) declared education as a basic right in 1948. As such, African countries met in New Flower in 1961 and agreed to realize Universal Primary Education (UPE) by 1980 and at the identical time planned to expand all other levels of education. The management of education was re-emphasized in 1990 when 1500 participants from 155 countries including Kenya and Tanzania gathered in Jomtien in Thailand and re-affirmed education as somebody's right by adopting the planet Declaration on Education for All (Government of Kenya, 2005). As a result, the availability of high-quality education remains the topmost agenda for the African Countries as they strive to realize development and join the league of developed nations within the world. However, quality education issues still clog the education systems in developing nations like Tanzania.

Moreover, in Tanzania Education has been considered a national priority and a pivotal for economic development. Hence, the supply of education has been widely believed to produce the optimum setting to arrange especially adolescents, for healthy and productive adult lives. This entails participation in social, political, and economic spheres. Also, for countries like Tanzania to compete within the global economy, a big number of their citizens need pedagogy to amass the precise skills and aptitudes necessary for an increasingly technology-driven marketplace (Jacob and Lehner, 2011). Currently, global access to education is growing at an increasing pace (UNESCO, 2008, 2010).

Furthermore, within the mid of 1990s, the Tanzania Government introduced the Millennium Development Goals (MDGs) and therefore the Education For All (EFA) initiatives that driven an education reform agenda predominantly focused on improving access to Primary and educational activity. in additional recent years, proponents of post-basic education have gained a voice and wider access to good educational activity as being increasingly recognized as a critical element in achieving the goals of human development, political stability, and economic competitiveness (Acedo, 2002; Alvarez et al., 2003; Holsinger and Cowell, 2000; King et al, 2007; International Bank for Reconstruction and Development, 2005, 2007).

The Sustainable Development Goals developed in 2015 has also included education. Goal 4 aims to **ensure inclusive and equitable quality education and promote lifelong learning opportunities for all** by 2030. This goal is made up of ten targets which among them, focus to ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes but also increasing the supply of trained teachers, notably through international collaboration for teacher training in developing nations, particularly in LDCs and small island-developing states. All of the SDG 4 targets can only be achieved with the help of teachers. Because the shortage and uneven distribution of fully qualified teachers, especially in impoverished areas, magnifies the equity gap in education, it demands immediate attention with a more urgent deadline.

Instructors and educators should be empowered, appropriately recruited and remunerated, motivated, properly qualified, and supported within well-resourced, efficient, and well managed systems, as teachers are a vital condition for ensuring quality education (UNESCO, 2018). They also focus to ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.

As an intermediary step between Primary and Tertiary Education, teaching is a preparatory phase for youth before they enter the workplace, helping to equip a largely adolescent population with the abilities, aptitudes, and social values for productive and healthy adult life (Jacob and Lehner, 2011). Likewise, in Tanzania, education occupies a pivotal role within the functioning of the economy and therefore the education system itself. Experience shows that the bulk of the people in both the private and public sectors are expected to be teaching leavers. The full Primary Education system relies on teachers who are a product of the instruction system. Candidates of upper and Tertiary education and Training are products of the educational activity system. This can be the essence of being pivotal to any or all it means to the economic, political, and social development of the Country (Gideon 2014).

Furthermore, in step with Tanzania National Development Vision (2025), Education and continuous learning help within the effective and transformation of the mindset and culture that promote attitudes to influence community development, confidence, and commitment to face development challenges and exploit every opportunity for the development of the standard of livelihood. A study by UNESCO (2005) and Gideon (2014) noted that education in a very country is one in all the key indicators of its level of development. However, the achievement of universal participation in education is fundamentally dependent upon the standard of education available.

As such, Quality education can lift families and communities out of poverty by increasing a country’s economic process (Human right watch, 2017). Tanzania Government in its Development Vision 2025, aimed toward providing quality education and knowledge that may produce a nation with an elevated level of education in any respect levels as put by development planners additionally as economists.

Moreover, since 2001, the Tanzanian Government has taken several initiatives to reform its Primary and secondary Education sectors to attain its pivotal role in education. These reforms include implementation of the Primary Education Development Program (PEDP) from 2002 to 2006 and therefore the pedagogy Development Plan (SEDP) began in 2004 all that specialize in the Tanzania development strategies on combating ignorance, disease, and poverty in line with the National Development Vision 2025 (Sumra and Rajani, 2006).

The PEDP 2002-2006 raised the enrolment rate in Primary education from 59 percent in 2000 to 97 percent in 2007 (World Bank, 2008). This created a social demand for and even an expectation of transition to instruction (UNESCO, 2007). This variation implies that there may be factors contributing to the low academic achievement of scholars publicly Secondary Schools. Therefore, it's important to seek out  what is the determinants of low academic achievement  publically school Students in Tanzania in and of itself being inhibiting factors to the supply of quality education.

**1.2 Statement of the Problem**

In recent years, students’ academic achievement within the Certificate of instruction Examination (CSEE) in Karatu District and Tanzania, specifically, has been declining tremendously. As seen earlier, as an example, the proportion of students failing with Divisions zero (0) has been varying since 2010 where it reached its crossroads in 2012 where 5,304 (42.87%) of the students failed in their form four National Examination (Haki Elimu, 2017). This decline in academic achievement has raised several concerns about what is the reason for this low academic achievement and therefore the way it is going to preferably be addressed. This is often a worrying trend by any standards that have compelled this study to be applied.

This significant variation in performance implies that there may well be specific determinants of low academic achievement of scholars in public Secondary Schools in Tanzania, particularly, Karatu District. As such, it's important to search out  what can be the factors affecting the supply of quality education in public Secondary Schools in Tanzania, thereby contributing to low academic achievement among students. This study, therefore, intends to analyze the factors affecting the supply of quality education in public Secondary Schools in Karatu District Council.

**1.3 Objective of the Study**

**1.3.1 General Objective**

The main objective of this study is to assess factors affecting the availability of quality education in public Secondary Schools in Karatu District Council in Tanzania.

**1.3.2 Specific Objectives**

1. To examine how the staffing of teachers affects quality of education in public secondary schools in Karatu District.
2. To identify the availability of enough instructional materials in public secondary schools in Karatu District.
3. To describe the adequacy of essential physical facilities in public secondary schools in Karatu District.
4. To examine the perception of teachers on the standards of education among public secondary schools in Karatu District.

**1.4 Research Questions**

The research questions for the study were as follows:

1. How does staffing of teachers affect quality of education in public Secondary Schools in Karatu District?
2. To what extent are the instructional materials enough in public secondary schools in Karatu District?
3. To what extent are the physical facilities present in public secondary schools in Karatu District?
4. What are the perceptions of teachers on the standards of education among public secondary schools in Karatu District?

**1.5 Research Hypotheses**

The study was guided by the subsequent null hypothesis:-

H0 = There's no significant relationship between quality of education and staffing status, instructional materials, and adequacy of physical infrastructure among Public Secondary Schools in Karatu District

**1.6 Significance to the Study**

The findings from this study have provided new knowledge about factors affecting the supply of quality education in public Secondary Schools in Karatu District Council, Tanzania. The study is also beneficial to the policymakers, educational planners, and therefore the community generally. It should further provide possible answers to why the educational achievement of scholars in public Secondary Schools is declining in such an amazing situation. It can further function as secondary data for prospective researchers.

**1.7 Scope of the Study**

This study was conducted to assess factors affecting the availability of quality education in public Secondary Schools in Karatu District in Tanzania. The study targeting the factors regarded during this study as determinants of quality education. As such, the study assessed the effect of staffing status, Teacher-Student Ratio, availability of teachers, adequacy of instructional materials on how they affect the supply of quality education in Karatu District.

**1.8 Limitation of the Study**

In general, the study proceeded well and also the respondents were largely cooperative. However, like most research, there have been some limitations, but they weren't in any way compromised the validity of the info collected since the researcher took the required steps to handle all the setbacks. The first limitation worth mentioning was teacher respondents within the Public Secondary Schools for they were rather too busy with the mid-term/ annual examinations. Hence the researcher had to attend for the teacher’s respondents to attend to students first then to attend the researcher by filling their questionnaires. The heads of colleges were also too busy but the researcher managed to interview all of them.

Also, a number of the teachers didn't take their time to fill out the questionnaires while some filled them wrongly et al. didn't fill them completely or inappropriately filled. Another limitation of this study is that it had been administered within the Ordinary Level Public Secondary Schools in Karatu District Council. Hence, this limited the flexibility of the researcher to generalize the findings for the country as an entire population. However, provided that all students in Tanzania follow the identical curriculum the findings may apply to all or any Public Secondary Schools.

## 1.9 Organization of the Study

# This study consist of five chapters. The first chapter gives the introduction of the study. The second chapter is literature review where empirical and theoretical evidence behind the study can be found. The third chapter is research methodology, which shows what was done, how and why. The fourth chapter presents findings and discussions. The 5th chapter is Summary, conclusion and recomendation is a summary of the most significant findings and suggestions for what needs to be done.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

This chapter presents a synthesis of literature significant to the factors that affect provisions of quality Education in public Secondary Schools in Tanzania. The chapter begins with the conceptualization of the key terms as utilized in the study, theoretical framework, and empirical reviews like global views on secondary education, concept, and determinants of Low Academic Achievement that eventually affects the supply of Quality Education public Secondary Schools in Karatu District. More specifically, the literature reviewed included textbooks, research reports, periodicals, and studies published in journals similarly as reviews and critiques of studies found in libraries and therefore the internet have been discussed from the general to the more specific objectives relevant to the matter under investigation.

**2.2 Conceptualization of Key Terms**

**2.2.1 Public Secondary Schools**

Public Secondary Schools in step with Mlozi et al. (2013) are schools built with the assistance of individuals in their localities or built by the government and later handed over to the community. The government supplies the teaching staff, teaching and learning materials, and overall management. In this study, Public Secondary Schools are those secondary schools that were built from funds raised by the relevant communities and native councils with little financial assistance from the Central Government and most of them are day schools. These Secondary Schools were introduced to extend access to secondary education in Tanzania through the  instruction Development Plan.

**2.2.2 Instructional Materials**

Isola (2010) named instructional materials as objects or devices, which help the teacher to form a lesson much clearer to the learner. It also refers to the provision and adequacy of teachers’ reference books, students’ textbooks, and reference books and maps and globs which will be necessary to create the teaching and learning process efficient and effective.

**2.2.3 Physical Facilities**

According to Akomolafe et al. (2016), physical facilities talk over with the varsity plant, that is, the college buildings, classrooms, library, laboratories, toilet facilities, offices, and other materials and infrastructures that may likely motivate students towards learning. In this study, physical facilities confer with the adequacy of classrooms, desks and chairs, laboratories, and libraries to make an environment during which implementation of secondary Education can happen.

**2.2.4 Academic Achievement**

Academic achievement or performance is that the outcome of education within the extent to which student, teacher, or institution achieved their educational goals (Loku, 2013). In this study indicators of educational achievement are the Divisions obtained by candidates in their form four National Examinations concerning the examination standard board of a rustic like the National Examination Council of Tanzania (NECTA). According to URT (2012), the NECTA criteria of awarding divisions is as follows: A candidate who sits for NECTA examinations is awarded divisions 1, 2, 3, 4, or 0 on meeting the subsequent conditions: Division One (1); passes in a minimum of 7 subjects passes at grade A or B or C in a minimum of five subjects. Reaches an aggregate of over or adequate to 7 points but but or capable 17 points, taking the most effective seven subjects.

**2.2.5 Low Academic Achievement**

Asikhia (2010) described low academic achievement as any performance that falls below the specified standard. For the case of this study, a candidate who scores below the Divisions 1, 2, and three was thought to be showing low/poor academic achievement publically Secondary Schools.

**2.2.6 Quality Education**

In this study quality education implies that the bulk of the scholars can meet the expectation of the "Minimum Level of Learning". that's to mention, students can develop problem-solving skills, stimulating power, and putting emphasis on the applying of the knowledge they acquire from their education.

**2.3 Theoretical Framework**

Theories are analytical tools wont to understand, explain and make predictions a couple of given material. These are statements that designate a selected segment of phenomena by specifying certain relationships among variables (Kerlinger, 1983).

**2.3.1 The CIPP Theory**

This study, therefore, adopted the CIPP Theory of Curriculum Evaluation developed by Stufflebeam (1971) cited in Frye and Hemmer (2012) involving Context, Input, Process, and products (CIPP) to know the factors affecting the supply of quality education publicly Secondary Schools in Tanzania. The speculation revolves round the two major variables of this study namely the teaching and learning materials, teacher-student ratio, the provision of teachers (staffing status), student’s attitudes, and quality of education measured in terms of performance.

The applicability of this theory is that it provides a way for generating valuable information to satisfy the intended objectives of this study where most of the study objectives are explained within the input evaluation aspect. Input evaluation assesses alternative means for achieving the intended goals and objectives of the program to help decision-makers to settle on the best optimal means. The idea asks the question, “How should or not it's done?” and identifies procedural designs and academic strategies which is able to presumably realize the desired results (Zhang et al., 2011).

The study on the factors affecting the availability of quality education in Tanzania needs for a correct theoretical framework which can embrace the most important components and mix all relevant attributes which will be considered essential about the present study. Therefore, Stufflebeam’s Context, Input, Process, and merchandise evaluation model becomes the excellent framework for this particular study. As such, Aziz, Mahmood, and Rehman (2018) believed that CIPP model is effectively applied for varsity evaluation where Context refers to the background, history, goals, and objectives of the schools and inputs confer with the fabric and human resources needed for the effective functioning of the school. Process refers to the implementation of various school practices where Product refers to the standard of scholars learning and its usefulness for the individual and for society normally as intended within the program.

Additionally, Yahaya (2001) acknowledged that the input evaluation aspect of the Model intends to concentrate on the resources involved in helping the achievement of the program goal and objective. A CIPP model Input evaluation aspect is beneficial when resource allocation (e.g. staff, instructional materials, physical facilities like classrooms) is a component of coming up with an academic program or writing an academic proposal. Therefore, the Input evaluation aspects during this study are staffing status, availability, and adequacy of instructional materials and adequate physical facilities.

