# THE INFLUENCE OF SCHOOL CLIMATE ON SECONDARY SCHOOLS' PERFORMANCE IN MVOMERO DISTRICT, MOROGORO, TANZANIA

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION IN ADMINISTRATION, PLANNING AND POLICY STUDIES OF THE OPEN UNIVERSITY OF TANZANIA**

**2015**

## CERTIFICATION

I, the undersigned, certify that have read and hereby recommend this dissertation entitled "*The Influence of School Climate on Secondary Schools' Performance in Mvomero District, Morogoro, Tanzania*" for the acceptance by The Open University of Tanzania for the award of the Degree of Masters of Education in Administration, Planning and Policy Studies (MED APPS) of The Open University of Tanzania.

……..……

**Dr. Said M.S. Massomo**

**(Supervisor)**

……..……

**Date**

## COPYRIGHT

## DECLARATION

I, Leonid Leopold Nkuba, do hereby declare that this dissertation is my own original work, and it has not been submitted for a similar degree in any other University or Institutions. Where other peoples' works have been used, references have been given.

……...……

Signature

……...

Date

## DEDICATION

This dissertation is dedicated to my parents - Mr. Leopold Francis Nkuba and Ms. Eliana Lameck Mgaye.

## ABSTRACT

This study assessed the climate of eight secondary schools in Mvomero district, Morogoro. It also examined the relationship and influence between school climate and students' academic achievement. The study employed quantitative approach within *ex post facto* research design using three climate questionnaires for secondary schools. A random sample of 160 teachers was drawn, however, only 74 teachers responded to the research tools. The study revealed that the climates of all secondary schools were *non-conducive* or *negative*. In determining the relationship, the subtest of intimate teachers' behaviour indicated a significant strong positive correlation ($r = 0.821$, $p < 0.05$) with division II and ($r = 0.868$, $p < 0.01$) with division III. However, the frustrated teachers' behaviour subtest was significantly negatively correlated ($r = - 0.779$, $p < 0.05$) with division IV. The subtest of institutional integrity indicated a strong correlation ($r = 0.887$, $p < 0.05$) with division IV, while initiating structure showed a strong positive correlations ($r = 0.824$, $p < .05$) with division I. Lastly, the subtests of headmaster/mistress influence and academic emphasis both indicated a strong significant ($r = 0.848$ and $r = 0.860$, $p <0.05$) correlation with division I and II, respectively. In testing whether the school climate predicts school performance, the study indicated that some of the variance in division categories can be explained by school climate. Surprisingly, all school climates did not significantly correlate with division categories. However, on using the beta weighting, there were noticeable effects (weak to strong) of independent variables on dependent variables. This study showed that, students' academic achievement is related and influenced by the school climate. Therefore, school climates need to be *conducive* or *positive* as necessary for the survival and well-being of such schools.

## ACKNOWLEDGEMENTS

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## LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| ACSEE | Advanced Certificate of Secondary Education Examination |
| ANOVA | Analysis of Variance |
| CSEE | Certificate of Secondary Education Examination |
| DAS | District Administrative Secretary |
| NECTA | National Examination Council of Tanzania |
| OCDQ-RS | Organisational Climate Descriptive Questionnaire for Secondary Schools |
| OHI-S | Ogarnisational Health Inventory for Secondary Schools |
| PCI | Pupils Control Ideology |
| PSLE | Primary School Leaving Examination |
| RAS | Regional Administrative Secretary |
| RIP | School Improvement Plans |
| SES | Social Economic Status |
| SIR | School Improvement Report |
| SPSS | Statistical Package for Social Sciences |
| UNESCO | United Nations Educational, Scientific and Cultural Organisation |
| USA | United States of America |
| URT | United Republic of Tanzania |

# CHAPTER ONE

# 1.0 INTRODUCTION AND BACKGROUND TO THE STUDY

## 1.1 Introduction

This study aimed at investigating the relationship and influence between school climates and the students' academic achievements. Chapter one describes the problem background by explaining the general purpose of the study, it also present the statement of research problem, objective of the study, hypotheses, significance of the study, delimitation and assumption of the study. This chapter also present the limitations of the study, definition of terms and the organisation of the study.

## 1.2 Background to the Problem

High quality education is highly needed and valued in any society. The process of education usually begins in an institution of general education and its efficiency largely contributes to the success in the learner's later periods of life. Currently, there have been a lot of problems related to the management, administration and supervision of Secondary Schools in Tanzania (HakiElimu, 2013). These include, the issue of ranking secondary schools based on the national examinations results and public discussions on which school is better than the other. Tension has been increasing due to the public interests based on educational reforms, ongoing debate and discussion on the current trend of the National Form Four Examinations results for secondary schools in Tanzania. School administrators are therefore in a complicated position and it is difficult to find a way out. Teachers are not content with the working environment, although they love their profession (Nguni *et al.,*

2006; Mkumbo, 2013) and on the other hand, the educational stakeholders require them to be highly on the national examinations in form of students' performance (HakiElimu, 2013).