**2.4 Empirical Review**

**2.4.1 Global Views on Education**

Secondary school education is a vital channel through which youth acquire skills that improve opportunities permanently jobs. High-quality education that caters to the widest possible range of abilities, interests, and backgrounds is critical not just to line children on the trail to the work, but also to present countries the educated workforce they have to compete in today’s technologically driven environment (UNESCO, 2012).

Furthermore, Jacob and Lehner (2011) affirm that educational activity is widely believed to produce the optimum setting to arrange teens, predominantly adolescents, for healthy and productive adult lives, including participation in social, political, and economic spheres. Also, for countries to compete within the global economy, a big number of their population need teaching to amass the precise skills and aptitudes necessary for an increasingly technology-driven marketplace. Lower school (ordinary level for the case of Tanzania as far as this study is concerned) extends and consolidates the essential skills learned in primary school; upper school deepens general education and adds technical and vocational skills. Neither is feasible, however, without ensuring that everyone complete a decent quality instruction because the priority is building the abilities that individuals, societies, and economies need (UNESCO, 2012).

Besides, several efforts are made for the enhancement of pedagogy in most of the globe. The efforts are taken concurrently with those of boosting primary education. As such, at the international level, countries have agreed to confirm that teaching is improved through increased resources. Together a set of challenges is being solved through the international community’s efforts to attain primary Education for All (EFA) and therefore the Millennium Development Goals (MDGs) which were replaced by Sustainable Development Goals (SDGs) in 2015 throughout the globe. National governments and donor organizations have concentrated investments on increasing school participation at the first level within the developing countries, (Olowoselu and Bello, 2015).

**2.4.2 The Formal Education in Tanzania: Then and Now**

The foundation of recent education was laid by missionaries who introduced reading to spread Christianity. Wosanju (2002) noted that the missionaries also taught practical subjects like carpentry and gardening which were useful round the missions. The Frazer Report of 1909 recommended the establishment of separate educational systems for Europeans, Asians, and Africans which was maintained until after independence in 1961.

Likewise, in Tanzania, education occupies a pivotal role within the functioning of the economy and therefore the education system itself. Experience shows that the majority of the people in both the private and public sectors are expected to be education leavers. The entire primary education system relies on teachers who are a product of the educational activity system (URT, 2010). Despite the important role of Gymnasium education and efforts for its expansion still, some challenges have to be addressed.

The African Development Fund (ADF) (2007) observed that, even with the many progress within the expansion of secondary education in Tanzania, still a tutorial achievement of secondary education has remained the most challenging move. This study examined the determinants of educational achievement in public secondary schools that act as inhibiting factors for the availability of quality education in Tanzania. Consequently, in 2004, the government of Tanzania launched its educational activity Development Plan (SEDP) aiming significantly to reform the education system throughout the country. As such, SEDP was formulated in line with the event of ward/Community-based Secondary schools.

The goal was to make sure more access and equity in participation across geographical, gender, disadvantaged group, and also the marginalized among the community. Such a critical plan was to curb the substantially increased number of pupils enrolled in Primary schools, thereby creating an upward demand for increased access to educational activity (Hakielimu, 2017). In 2005, nearly 124,884 students were enrolled in Forms 1-6 and 1,602,752 in 2012. By any measure, these were large enrolment increases within a brief time (BEST, 2013).

Moreover, the state of performance of scholars in form four national examinations within the previous six years in Karatu District has not been stable furthermore, as an example, the whole number of scholars failing with Divisions zero (0) from 2010 to 2015 has reached 5,304 (42.87%) students which may be a critical situation as will be depicted in Table 2.1 (Hakielimu, 2017)

**Table 2.1: Academic Performance in Certificate of Secondary Education Examinations in Karatu District (CSEE) 2010-2015**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Total Candidature** | **Total Pass (Division 1-4)** | **% of Pass** | **Total Fail (0)** | **% of Fail** |
| 2010 | 2201 | 1313 | 59.65 | 888 | 40.35 |
| 2011 | 1889 | 1211 | 64.1 | 678 | 35.9 |
| 2012 | 2516 | 1055 | 41.9 | 1461 | 58.1 |
| 2013 | 2061 | 1277 | 61.9 | 784 | 38.1 |
| 2014 | 1609 | 968 | 60.2 | 641 | 39.8 |
| 2015 | 2096 | 1244 | 59.3 | 852 | 40.7 |
| **Total** | **12,372** | **7,068** | **57.13** | **5304** | **42.87** |

**Source:** Haki Elimu, (2017).

Table 2.1 depicts the deterioration of student’s performance in the past six (6) years in Karatu District as measured in their Form Four National Examination and as well worsening the quality of educational achievement in the district.

**2.4.2.1 Secondary School Education Delivery in Tanzania**

Secondary Education in Tanzania consists of two tiers: the first cycle is Ordinary Level [0-Level], of 4 years post-primary education. The cycle follows both a core or common national curriculum and specialized optional subjects at the highest of which pupils sit for nationally set examinations. it's four curriculum tracks or biases, which are Technical, Agricultural, Commercial, and residential Economics. The second cycle is Advanced level, (A-level) which may be a two-year post-O-level course during which students follow a National curriculum and at the tip of which they sit for national examinations. The cycle is split between Science and Arts’ streams. It prepares students for tertiary and better education, yet as entry into the labor market (URT, 2000).

**2.4.2.2 Classification of Secondary Schools in Tanzania**

Secondary schools in Tanzania are classified into: Government schools consisting of two categories-which are the standard Public national schools and community built schools. The latter are schools built by local communities but operated and managed by the government. URT (2009) defines Community/ Ward secondary schools as those schools which are built by the efforts of local communities with both cash and in-kind contributions but operated and managed by the government and thought of as government schools. Among the categories of faculties in Tanzania, ‘communities built schools’ are the foremost challenged (Sumra and Rajani, 2006).

Furthermore, care and support for the faculties from the local authorities are low because of the personal income of the community they serve (Wedgwood, 2005). This study was fascinated by investigating the determinants for educational achievement in Public/Community Secondary Schools in Tanzania with a special concentrate on Karatu District. Similarly, schools in Tanzania are often operated as either day or boarding schools, counting on their geographical location, catchment areas, and affordability. The bulk of the communities built secondary schools are day schools. The deteriorating quality of school education in Tanzania to a greater extent rests with this community-built school. The outputs from community-built schools are increasingly poor and are negatively affecting the standard of education in Tanzania (Jimdamva, 2012).

Moreover, the transition rate from primary to instruction in 1998 was 19.1%. This figure was very low compared to transition rates in neighboring countries. In Kenya in keeping with Chege and Sifuna (2006), as an example, it had been 53% while in Uganda it stands at 29%. Regional comparisons of the participation rate in teaching show that Tanzania lags far behind her neighboring countries in gross enrolment rate.  This implies that the country cannot enroll as great as many children from both the relevant age cohort and people outside it. For example, in line with UNESCO (2005) secondary gross enrolment rates (GER) (%) for Zimbabwe was 44, Zambia 28, Kenya 26, Uganda 12, and Tanzania 5. Thus, in 2004, Tanzania Government initiated the building of community secondary schools among other measures to extend the GER from 5 to 12 percent.

Also, as observed by Mlozi et al. (2013) the headcount enrolment in secondary schools has increased within the context of scarce resources and a dire need for college infrastructure (laboratories, and libraries) in step with these authors, they argued that the low academic achievement resulted from the fogeys who demand that their children attend secondary schools, and also the existence of a SEDP that children can attend secondary schools whether or not they need to travel long distances without considering the problem of quality (academic achievement). That’s why the study is curious about investigating factors affecting the availability of quality education in secondary schools in Tanzania.

**2.4.3 Education Sector Development Programs in Tanzania**

In the mid-1990s the govt. of Tanzania initiated various social sector reforms including those within the education sector. Within the education sector, the reform is going on under the Education Sector Development Programme (ESDP). Among its objectives is to ensure equity in access to quality formal education. Within the execution of the program, the education plan (SEMP) was developed specifically to systematize the reform process at each level. SEMP is operationalized through the pedagogy Development Programme (Tanzania Institute of Education (TIE), 2013).

**2.4.3.1 Secondary Education Development Programme**

The education Development Programme II (SEDP II) as a continuation of SEDP I, was implemented between 2004 and 2009, building on the national goals of education provision. It also builds on national and international reforms regarding the education sector which have taken place within the last 15 years. A number of these reforms were supported by key policy documents like the Tanzania Development Vision 2025, the National Strategy for Growth and Reduction of Poverty (NSGRP – commonly cited by its Kiswahili acronym: MKUKUTA), the Education and Training Policy of 1995, the Education Sector Development Programme (ESDP, 2001) and so the Millennium Development Goals (MDGs).

Overall objectives of SEDP were to enhance access with equity, quality, management, and delivery of instruction in Tanzania (URT, 2010). A review of SEDP I implementation has shown that the Programme was most successful in improving access and equity. The quantity of secondary schools has quite tripled between 2004 and 2009 to serve different underserved communities and then has the amount of enrollees. Despite these successes, there are several challenges: a number of which are: Poor performance in pedagogy examinations, Asymmetrical deployment of teachers, different schools leading to inequalities of learning outcomes, with girls doing poorly in both participation rates and pass rates, especially in science and arithmetic subjects, and community secondary schools doing consistently poorly, Insufficient infrastructure, including many construction projects that started under SEDP I, but weren't completed, Lack of, or non-use of, laboratories in most faculties resulting in students doing the science theoretically, and most of them doing poorly.

This poor performance in science subjects has, in turn, resulted in an avoidance syndrome, with most students choosing to enroll in social science/arts subjects, rather than natural sciences, poor teaching approaches within the classroom, because it is teacher-centered, with students relying heavily on the teacher and old notes, and classroom time often not getting used efficiently and effectively for mental engagement of the students (URT, 2010). However, this study has investigated the determinant of low academic achievement in community secondary schools.

**2.5 National Education Policy 2014**

In 2014, the government of Tanzania established Education and Training Policy which was the product of the revitalization and eventual removal of earlier educational and training policies. The policy’s aim is to have educated and knowledgeable Tanzanians able to contribute quickly to the development of the nation and withstand competition. In order to fulfill this aim, the government of Tanzania had to make sure that structure, systems and extended procedures enables Tanzanians to develop themselves in various ways in academic and educational aspect.

Alsoquality education and training to be recognized nationally, regionally and internationally.Another strategy is thatdifferent education and training opportunities are accessible in the country but also increased human resources according to national priorities. There should be a proper management and administration of education and training; education and training structure that takes into account cross-cutting issues with a sustainable structure for financing education and training in the country (MoE, 2014).

**2.6** **The Sustainable Development Goal 4**

In 2015, 193 countries around the world led by the UN came together to plan for the future development; and together they came up with 17 sustainable development goals to achieve by 2030. The goal no. 4 is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This goal is made up of ten targets which among them, focuses on increasing the supply of trained teachers, notably through international collaboration for teacher training in developing nations, particularly in LDCs and small island-developing states.

All of the SDG 4 targets can only be achieved with the help of teachers. Because the shortage and uneven distribution of fully qualified teachers, especially in impoverished areas, magnifies the equity gap in education, it demands immediate attention with a more urgent deadline. Instructors and educators should be empowered, appropriately recruited and remunerated, motivated, properly qualified, and supported within well-resourced, efficient, and well managed systems, as teachers are a vital condition for ensuring quality education (UNESCO, 2018). They also focus to ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes (UNESCO, 2018).

**2.7****National Five-Year Development Plans (FYDP II & III)**

The government of Tanzania through the Ministry of Finance and Planning had developed the second five years development plans starting from 2011. The 2nd Plan, FYDP II (*2016/17–2020/21),* has integrated frameworks of the first five years development plan and the Second National Strategy for Growth and Reduction of Poverty. FYDP II was themed “Nurturing Industrialization for Economic Transformation and Human Development” and had the following areas to be prioritized: first, fostering economic growth and industrialization; second, fostering human development and social transformation; third, improving the environment for business and enterprise development; and fourth, strengthening implementation effectiveness (MoF, 2016).

 The Third Plan or FYDP III (2021/22-2025/26) has a theme “Realizing Competitiveness and Industrialization for Human Development” with the major goal to help achieve the objectives of the National Development Vision 2025 whereas, Tanzania is expected to obtain peace, stability and unity; good governance; an educated and learning society; and a strong competitive economy that benefits a large number of people. Generally, FYDP III adds on the momentum of prior plans (MoF, 2021).

FYDP II and FYDP III intended to foster education and appropriate skills through fostering human development. In the education sector, teacher-student relationships will be improved at all levels, the teaching and learning environment will be enhanced, and students at the tertiary level will have more access to loans, the use of ICT in teaching and learning will be expanded, and teacher remuneration and housing will be improved. The plan also addresses the quality of education through interventions that ensure that its provisions are well aligned with, and tailored to meet needs of both the local society and competition in the domestic, regional and global economies.

The quality of education delivered depends on two related aspects; the quality of the recipient and is influenced by the teaching and learning environment. Quality of the recipient is determined by the mental health and extent of preparedness. Teachers have a critical role in enhancing educational quality, so it is essential to increase their professional competencies and raise their morale through improving the quality of the teaching environment (MoF, 2016 & 2021).

## 2.8 Tanzania Education Training Policy and Academic Performance

The indicators of academic achievement are marks scored for example: (i) 100-80% signifying very good (1 point) (ii) 79%-40% signifying good (2 points) (iii) 39%-0% signifying poor (3 points) grades for example the CSEE examination has a five (5) point grading scale. Grade A, B, C, D, and F. Grade A indicates the highest level of achievement (1 point), Grade B indicates very good principal pass (2 points), Grade C indicates good principal pass (3points), Grade D indicates satisfactory (4 points) and F indicates failure (5 points) and divisions, the Certificate of Secondary Education is awarded in four divisions (URT, 2013). Also, URT (2013) indicates that the divisions shall be computed based on the best 7 subjects as shown below:

1. Division I: 7 to 17 points (ii) Division II: 18 to 21 points (iii) Division III: 22 to 25 points (iv) Division IV: 26 to 34 points

## 2.9 Factors Affecting Provision of Quality Education

## 2.9.1 Quality Education

 Many definitions of quality education exist, testifying the complexity and multifaceted nature of the concept (Adams, 1993). Slade, (2017) acknowledged that considerable consensus exists around the basic dimensions of quality education today: quality education involves learners who are healthy, well-nourished and ready to participate and learn, supported in learning by their families and communities; Environments that are healthy, safe, protective and gender-sensitive, and provide adequate resources and facilities; Content that is reflected in relevant curricula and materials for the acquisition of basic skills, especially in the areas of literacy, numeracy, and skills for life, and knowledge in such areas as gender, health, nutrition, HIV/AIDS prevention and peace; Processes through which trained teachers to use child-centered teaching approaches in well-managed classrooms and schools and skillful assessment to facilitate learning and reduce disparities; Outcomes that encompass knowledge, skills and attitudes, and are linked to national goals for education and positive participation in society (BEST, 2013).

Accordingly, the provision of quality education is a priority that every country will aspire to include amongst the national goals of education (Mphale and Mhlauli, 2014). Raising the quality of education is one of Tanzania’s national goals. Kihuria (2015) added that the purpose of education is to equip the citizenry with values, skills, and knowledge to reshape their society and eliminate inequality. This is because education helps an individual develop his/her capabilities, attitudes, and behavior that is acceptable to society. The benefit of having quality education is that it can adapt to the changing needs of the country as the world changes and spearhead the development of human resources and the country’s economy.

Likewise, Coombs (2000) avers that quality education pertains to the relevance of what is taught and learned and how well it fits the present and future needs of the particular learners in question, given their particular circumstances and prospects. He emphasized that quality refers to significant changes in the educational system itself, like its inputs (students, teachers, facilities, equipment, and supplies); its objectives, curriculum and educational technologies; and its socioeconomic, cultural, and political environment.

## 2.9.2 Staffing Status

Teachers for years have been regarded as the essential catalysts for school improvement. They are the driving force and main resource in the development and academic growth of students as they are sources of knowledge and agents of change (Jimdamva, 2012). Teachers play a pivotal role in helping the students to direct their potential goals to achieve their destiny. Moreover, according to UNESCO (2010) teachers are a critical education resource in every country. From early childhood programs through primary and secondary school, the presence of qualified, well-motivated, and supported teachers is vital for student learning. Effective teaching strongly influences what and how much students achieve in school.

Furthermore, Benya (2010) asserts that noble as the objectives of any educational program may be, central to their success is that of the adequacy of qualified teachers. Before taking off any educational program, the adequate provision of manpower (teacher) must have been put in place. The quantity and quality of manpower put in place have a great influence on the kind of school products produced in society. However, Hargreaves (2000) argues that there is no educational system that can rise above the quality of its teachers and that no nation can be elevated above the level of its teaching staff. This statement proves the key role played by teachers in any progressive society. For this reason, the adequacy of qualified teachers cannot be underestimated for the attainment of the objectives of any educational system. In support of this view Mosha, (2014) insisted that:

*The success or failure of any educational system depends greatly on the quantity and quality of its teachers. The service of teachers is indispensable; they contribute immensely to the lives of the nation’s youth (Mosha, 2014).*

Education constitutes the most fundamental industry in many developing countries and it is believed to consume the largest proportion of the local vote earmarked for social services. Consequently, Kemmerer (2001) argues that the destiny of a nation is shaped in its classrooms and it is the teacher who is a very important instrument in shaping the destiny of the nation. In the report by UNESCO on thirty years of service to peace, the teacher is described as the spark that forced the whole development process (UNESCO, 2005).

## 2.9.2.1 Teacher-Student Ratio

Teachers and also the number of learners to be taught in an exceedingly single classroom is a very important determining factor for the educational achievement of scholars in secondary schools in Tanzania. Tanzania Institute of Education (TIE, 2010) detected that; teacher-student ratio shall be 1:40. The quantity of educators per class shall be 40 which will help to achieve the great academic achievement of school students in Tanzania. Consequently, if the teacher-student ratio exceeds the stated ratio, the tutorial achievement of the learners would be negatively affected. Alderman, Orazem, and Paterno (2001) contributed to the current discussion. Their study concluded that a better student-teacher ratio had a consistently negative effect on student achievement.

Likewise, Graddy and Stevens (2003) in their study concluded that the student-teacher ratio was a very important determinant of fees and fogeys choose schools with lower student-teacher ratios. Levacic (2005) concluded in an exceedingly study on Grade KS3 and located that a discount within the student-teacher ratio had a statistically significant positive effect on mathematics achievement. A study by Waita (2012) on pupil-teacher ratio and its impact on academic performance in primary schools in Kenya found that Pupil-Teacher Ratio incorporates a statistically significant effect on pupil’s performance in primary schools.

The study showed that as PTR increases, average test scores in primary schools decrease. Likewise, a study by David (2014) in Sumbawanga District Tanzania found that one in every of the factors influencing students’ academic performance is that the low number of teachers to students ratio is critical. The teacher-student ratio stands at a median of 52:1 and as high as 72:1. UNESCO (2006) cited in Mulei et al (2016) found the identical problem exists in Mozambique where the study found teacher shortages with the STR of 67.4:1.

**2.9.2.2 Demands and Provision of Teachers in Tanzania**

Teachers in Tanzania are officially described as individuals that are trained then registered to perform instructional duties in schools and other related institutions. The Ministry of Education has the responsibility to coach and develop teachers to fulfill the large demand that exists in Tanzania’s expanding education at basic education levels of Pre-primary, Primary Schools still as Lower Secondary. The cadres of teachers are trained at Universities where they qualify with a minimum of a bachelor’s degree (Education and Training Policy 1999, 2005).
Consequently, training of Gymnasium teachers either Pre-service or in-service is completed at Teacher Training Colleges (TTCs) and Universities which supply education courses.

Normally, TTCs offer both Pre-service and In-service teacher education. The Pre-service program includes Grade A credentials and Diploma in Education courses. Currently, Grade ‘A’ Certificate Course consists of a one-year Residential Course and one-year Teaching Practice in a very grade school. The Diploma course consists of a two-year Residential Course followed by Teaching Practice which lasts for 6–8 weeks annually. The In-service courses at the TTCs incorporate 3–9 month training of teachers at various levels of education. According to the fundamental Education Statistics in Tanzania (BEST) (2010), there are 74 Government TTCs that train teacher-students at certificate and diploma level and with a complete number of 18,500 students. There are 1,804 tutors in TTCs whereby 827 are graduates, 651 with Diploma, and 326 with Special Certificates. There are presently 36 private TTCs with about 950 students. Both Government and personal teacher colleges award certificates and diplomas. Currently, there are 6 universities training teachers everywhere the country, (TCU, 2008; NECTA, 2009; BEST, 2010).

**2.10 Availability of Instructional Materials**

The primary purpose of the teaching and learning process is to bring a big change in behavior through active participation and important thinking of the learner. This cannot occur without the provision of instructional materials (Afework and Asfaw, 2014). Likoko et al. (2013) insisted that Instructional materials which are educational inputs are of significant importance to the teaching of any subject within the school curriculum. Muthamia (2009) supported that the employment of instructional resources would make discovered facts glued firmly to the memory of learners.

Oladejo et al. (2011) named instructional materials as objects or devices, which help the teacher to create a lesson much clearer to the learner. Instructional materials also are described as concrete or physical objects which offer sound, visual or both to the sense organs during teaching. Adeogun (2010) discovered a really strong positive significant relationship between instructional resources and academic performance. in step with Adeogun, schools endowed with more resources performed better than schools that are less endowed.

Furthermore, Gogo (2002) within the study of the input of cost-sharing on access, equity, and quality of pedagogy within the Rachuonyo district found that the standard of education had remained average for the whole period from 1996 to 1999. The author concluded that performance may well be attributed to inadequate teaching and learning materials and equipment. Also, Gogo recommended that to produce quality education the supply of relevant teaching /learning materials and facilities is crucial. Muthamia (2009) found out that teachers can only be effective and productive in their work if they need adequate and relevant instructional materials.

**2.11 Availability of Physical Facilities**

Okomolate and Adesua (2016) consult with physical facilities because the school plants, that is, the varsity buildings, classrooms, library, laboratories, toilet facilities, offices, and other materials and infrastructures that will likely motivate students towards learning. Schools exist for teaching and learning. Human and material resources are deployed for this purpose. School physical facilities are the fabric resources provided for workers and students to optimize their productivity within the teaching and learning process.

TIE (2007) indicates that physical facilities include classrooms, laboratories, libraries, ICT facilities, dormitories, health and kitchen facilities, yet as facilities for college students with disabilities. Physical facilities provide and maintain, safe, clean, and inventive educational environments that are conducive to the high achievements of the scholars. Physical facilities strive to provide students a cushy atmosphere within which they work and learn. In developing countries like Tanzania, low levels of learning among children can partly be attributed to poor or inadequate physical facilities.

## 2.12 Recent Related Studies

A number of  the issues concerning quality education and its provision are well documented in studies by Hakielimu (2011), Mkumbo (2013), Mosha (2014), Jimdamva (2012), Laddunuri (2012), and Mlozi et al. (2013) among the others. Fore, example, Hakielimu (2012) researched the link between examination practice and curriculum objectives in Tanzania and identified that the teaching and learning environment was generally poor in supporting the effective implementation of the education curriculum. Therefore, the poor performance within the national examination is also because of poor curriculum implementation instead of the examination papers themselves.

Furthermore, the faculties with buildings had insufficient accommodation (students mostly sit on mats). Besides, textbooks for teachers, copies of curriculum and resource materials are never provided (Hakielimu, 2012). Mlozi et al. (2013) conducted a study on the factors influencing students’ academic performance in community Built secondary schools in Tanzania: a case of Mbeya Municipality. The study findings revealed that in most of the public-built secondary schools there have been poor teaching and learning resources. Also, the supply of facilities within the schools failed to match with the quantity of learners.

**2.13 Gap within the Literature**

Since Independence studies have been conducted on different aspects of the middle school Curriculum in Tanzania by various scholars as shown by Hakielimu (2011), Mkumbo (2013), Mosha (2014), Jimdamva (2012) Laddunuri (2012) Mlozi et al (2013) among others, but perhaps no comprehensive study has thus far been conducted to analyses factors affecting the supply of quality education in Secondary Schools in Karatu District Tanzania, covering aspects of the adequacy of staffing status, adequacy of instructional materials, the employment of English as a language of instruction and adequacy of physical facilities among others. This study, therefore, sought to fill the gap using Karatu District Council as a case in point.

**2.14 Conceptual Framework**

This study adopted the CIPP Theory of Curriculum Evaluation developed by Stufflebeam (1971) cited in Frye and Hemmer (2012) involving Context, Input, Process, and products (CIPP) to know the factors affecting the availability of quality education in Secondary Schools in Tanzania. The speculation revolves round the two major variables of this study namely the teaching and learning materials, teacher-student ratio, the availability of teachers (staffing status), student’s attitudes, and quality of education measured in terms of performance. The applicability of this theory is that it provides a way for generating valuable information to meet the intended objectives of this study where most of the study objectives are explained within the input evaluation aspect.

Input evaluation assesses alternative means for achieving the intended goals and objectives of the program to assist decision-makers choose the most effective optimal means. The idea asks the question, “How should it be  done?” and identifies procedural designs and academic strategies that may  presumably achieve the required results (Zhang et al, 2011). The study on the factors affecting the availability of quality education in school needs a correct theoretical framework that embraces the most important components and combines all relevant attributes which will be considered essential about this study. Therefore, Stufflebeam’s Context, Input, Process, and products evaluation model become a comprehensive framework for this particular study.

As such, Aziz, Mahmood, and Rehman (2018) believed that the CIPP model are often effectively applied for varsity evaluation where Context refers to the background, history, goals, and objectives of the school and Inputs discuss with the fabric and human resources needed for the effective functioning of the school. Process refers to the implementation of various school practices where Product refers to the standard of learners learning and its usefulness for the individual and for society generally as intended within the programme.

Additionally, Yahaya (2001) acknowledged that the input evaluation aspect of the Model intends to concentrate on the resources involved in helping the achievement of the program goal and objective. A CIPP model Input evaluation aspect is helpful when resource allocation (e.g. staff, instructional materials, physical facilities like classrooms) is an element of designing an academic program or writing an academic proposal. Therefore, the Input evaluation aspect during this study is going to be staffing status, availability, and adequacy of instructional materials, and adequate physical facilities.

Moreover, the effective interaction of 4 stages of Stufflebeam’s (CIPP) Model about the objectives of the study is anticipated to end in the improved academic achievement of learners Secondary Schools in Karatu District in Tanzania. Thus, CIPP Model encompasses a lot that may be borrowed by the Tanzanian education system, as an example, improved academic achievement of middle school education, involves effective interaction of the four stages of Stufflebeam’s Model within the Ministry of Education and Government at large, Education administrators, planners, teachers, and students must play their role effectively to realize the improved academic achievement among students in Secondary Schools.

**ACADEMIC ACHIEVEMENTS**

**Independent Variables**

* Adequacy of staffing status
* Sufficient curricular – Instructional materials
* Adequacy of resources and physical facilities

**CIPP** Theory

* Content
* Inputs
* Process
* Product

**Intervening factors**

* Students teachers attitudes
* School administration
* Governments support

**Communication of feedback**

**Dependent Variables**

* Quality students
* Self-Reliant citizens
* Problem solving skills
* Outcome linked to national goals for Education

**QUALITY EDUCATION**

**Dependent Variables**

* Quality students
* Self-Reliant citizens
* Problem solving skills
* Outcome linked to national goals for Education

**Figure 2.1: A Hypothesized Model of Quality Education**

**Source**: Fieldwork (2020)

Furthermore, the intervening variables are the factors that facilitate or interfere with the result of an incident in the study, therefore intervening variables are teacher-student attitude, school administration in terms of leadership styles in creating an environment that motivates teachers to perform better in addition as government support within the provision of funds classroom constructions, provision of trained and qualified teachers, and also the relevant and sufficient curricular. The study, therefore, assumes that if all the system associates interaction is positive by supporting the supply of quality education in secondary schools, then it's going to yet improve student’s performance. The leadership variety of the supervisor plays important roles in shaping teacher’s-student attitude towards the teaching professional and learning attitude; hence the correct leadership style harmonizes school stakeholders to just accept the school environment,

This conceptual framework depicts the interaction between independent and dependent variables. The independent variables include the adequacy of staffing status, availability, and adequacy of instructional materials, availability of physical facilities which are to be manipulated during the study to analyses factors affecting the availability of quality education in Secondary Schools. The successful implementation of the school Curriculum is that the positive academic achievement among middle school students. The underside line indicates the intervening variables like students' and teachers' attitudes and faculty administration which can also affect the tutorial achievement of Public Secondary Schools. If teachers aren't motivated positively, they're going to not be ready to undertake the teaching and learning process willingly, hence may lead to low academic achievement.

Likewise, if students don't seem to be able to learn, though every need is in place, it should not give birth to improved academic achievement. The method of determining improved academic achievement in Secondary Schools requires teachers to be sufficiently trained, instructional materials to be available and adequate, enough and better physical facilities, positive attitudes inculcated to teachers and students, and also educational support to be sufficiently provided is also the induced factors to compel the system actors to supply the required results to the learners. The researcher, therefore, come into being to relate to a longtime body of information in an effort to hunt answers to questions raised and achieve objectives started out during the investigation of this study.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 Overview**

This chapter is anxious with methodological procedures through which the information relevant to the research problem are going to be collected. The chapter provides an account of the study approach, study area, research design, target population, sampling procedures, and instruments utilized in data collection. It also covers the validity and reliability of the instruments used, ethical consideration still as data analysis techniques.

**3.2. Study Area**

The study was conducted in Karatu District Council which is among the seven councils in Arusha Region. The District has 32 Public Secondary Schools, and administratively is split into 4 divisions, 14 wards, 57 registered Villages, and 262 sub Villages and occupies a part of 300 square kilometers. Geographically, Karatu District Council lies between between Latitudes 3º10'4º00'Sand Longitudes 34º47'E-35º56'E, 3605 East and Latitude 3705 South of the Equator. On the North the District borders Ngorongoro District, On the East it borders Monduli and Babati, and to the South, it borders Mbulu and on the Western side, it borders Iramba and Meatu District.

**Figure 3.1: Location of the Study Area**

**Source:** URT, (2012)

**3.2.1 Climate**

The climate varies from one area to the other within the district. In Eyasi Basin the annual rainfall received is between 300mm/ and 400mm/per annum while in Karatu town it ranges between 900mm/ and 1000mm/ each year. In April the rain intensity becomes very high enough to cause great erosion. In most places, short and long rains are separated by one or two months of slightly less rainfall. The District experiences four seasons which are short rainy-extended from November to December, short and hot dry period from January to March and mid-May while the long and cold seasons occur from June to October

**3.2.2 Population**

According to the National Population and Housing Census of August 2012, Karatu District encompasses a total population of individuals 230,166 of which 112,397 are female and 117,769 are male.  There are 45,130 households and a growth of three.1%. The projected population for 2016 is 4% while the population density is 73.4 People per sq. Km in 2012 (URT, 2013).

**3.2.3 Economic Activities**

The District contains a relatively well-developed agricultural base of intensive smallholder production of food crops and estate production of cash crops like coffee and onion for export. The most economic activities carried in Karatu is Agriculture and livestock keeping which occupies quite 85% while others involve petty business like tourism, and retail shops. The District is rich in natural resources from its mountain, coastal and marine habitats. The District has a district of 102,573 ha that's good for Agricultural activities with 5535 Ha the land potential for irrigation. The resource and placement advantages must be put in use for poverty alleviation and fostering the socio-economic development of a growing population. Appropriate investments are necessary to attain economic process, improve household income and also the well-being of individuals.

**3.3 Research Design**

The selection of an approach to be used in any research normally rests on the character of the question into consideration and therefore the objectives of the research study being undertaken (Best and Kahn, 1993). This research study was conducted employing a descriptive survey because the look deals with an in-depth multi-faceted investigation using both quantitative and qualitative approaches within the examination othe only social phenomenon (Scheerens, 2000). It also involved antensive review of the literature to spot the context, nature, and procee through which factors affecting the supply of Quality Education in Secondary Schools in Karatu District in Tanzania.

**3.4 Study Population**

Karatu District is among seven Districts of the Arusha Region with a complete population of individuals 230,166 of which 112,397 are female and 117,769 are male. There are 45,130 households and a growth of three.1%. The projected population for 2016 is 4% while the population density is 73.4 People per sq. Km in 2012 (URT, 2013).

**3.5 Sample and Sampling Procedures**

To obtain the participating Council and schools a straightforward sampling was employed in which a Fishbowl Container technique was adopted. During this case, 7 District Councils in Arusha Region were written on the pieces of paper and mixed and thereafter Karatu District was selected and also the identical technique was also accustomed obtain participating schools. The choice principle was to confirm that every council and school had an equal chance of being selected and thus to avoid any bias and to make sure that results are reliable allows generalization (Gray et al, 2007). The sample size for this study was 237 and was obtained through the employment of Taro formulae.

Therefore both probability and non-probability sampling techniques were adopted to pick out the sample size that was utilized in the present study. In line with Mertens (2005), simple sampling ensures that every member of the population has an equal and independent chance of being selected. Simple sampling was accustomed  to select 16 out of 32 Public secondary schools. Karatu District Council incorporates a population of 594 teachers within which a sample size of 205 was drawn to urge a representative to the study by the employment of Taro Formulae. However, to induce the top of 16 schools and one District Educational Officer and one School Inspector, one Regional Education Officer, purposive sampling was employed. The guide gives sample sizes for various population sizes up to 300,000,000 at different confidence levels. The study adopted the proposed sample size at a 95% confidence level and a 5% margin of error.

Only teachers who teach in Secondary Schools were selected to participate during this study. To be more specific, the sample size for this study supported the mathematic model by Taro Yamani (1964):-

n= N/1+N (e) 2

where,
n= Sample Size

N= total population size which is 594

e=Level of significance which is (0.05)

t=constant

Therefore, the applying of the above model/ formulae by Taro (1964) are going to be as follows:-

n = 594/ 1+594 (0.05)2

= 594/1+594 \*0.0025

= 594/ 2.61 = 239.45which is approximately to be 205

**Table 3.1: Sampling Frame**

| **S/N** | **Pop Category** | **Target Population** | **Sample Size** |
| --- | --- | --- | --- |
| 1. | Teachers | 594 | 205 |
| 2. | District Education Officer | 1 | 1 |
| 3. | School Inspector | 3 | 1 |
| 4. | School Board | 26 | 6 |
| 5. | Ward Education Coordinator | 14 | 4 |
| 6. | Regional Education Officer | 1 | 1 |
| 7. | District Executive Director | 1 | 1 |
| 8. | Teachers Association | 2 | 2 |
| 9. | The Head Teachers/Mistress | 32 | 16 |
|  | **TOTAL** | **676** | **237** |

**Source:** Fieldwork, (2020)

**3. 6 Data Collection Methods**

According to Hillway (1995), the selection of techniques to be utilized in the study is dictated by research design, objectives, and questions. Therefore, a good range of research instruments was designed and utilized in data collection, namely, questionnaires, interviews, and documentary sources.

**3.6.1 Questionnaire**

The questionnaire is one among the foremost widely used techniques in research for obtaining information from subjects (Kothari, 2002). per Best and Kahn (2006), a questionnaire could be a set of questions addressing some topic or related group of topics, given to a specific group of people to collect data on an issue into consideration. Travers (2004) observes that questionnaires, despite their risks in data collection, are useful and handy because they're relatively economical, can ensure anonymity and collection of data from respondents in a very relatively short time, and while maintaining confidentiality further as freedom.

During this study, the questionnaire comprised of closed-ended questions. Closed-ended questions elicited specific information from respondents regarding the matter under investigation. For these reasons, the 237 questionnaires were administered to 237 sampled teachers and other stakeholders from the respective secondary schools and also the district officials. The questionnaires were composed of 5 different sections. Section I consisted of questions regarding the background and demographic information of the respondents. Section II focused on questions regarding objective much loved (Adequacy of Staffing). Section III focused on the questions regarding objective II (Availability and adequacy of instructional materials). Section IV targeting the questions referring to objective number III (availability adequacy of physical infrastructure facilities). Section V focused on objective number IV (Perception of stakeholders on factors for Quality Education).

**3.6.2 Interview**

This is a guided set of questions administered through spoken language in a very face-to-face relationship between a researcher and respondents (Travers, 2004). Lichtman and Cech (2006) assert that one amongst the benefits of the interview is that it allows for greater depth than is that the case with other methods of knowledge collection. The interview is flexible and therefore the opportunity to restructure the question is usually there. Yet, problems will be controlled effectively as they arise, with no difficulty of missing returns and non-response generally remaining very low (Kothari, 2002). The interviews therefore can help the interviewer to seek clarification and/or confirmation regarding information obtained through a questionnaire. During this study semi-structured interview was administered to 16 Headmasters/Mistresses, 1 District Education Officer, 1 Regional Education Officer, 1 School Inspector, 2 representatives from Teachers Association, 3 board of education representatives, and three Ward Education Coordinators.

**3.6.3 Document Review**

Document review in research could be a way of collecting data by reviewing existing documents. The documents could also be internal to a program or organization (such as records of what components of quality education similarly as what entails of things for educational achievement. Documents to be reviewed could also be textual matter or electronic and should include reports, program logs, performance ratings, funding proposals, meeting minutes, newsletters, and also the NECTA results for Tanzania and Karatu District specifically. Documentary techniques enable the researcher to travel through the documents associated with the issues under investigation for instance education policy guidelines, NECTA results for the past seven (7) years for Karatu to ascertain the existence of the low academic achievement.

**3.7 Reliability of Instruments**

Reliability refers to the degree to which measures are free from random error and so yield consistent results (Dash, 2003). Sekaran (2003) affirms that the reliability of a measure is a sign of the steadiness and consistency with which the instrument measures the concept and helps to assess the goodness of the measure. Thus the extent to which any measurement procedure produces consistent results over time and an accurate representation of the overall population under study is spoken as reliability. This study used Cronbach’s alpha as a measure of internal consistency. Cronbach’s Alpha may be a reliability coefficient that indicates how well items in an exceedingly set are positively correlated to 1 another (Sekaran, 2003).

Kothari, (2002), identified that coefficient alpha could be a measure of internal consistency supported the formula α= rk/ (I + (K-I) r), where k is that the number of variables within the analysis and r is that the mean of the inter-item correlation. However, they caution that the alpha value (r) is inflated by a bigger number of variables so there's no set interpretation on what's acceptable. Nevertheless, it's advisable that a rule of thumb applies to most situations is given to the suitable value of alpha as:

α > .9 – excellent

α > .8 – good

α > .7 – acceptable

α > .6 – questionable

α > .5 – poor

α < .5 –

unacceptable

**3.7.1 Pilot Study**

To test reliability a pilot study was then conducted on 20 teachers on the four variables in a very population with similar characteristics to the target population. The pre-test group was kind of like the sample that the questionnaires tried to deal with it but absolutely was not involved within the current study. The aim of the exercise was to supply a check on the feasibility of the proposed procedure for coding data before the complete exercise begins. Consequently, the exercises have helped to shed light on flaws and ambiguities which may be encountered within the study.

The analysis was done through Statistical packages (SPSS) (formerly referred to as Statistical Package for Social Sciences) version 20.0, and acceptable reliability was set to be a minimum of 0.7 Cronbach’s Alpha. As Table 3.4 indicates, reliability for staffing was 0.824; for the fabric was 0.849, for physical infrastructure was 0.824, for quality of education was 0.891. This suggests that everyone items within the questionnaire were reliable since they produced the coefficient alpha (r) value of 0.847 that was above the suitable level.

**Table 3.2: Summary of Reliability Test from Employee Responses on Scale Items**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SN** | **Variable** | **No. of Items** | **Cronbach’s Alpha** | **Interpretation** |
| 1 | Staffing Status | 6 | 824 | Reliable |
| 2 | Materials | 7 | .849 | Reliable |
| 3 | Physical Infrastructure | 7 | .824 | Reliable |
| 4 | Quality of Education | 6 | .891 | Reliable |

**Source:** Fieldwork, (2020)

From the literature, an alpha of 0.7 or above is taken into account to be reliable as suggested by many researchers (Kumar, 2005). Sekaran (2003) also affirms that normally, reliabilities of the 0.7 range are considered acceptable and over 0.8 is good. During this study, the Cronbach’s alpha coefficient values ranged from an occasional of .824 to a high of .891 with an overall Cronbach’s alpha coefficient value of .847. Thus about the individual scale items in Table 3.4, the Cronbach’s alpha coefficients (r) obtained for the varied scales which was mainly 0.847 was considered acceptable in any research study.

**3.7.2 Validity of Instruments**

Research instruments are valid if they measure what they purport to live, that is, fulfilling the function that they're being employed. After the look, the questionnaires got to supervisors and experts for his comments and suggestions. This was done to confirm refinement and content validity. Whilst testing validity with experienced researchers is crucial, it absolutely was important to pre-test instruments on potential respondents before actual data collection. Hence a pre-test was administrated in Monduli District that's like the target population to arrange the collection instruments. The organization within the pre-test wasn't included within the final sample. The pre-test was enabled the researcher to test the validity of the instrument of knowledge that was collected. It had been expected to enable the researcher to assess the clarity of the questionnaires. The items found to be superfluous and misunderstood were modified to enhance the standard of the research instrument, thereby increasing its strength and validity.

**3.8 Ethical Considerations**

The respondent’s identities were protected and were informed of their freedom to say no from giving responses to questions about which they feel uncomfortable. Also, to assure the respondent's maximum confidentiality a transmitted letter clarifying the aim of the research was supplied to the authority and also the authorizing letter from the authority was made available to the respondents of the respective Council.

**3.9 Data Analysis**

Both qualitative and quantitative data were collected through the three methods for data collection namely questionnaires, interviews, and documentary sources. Data analysis involved the organization and interpretation of all collected data to simplify and present them within the best way possible for straightforward interpretation and understanding the analysis entailed analyzing numbers a couple of situation by choosing specific aspects of that situation. Descriptive statistics were accustomed to analyze the quantitative data in terms of frequencies, percentages, mean scores, and Standard Deviations.

Statistical Packages Solution (SPSS) (formerly referred to as Statistical Package for Social Sciences) version 20.0 was employed to further analyze the information. Also, tables were used for data presentation while the correlation was accustomed to test the strength of the connection between the 2 variables. Moreover, qualitative data were analyzed using themes emerging from the interviews. The study findings were presented, analyzed, and interpreted sequentially following research questions with meanings and inferences drawn from the findings as compared with concepts within the literature.

# CHAPTER FOUR

# FINDINGS AND DISCUSSIONS

**4.1 Overview**

This chapter presents the results of the study supported by the set objectives. Among the problems discussed are the factors affecting the availability of quality education in secondary schools in Karatu District in Tanzania. Thereafter, the analysis of information was guided by research questions that guided the study. Each research question had corresponding questionnaire items within the questionnaire, which was the most important instrument for data collection.

Furthermore, the analysis of information was divided into three major sections: the primary section restricted the demographic characteristics of respondents while the second treated descriptive statistics. The third section finally presents the results of the Pearson Product Moment coefficient of correlation which was accustomed to tests the hypotheses of the study.

**4.2 Response Rate**

Two hundred and thirty-seven (237) respondents were targeted for this study, hence the identical numbers of questionnaires were sent out. However, out of this number, 172 questionnaires were received out of which 65 were poorly or inappropriately filled and were therefore not employed in the analysis. In all, a complete number of 172 questionnaires were used and this represents 72.57% because the response rate. The response rate of 72.57% was deemed sufficient for both the analysis and interpretation of the information and hence employed in that regard. Table 4.1 depicts the distribution of the responses supported the assorted ranks sampled within the target population.

**Table 4.1: Distribution of Total Responses**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Rank** | **Total Population** | **Target** **Sample** | **Actual** **Response** | **Response** **Percentage** |
| Top Management  | 37 | 14 | 14 | 1 |
| Teachers | 594 | 205 | 142 | 69.26 |
| Other respondents | 45 | 18 | 16 | 2.31 |
| **Total** | **676** | **237** | **172** | **72.57** |

**Source:** Fieldwork, 2020

**4.3 Socio-Demographic Characteristics of Respondents**

Descriptive statistics like frequencies and percentages regarding the socio-demographic characteristics of respondents are presented in Table 4.2.

**Table 4.2: Demographic Characteristics of Respondents**

| **SN** | **Category** | **Frequency** | **Percent** |
| --- | --- | --- | --- |
| 1. | **Gender of Respondents**MalesFemales**TOTAL** | 12052**172** | 69.830.2**100** |
| 2. | **Class Size**40 and Below41 to 60Above 60**TOTAL** | 528634**172** | 30.250.019.8**100** |
| 3. | **Level of Education**PGDE or MastersBachelor DegreeDiplomaForm SixMissing**TOTAL** | 61026013**172** | 3.559.334.90.61.7**100** |
| 4. | **Working Experience**5 Years or below6 to 10 years11to 15 yearsOver 15 Years**TOTAL** | 49722724**172** | 28.541.915.714.0**100** |

 **Source**: Fieldwork, 2020

As seen in Table 4.2, respondents were categorized in step with gender, size of their classes, level of education, and dealing experience. As far as gender is concerned, male respondents were 120 (69.8%) while their female counterparts were 52 (30.2%).This implies that majority of respondents were males. This is often not surprising because the general public want to figure within the public service thanks to the protection of employment and also the favorable pension scheme that gives support just in case of disability, death, and other benefits. On the contrary, this might also suggest that there may well be some conditions that aren't favorable to female counterparts to figure during this particular District.

That’s why Irfan, et al. (2009) suggested that organizations should take strategic initiatives to recruit and retain talented women by creating change in work-life balance and other related issues that are important to them. This could suggest that there's a desire to develop organizational culture compatible with societal values that supports and motivates more women to participate within the teaching profession.

Furthermore, the researcher was also interested to work out the scale of classes teachers under investigation taught. Fifty-two teachers 52 (30.2%) taught classes of 40 and below students, 86 (50%) taught classes of 41 to 60 students while 34 (19.8%) taught classes of above 60 students. This means the variation of sophistication sizes in schools under investigation. While the recommended number of learners in every class is 40, the bulk of teachers indicated that their classes had quite 40 students.

Likewise, the extent of education was another criterion within which teacher respondents were categorized accordingly. Table 4 indicates, 6 (3.5%) teachers had PGDE or Masters Qualification, 102 (59.3%) had a bachelor degree, 60 (34.9%) had diploma qualification, and 1 (0.7%) was a form six leaver while 3 didn't indicate their education level. Therefore, the bulk of teacher respondents their education level. Therefore, the bulk of teacher respondents were degree holders as needed within the Education and Training Development Policy.

On the contrary, those with diploma qualifications were 60 (34.9%) is that the majority thought to be under-qualified. This is often because, the entry point qualification for civil servants allowed to show in secondary schools within the country must be an academic degree, and in itself, it will be inferred that the bulk of civil servants under study were under-qualified. This concerns the government to upgrade these civil servants' skills through regular degree programs to extend their performance. This is often in line with the views of Kim & Ployhart (2013) who admitted that developing staffs through both short and long-term training is of prerequisite important to equip them with the specified professional qualifications.

Finally, the working experience was another demographic category. As Table 4.2 indicates, 49 (28.5%) teachers had the teaching experience of 5 years or below, 72 (41.9%) had experience of 6 to 10 years, 27 (15.7%) had the experience of 11 to fifteen years and 24 (14%) had the experience of over 15 years. This means that there was a variation in teaching experience among teachers under investigation. This illustrates a pyramid structure which is sometimes the norm in organizations since the best rank with enough experience is sometimes made from only a few members. This is often contrary to the study by Powel et al. (2014) who found that better staff experiences are related to better outcomes for workers and patients additionally as a lower level of absenteeism.

**4.4 Factors Affecting the Availability of Quality Education**

This section presents the results of the analysis supported the set of objectives. It provides employees’ perceptions on the factors affecting the availability of Quality Education on teachers- students’ performance in three key areas namely adequacy of staffing status, sufficient instructional materials, and adequacy of physical facilities. Respondents were asked to point the extent to which they agreed to statements regarding factors affecting the availability of Quality Education constructs undertaken by their organizations on a four-point Likert(1 = strongly disagree – 4 = strongly agree).

**4.4.1 Staffing of the Teachers**

Staffing of teachers was measured in terms of Teacher-Student Ratio and Demand and provide of Teachers in Tanzania. This is often because; teachers for years are considered the essential catalysts for school improvement. They're the drive and main resource within the development and academic growth of learners as they're sources of information and agents of change (Jimdamva, 2012). As such, teachers play a pivotal role in helping the learners to direct their potential goals to attain their destiny.

As indicated in Table 4.3, the general mean score for teachers was 2.54 which falls within the agreement zone (2.50-3.49), denoting that teachers generally agreed that staffing status in their schools is adequate. Looking into specific items within the questionnaire, teachers agreed that their schools have teachers for guidance and counseling, sports, and games. This can be very worth noting as guidance and counseling is a necessary ingredient for appropriate students’ behavior and sports and games are essential for condition of the learners.

However, the mean score for teachers’ response to the remainder of the things within the questionnaire was between 1.50 and 2.49 denoting that teachers disagreed that their schools have an adequate number of teachers, teachers have manageable teaching load, teachers are equally distributed per subject, which each subject encompasses a sufficient number of teachers. Therefore, very much like schools under investigation have teachers for sports, games, guidance, and counseling programs, the quantity of teachers isn't adequate enough to cater for the necessity of each subject, something which leads teachers to be overloaded with teaching assignments.

To examine how the staffing of teachers affects quality of education in public secondary schools in Karatu District, respondents were needed to rate five questionnaire items in Table 4.3 employing a four-point Likert scale under the subsequent interpretations as guided by the subsequent research question: 1: *How does staffing of teachers affect* *quality of education in public secondary schools in Karatu District****?***

3.50-4.00 = strongly agree

2.50-3.49= agree

1.50-2.49 = disagree and

1.00-1.49 = strongly disagree

**Table 4.3: Staffing of Teachers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SN** | **Item** | **Mean** | **Std Dev** | **Interpretation** |
| 1. | My school has a teacher for guidance and counselling | 2.90 | .88030 | Agree |
| 2. | My school has a teacher for sports and game | 2.81 | 1.03293 | Agree |
| 3. | My school has an adequate number of teachers | 2.48 | .80549 | Disagree |
| 4. | Teachers have a manageable teaching load | 2.44 | .83170 | Disagree |
| 5. | Teachers are equally distributed per subjects | 2.41 | .85432 | Disagree |
| 6. | Each subject has a sufficient number of teachers | 2.14 | .77051 | Disagree |
|  | **Overall Mean** | **2.54** | **.62831** | **Agree** |

**Source:** Fieldwork, 2020

From Table 4.3, the mean scores for the responses suggest respondent’s neutrality (i.e. neither agree nor disagree) to the statements on the staffing of teachers in their organizations. However, the mean score for teachers’ response to the remainder of the things within the questionnaire was between 1.50 and 2.49 denoting that teachers disagreed that their schools have an adequate number of teachers, teachers have manageable teaching load, teachers are equally distributed per subject, which each subject encompasses a sufficient number of teachers.

Therefore, very much like schools under investigation have teachers for sports, games, guidance, and counseling programs, the amount of teachers isn't capable to cater for the necessity of each subject, something which leads teachers to be overloaded with teaching assignments. These findings concur with the study of URT (2010) discovered that the explanation for poor performance in form four examinations is attributed to an acute shortage of teachers and unequal distribution of teachers.

Likewise, the essence of staffing of teachers in their school environment was further delivered to view by most Headmasters’ interviewees who admitted that they need inadequate teachers to cater for all subjects. One Headmaster was quoted saying that:-

*“I have a shortage of teachers in various subjects like sciences, guidance, and counseling and in itself; it makes it impossible for a student to end the syllabi before they sit for final examinations. This might be because several teachers training institutions offering science and guidance and counseling subjects are inadequate to carter for the prevailing demand” (Interview with the pinnacle Masters, April 2020).*

The above quotation and findings could mean that respondents believe that insufficient supply of teachers especially in science subject is also one amongst the responsible factors for the poor performance of learners in their final National Examinations. This suggests that the bulk of teachers in schools under investigation perceived that the amount of teachers isn't adequate in their particular schools. This case concurs with the findings of Naisujaki et al. (2017) quoting Mosha (2014) who found that in most of the secondary schools in Tanzania, especially community built schools; there's the inadequacy of teaching staffs to be ready to assist the implementation of education to the increasing number of learners currently enrolled. This is often a really bad signal to the education sector to undertake to extend the enrolments of teachers especially sciences and guidance and counseling in Teachers college in addition as within the University offering Education.

**4.4.2 Availability of Instructional Materials on Quality Education**

This research question needed the extent to which the instructional materials are enough in public secondary schools in Karatu District through the teachers from the schools being studied. As observed in Table 4.4, the mean score for teachers’ responses during this category was between 1.50 and 2.49 which implies teachers generally disagreed with the things within the questionnaire. Looking into specific items within the table, we come to understand that teachers agreed that schools have such resources as charts, maps, and globes for teaching and learning.

To identify the availability of enough instructional materials in public secondary schools in Karatu District, respondents were needed to rate five questionnaire items in Table 4.4 employing a four-point Likert scale under the subsequent interpretations as guided by the subsequent research question 2: *To what extent are the instructional materials enough in public secondary schools in Karatu District****?***

3.50-4.00 = strongly agree

2.50-3.49= agree

1.50-2.49 = disagree and

1.00-1.49 = strongly disagree

From Table 4.4, one can declare that teachers disagreed that schools have reference books (M=2.28, SD=.85735) and that each subject has an adequate number of textbooks (M=2.06, SD=.72667). Furthermore, teachers disagreed that schools under investigation have modern facilities like computers and projectors for use during the teaching and learning process (M=1.99, SD=.87109). Therefore, schools under investigation seem to experience a scarcity of instructional materials for maximized teaching and learning efficiency as indicated in the overall mean average (M=2.15, SD=.60617).

**Table 4.4: Unavailability of Enough Instructional Materials**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SN** | **Item** | **Mean** | **Std Dev** | **Interpretation** |
| 1. | My school has such resources as charts, maps, and globes | 2.56 | .81881 | Agree |
| 2. | Apart from textbooks, my school has reference books | 2.28 | .85735 | Disagree |
| 3. | Each subject has an adequate number of textbooks | 2.06 | .72667 | Disagree |
| 4. | My school has an adequate number of textbooks | 2.05 | .76249 | Disagree |
| 5. | There are modern facilities like a computer for teaching and learning | 1.99 | .87109 | Disagree |
| 6. | The school has a projector for use in classes | 1.90 | .95057 | Disagree |
|  | **OVERALL MEAN** | **2.15** | **.60617** | **Disagree** |

**Source:** Fieldwork, 2020

The above findings confirm the study by Sumra and Rajani (2006) that discovered that community-built schools in Tanzania lack most of the important facilities like laboratories and teaching and learning materials. That is to say, insufficient availability of instructional and physical materials could be one of the important factors affecting the provision of quality education in Karatu District. Additionally, the essence of availability of instructional materials on the provision of quality education in schools was further brought to view by most interviewees who affirmed a serious shortage of instructional materials in schools under investigation as a key inhibiting factor to the achievement of quality education in the Country.

One Headmaster was quoted saying that:-

*“Teaching and learning materials are not sufficient especially for science and arts subjects, we don’t have things like reference books, textbooks and also teaching aids and this effect negatively in the poor performance of both teachers and students. As other interviewee insisted that, teachers are struggling much to find ways to help students understand with no reference books, no teachers guide, no textbooks, and no teaching aids, hence we are doomed to serious students’ failure.”* (Interview with Head Master, April 2020).

From the above quotation, one can declare that scarcity of teaching-learning materials could be a contributing factor to the provision of quality education in Public Secondary Schools in Karatu District Council.This is in line with the study by Nyamubi (2003) who opined that teaching materials are very important in the whole process of teaching and learning hence the shortage of them would affect negatively the smooth achievement of the objective of education.

## 4.4.3 Availability of Physical Facilities on Quality Education

The third research question is to what extent are the physical facilities available among public secondary Schools in Karatu District. The overall mean score for teachers in this category was between 2.50 and 3.49 which means teachers generally agreed with statements in the questionnaire. Particularly, they agreed that chalkboards are available and are readable, class spaces allow teachers’ movement from one student to another while classrooms have ideal sitting arrangements with a chair and a table for each student and those desks and chairs are good enough for effective learning.

To describe the adequacy of essential physical facilities, respondents were needed to rate five questionnaire items in Table 4.5 using a four-point Likert scale under the following interpretations as guided by the following research question **3**: ***To what extent are the essential physical facilities present in public secondary schools in Karatu District?***

3.50-4.00 = strongly agree

2.50-3.49= agree

1.50-2.49 = disagree and

1.00-1.49 = strongly disagree

**Table 4.5: Availability of Physical Facilities on Quality Education**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SN** | **Item** | **Mean** | **Std Dev** | **Interpretation** |
| 1. | Chalkboards are visible and readable | 2.90 | .78182 | Agree |
| 2. | Class space allows teacher’s movement from one student to another | 2.86 | .83984 | Agree |
| 3. | Classrooms have ideal sitting arrangement | 2.77 | .73803 | Agree |
| 4. | Classrooms have a chair and table for each student | 2.73 | .84421 | Agree |
| 5. | Desks and chairs are good enough for effective learning | 2.65 | .88102 | Agree |
| 6. | The laboratory has adequate facilities | 2.37 | .87674 | Disagree |
| 7. | The School library has adequate chairs and tables | 1.82 | 1.0050 | Disagree |
|  | **Overall Mean** | **2.59** | **2.5893** | **Agree** |

**Source:** Fieldwork, 2020

From Table 4.5, one can declare that teachers’ mean score for two items was between 1.50 and 2.49 meaning disagreement. This means that teachers disagreed that laboratories have adequate facilities and that the school library has adequate chairs and tables (M=2.37, SD= .87674). Therefore most of the physical infrastructure items are identified by teachers to be available (2.50-3.49), such items like laboratory facilities and tables and chairs for libraries are available but not adequate.

Consequently, from the above findings, it is worth noting that, the scarcity of selected physical facilities can therefore be the contributing major factor hindering the provision of quality education in Public Secondary Schools in Karatu District. As such, the finding concurs with the findings from the study by Odeh (2015), who discovered physical facilities such as classrooms, furniture such as desks and chairs, libraries, and laboratories as among the contributing factor affecting academic performance among students in Public Secondary Schools. On the other hand, the context relating to school physical facilities, the environment in which the students learn is very crucial and without a suitable environment, effective learning cannot take place. This is in line with the study by Khan and Iqbal (2012) who acknowledged that adequate and quality school physical facilities are basic ingredients for the provision of quality education and to achieve the intended goal of the school program.

Moreover, the essence of availability of physical facilities on the provision of quality education in schools was further brought to view by most interviewees who affirmed a serious shortage of some physical facilities in schools under investigation as a key inhibiting factor to the achievement of quality education in the Public Secondary Schools in the Country. District Education Officer was quoted saying that:-

*“Physical facilities like classrooms, desks are not enough at all, also the library is available but not big enough to accommodate that big number of students as well the shortage of classrooms being not enough to have leads many students attending a lesson in a single congested room of which a teacher cannot afford to manage them properly.*” (Interview with District Education Officer, April 2020).

From the above quotation, one can conclude that scarcity of physical infrastructure could be a contributing factor to the provision of quality education in Public Secondary Schools in Karatu District Council.This is in line with the study by Hakielimu (2011) who agreed that most community secondary schools in Tanzania particularly those in rural areas are in a disadvantaged group because they lack adequate physical facilities and human resources. Most of the community secondary schools are anticipated to have inadequate classrooms and this eventually affects negatively the provision of quality education.

## 4.4.4 Perception of Teachers on the Standards of Quality Education

This research question intended to examine the perceptions of teachers on the standards of quality education among public secondary schools in Karatu District. As seen in Table 4.6, the overall mean score is 2.72 which denotes agreement. Particularly, the mean score for teachers’ response to each item in the table is between 2.50 and 3.49 which means, teachers under investigation agreed with all items under investigation.

As such, to determine the perception of employees on availability of physical infrastructure materials, questionnaire respondents were needed to rate five questionnaire items in Table 4.6 using a four-point Likert scale under the following interpretations as guided by the following research question ***4****:****What are the perceptions of teachers on the standards of quality education among public secondary schools in karatu district?***

 3.50-4.00 = strongly agree

2.50-3.49= agree

1.50-2.49 = disagree and

1.00-1.49 = strongly disagree

**Table 4.6: Teacher’s Perception on Quality of Education**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SN** | **Item** | **Mean** | **Std Dev** | **Interpretation** |
| 1. | There is a high chance for students to be selected for further studies | 2.88 | .71906 | Agree |
| 2. | Students from this school are well prepared for future career | 2.80 | .59879 | Agree |
| 3. | Students from this school are well prepared for self-reliance | 2.70 | .72854 | Agree |
| 4. | I am proud of the quality of education at this school | 2.70 | .75251 | Agree |
| 5. | Students from this school are well prepared for hands-on activities | 2.69 | .75628 | Agree |
| 6. | Students from this school are well prepared for self-employment | 2.52 | .77202 | Agree |
|  | **Overall Mean** | **2.72** | **.57852** | **Agree** |

**Source:** Fieldwork, 2020

From Table 4.6, the mean scores for the responses suggest respondent’s agreement (i.e. agree) to the statements relating their perception on quality education offered by their schools. Particularly, the table indicates that they think that there are high chances for school kids to be selected for further studies (M=2.88, SD=.71906), and also students from their schools are well prepared for a future career (M=2.80, SD=.59879). Thus, the mean from all the six items within the questionnaire because the perception of teachers on quality education was agreement (M=2.72, SD=.57852).

Consequently, from the above findings, it's worth noting that, teachers perceived the education offered to arrange students for future advancement in most parts of their life like further studies, future careers, and self-reliance, in addition as teachers, agreed that students are well prepared for hands-on activities and self-employment. This is often in line with the study by Kihuria (2015) who opinioned that the aim of education always is to equip the citizenry with values, skills, and knowledge to reshape their society and eliminate inequality further as enable one to be self-reliant within the society. This can be because education helps an individual develop his/her capabilities, attitudes, and behavior that's acceptable to society to assume higher advancement.

Accordingly, the supply of quality education may be a priority that each country will aspire to incorporate amongst the national goals of education (Mphale and Mhlauli, 2014). In other words, the good thing about having quality education is that it can adapt to the changing needs of the country because the world changes and spearhead the event of human resources and also the country’s economy.

Likewise, the essence of quality education in Secondary Schools in Karatu was further dropped at view by Ward Education Coordinator’ interviewees who admitted that inadequate resources like teachers, books, and laboratories hinder greatly the supply of quality education. One Ward Education Coordinator was quoted saying that:

*“Where there's a severe shortage of teachers especially sciences, shortage of classroom, crowded classes where teachers cannot manage the learners and therefore is like, there's no way you would achieve quality education. I mean to form every student understand in line with the crowded classes where sometimes there aren't any chairs is extremely difficult”* (Interview with the Ward Education Coordinator, April 2020).

The above quotation and findings confirm the study by Hakielimu (2011) who agreed that the majority community secondary schools in Tanzania particularly those in rural areas are at a disadvantaged group because they lack adequate physical facilities and human resources. Most of the community secondary schools are anticipated to own inadequate classrooms and this eventually affects negatively the supply of quality education.

**4.5 Testing of the Study Hypothesis**

The last section of this study was to check the hypothesis between the independent variables over quality education. Hence, it absolutely was hypothesized that there's no significant relationship between quality of education and staffing status, instructional materials, and adequacy of physical infrastructure among Public Secondary Schools in Karatu District. A Pearson Product Moment model was accustomed to predict the results of staffing status, instructional materials, and adequacy of physical infrastructure on quality education. The Pearson Product Moment was adopted because it had been believed to be a robust parametric statistical tool accustomed to measure existing relationships between variables at ration or interval scale that are continuous (Morgan et al. 2004).

To ascertain the relation of the study variables, the subsequent hypothesis stated within the null form was tested: H0= there's no significant relationship between quality of education and staffing status, instructional materials, and adequacy of physical infrastructure among Public Secondary Schools in Karatu District. This hypothesis was tested by the utilization of Pearson-product Moment coefficient of correlation as indicated in Table 4.7 and it had been further broken into five sub-hypotheses because the quality of education and staffing status, instructional materials, and adequacy of physical infrastructure were as follows:

**Table 4.7: Relationship between Quality of Education and Staffing of Teachers, Instructional Materials, and Adequacy of Physical Facilities**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **STAFFING** | **MATERIALS** | **PHYSICAL** | **QUALITY** |
| **STAFFING** | Pearson Correlation | 1 | .502\*\* | .502\*\* | .556\*\* |
| Sig. (2-tailed) |  | .000 | .000 | .000 |
| N | 172 | 172 | 171 | 170 |
| **MATERIALS** | Pearson Correlation | .502\*\* | 1 | .663\*\* | .541\*\* |
| Sig. (2-tailed) | .000 |  | .000 | .000 |
| N | 172 | 172 | 171 | 170 |
| **PHYSICAL** | Pearson Correlation | .502\*\* | .663\*\* | 1 | .542\*\* |
| Sig. (2-tailed) | .000 | .000 |  | .000 |
| N | 171 | 171 | 171 | 170 |
| **QUALITY** | Pearson Correlation | .556\*\* | .541\*\* | .542\*\* | 1 |
| Sig. (2-tailed) | .000 | .000 | .000 |  |
| N | 170 | 170 | 170 | 170 |
| \*\*. Correlation is significant at the 0.01 level (2-tailed). |

**Source:** Fieldwork, 2020

This research question was analyzed through Pearson Product Moment Correlational Coefficient as reflected in Table 4.7. The strength of correlations was interpreted as follows: Greater or Equal to 0.7 = Strong Relationship; Greater or equal to 0.5 = Moderate Relationship and lesser or Equal to 0.5 = Weak Relationship.

α > 0.7 – Strong Relationship

α > 0.5 – Moderate Relationship

α Less than 0.5 – Weak Relationship

Much as Table 4.7 indicates, the existence of multiple relationships among variables under investigation, the researcher sought to determine only those relationships between quality of education and independent variables. The table indicates that there's a major moderate and positive relationship between staffing status and quality of education (r=.556, Sig=o.01), between the standard of education and availability of instructional materials (r=.541, Sig=o.01), and between the standard of education and adequacy of physical infrastructure (r=.542, Sig=o.01).

For this reason, the null hypothesis is rejected and that we maintain that there's a big relationship between quality of education and also the independent variables. Therefore, the provision of instructional materials, adequacy of physical infrastructure, and availability of instructional materials positively affect the standard of education. This can be in line with the study by Khan and Iqbal (2012) who acknowledged that adequate and quality school physical facilities and staffing status are basic ingredients for the supply of quality education and to attain the intended goal of the school program.

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

**5.1 Introduction**

This chapter is furnished with the summary, conclusions, and suggestions for what measures are to be taken to enhance the performance of learners and teachers in Karatu District Council. The chapter further provides an account of the world for further research as generated by the present study.

**5.2 Summary of Findings**

The purpose of this study was to research the factors affecting the supply of Quality Education in Secondary Schools in Karatu District, in Tanzania. To realize this, four specific objectives were set and these were; to examine how the staffing of teachers affects quality of education, to identify the availability of enough instructional materials and essential physical facilities but also to examine the perception of teachers on the standards of education among public secondary schools in Karatu District. The study adopted a descriptive survey design and was undertaken in Karatu District Council in Tanzania. The study was administered in 16 out of 32 Public Secondary Schools in Karatu District Council. Simple random and purposive samplings were employed with a sample size of 237 respondents.

The target population was 676 comprising mainly of employees within the executive department in Karatu District. A sample size of 237 was decided using Yamani’s mathematical formulae. Both simple random and purposive sampling was adopted to pick the specified sample from each department. Data were collected mainly from primary sources using questionnaires and interviews while a bit part constituted document sources. Both descriptive and inferential statistics were used to analyze the information. Inferential statistics in terms of Pearson Product Moment Correlational Coefficient analysis was adopted to check how well variable constructs could positively impact quality education.

Likewise, descriptive statistics were accustomed to analyze data collected from the interview by the utilization of narrative reporting and deduced meaning. The study adopted Context, Input, Process, and merchandise (CIPP) Theory by Stufflebeam cited in Frye and Hemmer to grasp the factors affecting the availability of quality education in Secondary Schools in Karatu District. A pilot study of 30 teachers from Public Secondary Schools within the neighboring District of Monduli was done to check the reliability of instruments. Data collection was done through closed and open-ended questionnaires and semi-structured interviews.

Moreover, descriptive statistics in terms of frequencies, mean scores, percentages, and standard deviations were accustomed analyze quantitative data. Qualitative data was analyzed using themes emerging from the interviews.
The findings of this study highlight the very fact that inadequate teachers, instructional materials similarly as inadequate essential physical facilities are key factors affecting the supply of quality education in Secondary Schools in Karatu District Council, Tanzania. These are discussed as detailed below:

**5.2.1 The influence of Staffing of Teachers on Quality Education in Public Secondary Schools in Karatu District**

 Responses from several teachers interviewed suggested their neutrality (i.e. neither agree nor disagree) to the statements referring to the staffing status of teachers in their organizations. However, the mean score for teachers’ response to the remainder of the things within the questionnaire was between 1.50 and 2.49 denoting that teachers disagreed that their schools have an adequate number of teachers, teachers have manageable teaching load, teachers are equally distributed per subject, which each subject encompasses a sufficient number of teachers. Therefore, very much like schools under investigation have teachers for sports, games, guidance, and counseling programs, but the study findings revealed that the quantity of teachers isn't capable cater to the necessity of each subject, something which leads teachers to be overloaded with teaching assignments.

**5.2.2 Availability of Instructional Materials on Quality Education in Karatu District.**

From the study findings on the extent to which the instructional materials are enough in public secondary schools to promote quality education in Karatu District, one can declare that teachers disagreed that schools have reference books (M=2.28, SD=.85735) which, each subject has an adequate number of textbooks (M=2.06, SD=.72667). Furthermore, teachers disagreed that schools under investigation have modern facilities like computers and projectors to be used during the teaching and learning process (M=1.99, SD=.87109).

Therefore, schools under investigation seem to experience a scarcity of instructional materials for maximized teaching and learning efficiency as indicated within the overall mean average (M=2.15, SD=.60617). That’s to mention, insufficient availability of instructional and physical materials may well be one in every of the important factors affecting the availability of quality education in Karatu District.

**5.2.3. Availability of Physical Facilities on Quality Education in Secondary Schools in Karatu District**

The third research question asks to what extent are the physical facilities available among public secondary Schools in Karatu District and the way it affects the standard of education offered. The general mean score for teachers during this category was between 2.50 and 3.49 which imply teachers generally agreed with statements within the questionnaire.

Particularly, they agreed that chalkboards are available and are readable, class spaces allow teachers’ movement from one student to a different while classrooms have ideal sitting arrangements with a chair and a table for every student and people desks and chairs are okay for effective learning. The mean score that was between 1.50 and 2.49 suggests teachers’ disagreement with some items within the questionnaires. This implies that teachers disagreed that laboratories have adequate facilities which the varsity library has adequate chairs and tables (M=2.37, SD= .87674).

Therefore, very much like most of the physical infrastructure items are perceived by teachers to be available (2.50-3.49), such items like laboratory facilities and tables and chairs for libraries don't seem to be adequate. Consequently, from the above findings, it's worth noting that, the scarcity of selected physical facilities can therefore be the contributing major factor hindering the supply of quality education in Secondary School in karatu district.

**5.2.4 Perception of Teachers on the Standards of Quality Education**

This research question intended to examine the perceptions of teachers on the standards of quality education among public secondary schools in Karatu District. The findings from this study show that the mean scores for the responses suggest respondent’s agreement (i.e. agree) to the statements relating their perception on quality education offered by their schools. Particularly, they think that there are high chances for students to be selected for further studies (M=2.88, SD=.71906), and also students from their schools are well prepared for a future career (M=2.80, SD=.59879). Thus, the overall mean from all the six items in the questionnaire as the perception of teachers on quality education was agreement (M=2.72, SD=.57852).

Consequently, from the above findings, it is worth noting that, teachers perceived the education offered to prepare students for future advancement in most of their life such as further studies, future careers, and self-reliance as well as teachers agreed that students are well prepared for hands-on activities and self-employment. Accordingly, in other words, the benefits of having quality education are that it can adapt to the changing needs of the country as the world changes and spearhead the development of human resources and the country’s economy.

Finally, inferential statistics in terms of Pearson Product Moment Correlational Coefficient analysis was adopted to test how well the Independent Variables/constructs could predict the provision of Quality Education. Both of the two hypotheses were rejected. This is because, much as Table 4.7 indicates, the existence of multiple relationships among variables under investigation, the researcher sought to establish only those relationships between quality of education and independent variables. The findings indicate that there is a significant moderate and positive relationship between staffing status and quality of education (r=.556, Sig=o.01), between the quality of education and availability of instructional materials (r=.541, Sig=o.01), and between the quality of education and adequacy of physical infrastructure (r=.542, Sig=o.01).

For this reason, the null hypothesis is rejected and the study maintains that there is a significant relationship between quality of education and the independent variables. That is to say, availability of instructional materials, adequacy of physical infrastructure, and availability of instructional materials positively affect the quality of education offered. In conclusion, the full interpretation and discussion of the study findings have been done in chapter four and chapter five provides among other things a summary of the main findings as well as conclusions and recommendations.

## 5.3 Conclusions

The study sought to examine factors affecting the provision of quality education and has identified three constructs that significantly affect the provision of quality education. The study also sought to examine the intervening effect of interpersonal relationships of supervisors in the provision of education on quality education. The conclusions drawn from the study are discussed below.

First and foremost, conclusions from the study point to the fact that sufficient staffing of teachers, availability of selected instructional materials as well as the availability of physical facilities are important determinants that indeed influence the provision of quality education in the teaching profession in the public service of Tanzania. Thus, inadequate teachers affect negatively the teacher-student ratio as compared to policy of 1:40 in a class.

Secondly, the study discovered and concludes that most of the schools under investigation have sufficient teachers for sports, games, guidance, and counseling programs while the number of science teachers is not adequate to cater to the need of every subject, something which leads teachers to be overloaded with teaching assignments. Although, though schools have such resources as charts, maps, and globes for teaching and learning, schools are missing reference books and specific subjects do not have an adequate number of textbooks. Furthermore, schools are missing modern facilities like computers and projectors for use during the teaching and learning process.

Moreover, much as chalkboards available are readable and class spaces allow teachers’ movement from one student to another, laboratories have inadequate facilities and school libraries have inadequate chairs and tables. The indication that the government has invested much in constructing laboratories for various subjects but most of them lack important facilities like chairs and tables and this could be some of the factors affecting the provision of quality education in the public service.

Finally, quality education is perceived by teachers to be high. This is indicated by the fact that there is a high chance for students to be selected for further studies; students are well prepared for future careers, self-reliance, and the ability to perform hands-on activities. But this is insignificant and it contradicts with the reality on the ground as shown in the study findings in the literature reviewed.

## 5.4 Recommendations

First and foremost, based on the above conclusions, the study came up with the following recommendations regarding the provision of quality education among Public Secondary Schools in Karatu District. There is a need for education administrators to ensure that schools are staffed with an adequate number of teachers for each subject. This will reduce teachers’ workloads and thereby enable teachers to spend much of their time with students, helping them to reach their full potentials. Consequently, there is the need for Government to look for means to make available the number of reference books and textbooks for each subject. That is to say, the Government through the Ministry of Education to ensure sufficient supplies for modern facilities such as computers and projectors to enhance the quality of teaching and learning and as well the factors for quality education will be realized.

Last but not least, there is a need for the District Education Department to improve the quality of laboratories and libraries through the supply of reliable and enough facilities, chairs, and tables. Adequate and modern facilities need to go hand in hand by maintaining adequate staffing, instructional materials, as well as adequate physical infrastructure as these factors positively, affect the quality of education in schools.

## 5.5 Suggestions for Further Studies

From the study findings, this research may provide further insights into the important issues affecting the performance of teachers in Karatu District Council. Firstly, research on Performance Appraisal Management enhancing tool and its effect on employee’s performance is a very significant area due to the importance of human resources in an organization. However, most of the studies were carried out in the Western world and Asian countries and these were the ones that necessitated this study. It is therefore important that more researchers especially those in Africa, Tanzania in particular continue to explore the area empirically on how to improve teacher’s performance in an organization.

Moreover, due to financial constraints, this research was cross-sectional and was also restricted to teachers from Karatu District Council in Arusha, Tanzania. It is therefore suggested that in the future, other researchers will undertake a longitudinal study to assess the practices that affect positively employee performance in the Public Service of Tanzania. Such a study will have the potential to reveal if a Performance Appraisal System with a special focus on OPRAS can lead to employee performance when is measured at one time could be the same or vary from the outcomes at a later point in time. This can help in the decision that the Government of Tanzania may take at each point in time as to whether to review PAS/OPRAS constructs or not.

It is further recommended that the study can be replicated in other regions or the entire District Councils in Tanzania and this can provide a broad representation of what happens in the entire Public Service in Tanzania about the implementation of PAS/OPRAS. Last but not least, further study can be undertaken to including students and parents in their views on the factors affecting the provision of quality education. This is because; the current study did not include the views from the parents and students of which they might be the key informants.

**REFERENCES**

Acedo, C. (Ed.). (2002). *Case Studies in Secondary Education Reform*. Washington, D.C.: Improving Educational Quality (IEQ) Project and USAID.

Adams, D. (1993). Defining educational quality. *Improving Educational Quality Project Publication #1:* Biennial Report. Arlington, VA: Institute for International Research.

Adeogun, A. A. (2010). The principal and the financial management of public secondary schools in Osun State. *Journal of Educational System and Development,* 5(1), 1-10.

African Development Fund (ADF), (2007). *Project Completion Report: Human development department*. (OSHD) Government Printers.

Alvarez, B., Gillies, J. & Bradsher, M. (2003). *Beyond Basic Education: Secondary Education in the Developing World*. Washington, D.C.: AED, World Bank Institute.

Asikhia O. A. (2010). Students and teachers’ perception of the causes of poor academic performance in Ogun state secondary schools: Implications for counseling for national development. *In European Journal of Social Sciences,* 13(2), 229 - 242.

Aziz S., Mahmood M. and Rehman Z., (2018) Implementation of CIPP Model for Quality Education at School Level: A Case Study; *Journal of Education and Educational Development,* 5(1), 189-206.

Benya, J. R. (2010). *Lighting for Schools.* Washington, D.C.: *National Clearing House for Educational Facilities.* Retrieved on 21st March, 2021 from; <http://www.edfacilities.org/pubs/lighting.html>.

Best, W. & Kahn, J. (2006). *Research in education.* Boston: Pearson Education Inc.

Coombs, B. (2000). *Successful Teaching: A Practical Handbook*. New York: Heinemann, Division of Reed Publishing.

Creswell, J. (2007). *Research Design-Qualitative, Quantitative and Mixed Methods Approaches,* 2nd Ed., USA: SAGE Publications.

Creswell, J. W. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. London: Sage Publications.

Dash, N. K. (2003). Research Paradigms in Education: Towards Resolution. *Journal of Educational Education,* 19, 1-6.

David, M. N. (2014). Determinants of poor academic performance of secondary school students in Sumbawanga District, Tanzania. unpublished masters dissertation, Sokoine University, Tanzania.

Digolo, O. O. (2006). The Challenges of Education in Kenya in the 21st Century. *Journal of the school of Education*, 1(1), 15-27.

Frye, A. W. & Hemmer, P. A. (2012). Program evaluation models and related theories: AMEE Guide No. 67. *Journal of Medical Teacher,* *34*(5), 88-99.

Gideon L. M. (2014). School-based factors influencing quality education in a public secondary school in Kitui country, Kenya, unpublished master dissertation, University of Nairobi, Kenya.

Gogo, K. S. (2002). Input of cost-sharing on access, equity and quality of secondary education in Rachuonyo District. Unpublished ME.d. Thesis, Kenyatta University, Nairobi, Kenya.

Gorman, G. E. & Clayton, P. (2005). *Qualitative research for the information professional: A practical handbook,* 2nd Edition. London: Facet publishing.

Government of Kenya, (2005). *Kenya Education Sector Support Programme 2005-2010*, Nairobi: Government Printer.

Gray, P., Williamson, J. B., Karp, D. A. & Dalphin, J. R. (2007). *The research imagination: An introduction to qualitative and quantitative methods.* London: Cambridge University Press.

Hakielimu, (2011). Are our Teachers Qualified and Motivated to Teach? *A research report on teachers’ qualifications, motivation, and commitment to teaching and their implications on quality education*. Dar es Salam: Hakielimu.

Hakielimu, (2012). Quality of Education in Tanzania. Dar es Salaam: Hakielimu

Hakielimu, (2017). *The Impact of the Implementation of Fee-Free Education Policy on Basic Education in Tanzania*. Dar es Salaam: Hakielimu

Hanushek, E. A. Kain R. & Rivkin, M. (2008). The Effect of School Accountability Systems on the Level and Distribution of Student Achievement, *European Economic Review*, forthcoming. *Journal of the European Economic Association,* 2(2-3), 406-415.

Hargreaves, A. (2000). *Changing Teachers, Changing Times.* London: Cassell.

Hillway, E. M. (1995). *Systems Analysis and Design*. New Delhi: Galgotia Publications.

Holsinger, D.B. and R.N. Cowell. (2000). *Positioning secondary school education in developing countries*. France: UNESCO International Institute for Educational Planning.

Human rights watch, (2017) *I had a dream to finish school, barriers to secondary education in Tanzania.* Dar es Salaam: HRW.

Irfan, S.M., Hussain, T. & Yousaf, I. (2009). Organizational culture: Impact on female employee job performance: *Journal of Quality and Technology Management*, 11, 1-11.

Isola, O. M. (2010). Effects of Standardized and Improvised Instructional Materials Students’ Academic Achievements in Secondary School Physics. M.Ed Thesis, University of Ibadan. Ibadan, Nigeria.

Jacob, W. J. & Lehner, S. (2011). *EQUIP2 State-of-the-Art Knowledge in Education: Secondary Education.* Guide to Education Project Design Based on a Comprehensive Literature and Project Review. USAID

Jidamva G. B. (2012). *Understanding and Improving Quality of Secondary School Education Conceptions among Teachers in Tanzania*. Finland: ÅboAkademi University Press.

Kemmerer, F. (2001). An Integrated Approach to Primary Teacher Incentives.” In D.W. Chapman and C.A. (Eds) *Improving Educational Quality: A Global Perspective,* Pp. 136-152. London: Greenwood Press.

Kihuria N. (2015)*.* Africa: need to address the shortage of textbook in Sub Saharan Africa. Retrieved on 12th June, 2021 from; [http://allafrica.com/stories/ 201507230526.html](http://allafrica.com/stories/%20201507230526.html).

Kim, Y. & Ployhart R. E., (2013). The effects of staffing and training on firm productivity and profit growth before, during, and after the great recession: *Journal of Applied Psychology,* 99(3), 361-389.

King, K., S. & McGrath, P. (2007). Beyond the basics: Educating and training out of poverty.” *International Journal of Educational Development*, 27, 349–357.

Kothari, C. R. (2002). *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.

Kothari, C. R. (2012). *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.

Kumar, R. (2005). *Research methodology: a step-by-step guide for beginners* (Second Edition). London: SAGE Publications.

Laddunuri, M. M. (2012). Status of school education in present Tanzania and emerging issues. *International Journal of Research and Technology*, 3(1), 15-20.

Leedy, P. (1999). *Qualitative Research: Planning and Design.* New York: Macmillan Publishing Company.

Lichtman, M. & Cech, V. (2006). *Qualitative research in educational: A user’s guide*. London: SAGE Publications

Likoko, S., Mutsotso, S. & Nasongo, J. (2013). The adequacy of international materials and physical facilities and their effects on quality of teacher preparation in encouraging private primary teacher training college in Bungoma Country Kenya. *International Journal of Science and Research (IJSR),* 2(1), 403-407.

Ministry of Education and Culture, (2014) *National Education Policy 201,* Dar es Salaam: URT.

Ministry of Education and Vocation Training, (2013). *Basic Education Statistic in Tanzania (BEST),* Dar es Salaam: URT.

Ministry of Finance and Planning (2016) *National Five-Year Development Plan 2016/17–2020/21.* Dar es Salaam: URT.

Ministry of Finance and Planning, (2021). *National Five-Year Development Plan 2021/22–2025/26.* Dar es Salaam: URT.

Mlozi, M. R. S., Kaguo, F. E., & Nyamba S. Y. (2013). Factors Influencing Students’ Academic Performance in Community and Government Built Secondary Schools in Tanzania. *International Journal of Science and Technology,* 2(2),174-186.

Morgan, G. A., Leech, N. L., Gloeckner, G. W. & Barrett, K. C. (2004). *SPSS for introductory statistics: Use and interpretation,* 2nd Ed., New Jersey: Lawrence Erlbaum Associates, Publishers.

Morse, J. M. (1991). *Approaches to Qualitative-Quantitative Methodological Triangulation*. *Nurs Res.* 40(2), 120-123.

Mosha, M. A. (2014). Factors affecting students’ performance in the English Language in Zanzibar Rural and Urban Secondary Schools*. Journal of Education and Practice,* 5(35), 64-76.

Mphale, M. L. & Mhlauli, B. M. (2013).An investigation on students’ academic performance for junior secondary schools in Botswana. Gaborone: *European Journal of Educational Research,* 3(3), 111-127.

Mulei, K. O., Waita, J. K., Mueni, B. K., Mutune, J. M. & Kalai, J. (2016). Pupil-Teacher Ratio and its impact on academic performance in public primary schools in the central division, Machakos county, Kenya. *International Journal of Research in Engineering, IT and Social Sciences, 6,* 62-80.

Muthamia, H. N. (2009). Factors affecting Adult Education Learners recruitment program in Kakamega south district, Kenya.Unpublished M.Ed. Thesis, Masinde Muliro University, Webuye, Kenya.

Okomolafe, O. C. & Adesua, O. V. (2016). The impact of physical facilities on students’ level of motivation and academic performance in senior secondary schools in southwest Nigeria. *Journal of Education and Practice, 7*, 38-42.

Olowoselu, A. & Bello, A. S. (2015). Challenges to secondary school principals’ leadership in Northern Region of Nigeria. *British Journal of Education,* 3(3), 1-5.

Organization for Economic Cooperation and Development, (2005). Creating effective teaching and learning environment: First Results from Talis; Santiago: OECD.

Powel M., Dawson J., Topakas A. & Fewtrell C. (2014). Job satisfaction and organizational performance: evidence from a longitudinal secondary analysis of the NHS staff survey and outcome data; Health Service Delivery Results; 2(50), 1-306.

Rajani, R. & Sumra, S. (2006). *Funding Primary School Education: Conceptual and Measurement Challenges*. Dar es Salaam: Adult Education Press.

Scheerens, K. (2000). *Issues in Social Science Research*. Chicago: the University of Chicago.

Sekaran, U. (2003). *Research methods for business*, 4th Ed., Hoboken, New Jew: John Wiley & Sons.

Slade, S. (2017). *What do we mean by quality education, retrieved on 30th April, 2020 from;* [https://www.huffpost.com/entry/what-do-we-mean-by-a-qual\_ b\_9284130](https://www.huffpost.com/entry/what-do-we-mean-by-a-qual_b_9284130).

Stufflebeam, D. L. (1971). The use of the experimental design in educational eval­uation. *Journal of Educational Measurement, 8*, 267–274.

Travers, R. M. (2004). *An Introduction to Educational Research.* New York: Macmillan Publishing.

UNDP, (2006). Human Development Report 2003: Millennium Development Goals—A Compact Among Nations to End Human Poverty. New York: Oxford University Press.

UNESCO, (2005). *Secondary education reform: Towards a convergence of knowledge acquisition and skills development*. Paris, France: UNESCO.

 UNESCO, (2007). *Experts’ consultation on the operational definition of basic education*. Paris, France: UNESCO.

UNESCO, (2008). *2009EFA Global Monitoring Report. Overcoming inequality: Why governance matters*. Paris: UNESCO.Norman M.K., (2007). Quality Education for All: Human right issues: *Regional Bureau of Education for Latin American and the Caribbean*: UNESCO, Santiago.

UNESCO, (2008). *EFA Global Monitoring Report, Education for all by 2015: Will we make it?* Paris, France: UNESCO.

UNESCO, (2010). *Out-of-School Adolescents*. Montreal, Quebec: UNESCO Institute for Statistics.

UNESCO, (2018). *Quick Guide to Education Indicators for SDG 4*. Montreal, Quebec: UNESCO Institute for Statistics.

United Republic of Tanzania, (2010). *National Strategy for Growth and Reduction of Poverty II (NSGRP II),* Ministry of Finance and Economic Affairs, Dar es Salaam. 168pp. URT.

United Republic of Tanzania, (2013). *Ministry of Education and Vocational Training Tanzania Institute of Education*. Dar es Salaam: Tanzania Institute of Education (TIE). URT.

Waita, K. J. (2012). *Pupil-teacher ratio and its impact on academic performance in public Primary schools in Central Division*, Machakos County. Nairobi: Kenyatta University.

World Bank, (2005). Expanding Opportunities and Building Competencies for Young People: *A New Agenda for Secondary Education*, The World Bank, Washington, DC.

World Bank, (2007). *An Impact Evaluation of World Bank Support to Basic education in Ghana*. Washington D.C.: The World Bank.

World Bank, (2008). *Tanzania public service reform project: Implementation, completion, and results report.* Washington, D.C: World Bank Publishers.

Yahaya, A. H. J. (2001). The Using of Model Context. Input, Process, and Products (CIPP).Learning Programs Assessment**.** International Conference on Challenges and Prospects in Teacher Education, Concorde Hotel Shah Alam 16 & 17 July 2001.

Yamane, T. (1967). *Statistics: An introductory analysis, 2nd Ed*., New York: Harper and Row.

Zhang, G., Zeller, N., Griffith R., Metcalf, D., Williams, J., Shea, C. & Misulis, K. (2011). Using the Context, Input, Process, and Product Evaluation Model (CIPP) as a Comprehensive Framework to Guide the Planning, Implementation, and Assessment of Service-learning Programs. *Journal of Higher Education Outreach and Engagement*, 15(4), 57.

**APPENDICES**

**Appendix i: Questionnaire for Teachers**

Dear respondent, You are requested to participate in a study entitled **“*Factors affecting Provision of Quality Education in Public Secondary School in Karatu, Tanzania*** by **Happiness Bilakwate** **from the Open University of Tanzania.** Please provide true information. Responses you provide will be treated with the utmost confidentiality. Do not fill in your name.

**DEMOGRAPHIC INFORMATION: Please tick the appropriate option**

1. **What is your Gender?**

( ) Male ( ) Female

1. **Number of students in your classroom**

( ) 40 and below ( ) 41 to 60 ( ) Above 60

**Please read carefully and tick the correct option to describe your feelings about the below aspects:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **STAFFING STATUS**  | **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| 1 | My school has an adequate number of teachers |  |  |  |  |
| 2 | Teachers are equally distributed per subjects |  |  |  |  |
| 3 | Teachers have a manageable teaching load |  |  |  |  |
| 4 | Each subject has a sufficient number of teachers |  |  |  |  |
| 5 | My school has a teacher for sports and game |  |  |  |  |
| 6 | My school has a teacher who deals with guidance and counseling |  |  |  |  |
|  | **INSTRUCTIONAL MATERIALS** | **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| 1 | My school has an adequate number of textbooks |  |  |  |  |
| 2 | Each subject has an adequate number of textbooks |  |  |  |  |
| 3 | Apart from textbooks, my school has reference books  |  |  |  |  |
| 4 | My school has other resources like charts and maps and globes |  |  |  |  |
| 5 | There are modern facilities like a computer for teaching and learning |  |  |  |  |
| 6 | The school has a projector for use in classes |  |  |  |  |
| 7 | There are reference books for teachers |  |  |  |  |
|  | **ADEQUACY OF PHYSICAL INFRASTRUCTURE** | **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| 1 | The School library has adequate chairs and tables |  |  |  |  |
| 2 | The laboratory has adequate facilities |  |  |  |  |
| 3 | Classrooms have a chair and table for each student |  |  |  |  |
| 4 | Desks and chairs are good enough for effective learning |  |  |  |  |
| 5 | Classrooms have an ideal sitting arrangement |  |  |  |  |
| 6 | Chalkboards are visible and readable |  |  |  |  |
| 7 | Class spacing allows teacher’s movement from one student to another |  |  |  |  |
|  | **QUALITY OF EDUCATION** | **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| 1 | I am proud of the quality of education at this school |  |  |  |  |
| 2 | Students from this school are well prepared for future career |  |  |  |  |
| 3 | Students from this school are well prepared for self-employment |  |  |  |  |
| 4 | Students from this school are well prepared for hands-on activities |  |  |  |  |
| 5 | Students from this school are well prepared for self-reliance |  |  |  |  |
| 6 | There is a high chance for students to be selected for further studies |  |  |  |  |

**THANK YOU VERY MUCH**

**Appendix ii: Questionnaire for Other Stakeholders**

Dear respondent, You are requested to participate in a study entitled **“*Factors affecting Provision of Quality Education in Public Secondary School in Karatu, Tanzania*** by **Happiness Bilakwate** **from the Open University of Tanzania.** Please provide true information. Responses you provide will be treated with the utmost confidentiality. Do not fill in your name.

**DEMOGRAPHIC INFORMATION: Please tick the appropriate option**

1. **What is your Gender?**

( ) Male ( ) Female

1. **Your Position**

( ) Board Representative ( ) Ward Ed. Coordinator ( ) School Inspector

**Please read carefully and tick the correct option to describe your feelings about the below aspects:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **STAFFING STATUS**  | **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| 1 | Schools have an adequate number of teachers |  |  |  |  |
| 2 | Teachers are equally distributed per subjects |  |  |  |  |
| 3 | Teachers have a manageable teaching load |  |  |  |  |
| 4 | Each subject has a sufficient number of teachers |  |  |  |  |
| 5 | Schools have a teacher for sports and game |  |  |  |  |
| 6 | Schools have a teacher who deals with guidance and counseling |  |  |  |  |
|  | **INSTRUCTIONAL MATERIALS** | **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| 1 | Schools have an adequate number of textbooks |  |  |  |  |
| 2 | Each subject has an adequate number of textbooks |  |  |  |  |
| 3 | Apart from textbooks, schools have reference books  |  |  |  |  |
| 4 | Schools have other resources like charts and maps and globes |  |  |  |  |
| 5 | There are modern facilities like a computer for teaching and learning |  |  |  |  |
| 6 | Schools have projectors for use in classes |  |  |  |  |
| 7 | There are reference books for teachers |  |  |  |  |
|  | **ADEQUACY OF PHYSICAL INFRASTRUCTURE** | **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| 1 | School libraries have adequate chairs and tables |  |  |  |  |
| 2 | The laboratories have adequate facilities |  |  |  |  |
| 3 | Classrooms have a chair and table for each student |  |  |  |  |
| 4 | Desks and chairs are good enough for effective learning |  |  |  |  |
| 5 | Classrooms have an ideal sitting arrangement |  |  |  |  |
| 6 | Chalkboards are visible and readable |  |  |  |  |
| 7 | Class spacing allows teacher’s movement from one student to another |  |  |  |  |
|  | **QUALITY OF EDUCATION** | **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| 1 | I am proud of the quality of education at schools in Karatu District |  |  |  |  |
| 2 | Students are well prepared for future career |  |  |  |  |
| 3 | Students are well prepared for self-employment |  |  |  |  |
| 4 | Students are well prepared for hands-on activities |  |  |  |  |
| 5 | Students are well prepared for self-reliance |  |  |  |  |
| 6 | There is a high chance for students to be selected for further studies |  |  |  |  |

**THANK YOU VERY MUCH**

**APPENDIX iii: Interview Guide for District Education Officer**

1. What is the staffing status in your District?
2. Did you prepare the Secondary School Teachers to implement the program?
3. Do you have enough teachers in your District?
4. If no, how do you control the situation?
5. Do you have enough teaching/learning materials in your District?
6. Do you have enough physical facilities in your District?
7. What is the general performance of Certificate of Secondary School Education Examinations in your District? (CSEE)
8. What do you think could be done to improve student's academic achievement in your District?
9. What is the attitude of students towards learning in your District?

**APPENDIX iv: Head Masters/Mistress Interview Guide**

1. How would you explain the sufficiency of teachers in your school?
2. Do you have enough physical facilities like classrooms, desks, etc. in your school?
3. What is the teacher-student ratio in your school?
4. What is the general academic achievement of Certificate of Secondary School Education Examinations in your District? (CSEE)
5. What do you think could be done to improve student's academic achievement in your school?
6. Please would you mind commenting on the availability of teaching/learning materials?
7. What is the attitude of students towards learning in your school?

**Appendix v: Request for Academic Survey Research**