In recent years, students' performance in the Tanzania Certificate of Secondary Education Examination (CSEE) has been steadily declining, prompting concern in civil society and the government about what might be responsible for this and how to address it. For instance, as Figure 1.1 shows, the pass rates in these examination had fallen from 72.5 % in 2009 to 50.4 % in 2010, and then to an unprecedented low 5.9 % (HakiElimu, 2013) and then 34.5 % in 2012 after the standardization (URT, 2012).

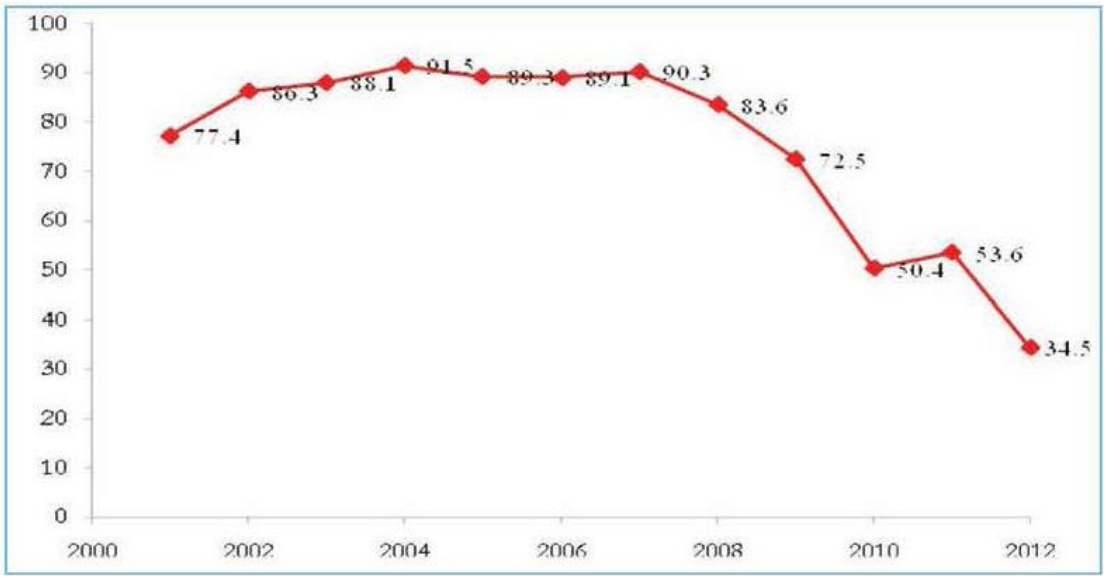


**Figure 1.1: Percentage of Candidates passing at the CSEE 2000 - 2012**

Source: United Republic of Tanzania - URT (2012).

Several factors have been attributed to students' academic performance at various levels of education. These include, teachers' working conditions, availability of teaching and learning facilities such as books and laboratories, school and home

factors such as type of school and the educational climate at home, students' background factors (HakiElimu, 2013). Some of these factors might be influenced by school administration, some of them cannot. For instance, in Tanzania, school administration has nothing to say in matters like the size and location specifics of a school, as the Ministry of Education in collaboration with the Local government authorities are responsible organs for such decisions. But there are also mechanisms that are manageable to some extent by school administration. One of these mechanisms is the general surrounding of an individual at work in an organization (school) that researchers have found to influence both employees' behaviour and work results (e.g. performance) of an organization or school (Hoy *et al.,* 1990). The effect of school climate on students' achievement has been confirmed in several studies conducted in different context (Brown, 2002; HakiElimu, 2013). Recent studies show that high quality school learning environments are the central factor in students' academic performance. Information is, however, limited on the specific characteristics that constitute high quality schools (Hanushek and WoBmann, 2007), cited by HakiElimu (2013).

There are several common terms that are used to refer to the general surrounding of an individual at work in an organization (i.e. school) or work place - "ecology," "milieu," "setting," "culture," "tone," "field," "health," "atmosphere," or "climate." They are all used to refer to internal quality of an organization as experienced by its members (Miles, 1969; Hoy and Forsyth, 1986), but word "climate" seems to be the concept most frequently used. Organization (school) climate includes the Institutional attributes that give an organization its personality (Bulach *et al.,* 1995).

Climate in an organization is based on individualistic perceptions aggregated as a group. Organizational climate is an experiential phenomenon based on how participants perceive the organizational environment (Taguiri and Litwin, 1968), and the climate of school can be defined as the set of internal characteristics that distinguishes one school from another and influence the behaviour of its members (Hoy and Hannum, 1997).

Although the concept of school climate has been studied extensively, there is a lack of agreement as to the definition of the construct. Terms such as "atmosphere" or "feelings" or simply "climate" are used with imprecision. Some allude to the "tone", "setting", or "milieu" of the school (Taguiri, 1988). In recent years some educational scholars have chosen to use the term "culture" (Purkey and Smith, 1983) and "school ethos" (Rutter *et al.***,** 1979) in referring to the internal characteristic of the school as school climate. Still others use the term "the psychological context" in which organizational behaviour is embedded (Hoy and Miskel, 1987). HakiElimu (2013) defined school climate, as a composite of variables in a school as perceived by members of the school, as well as actual observable school characteristics such as school libraries, laboratories, teachers' houses etc. In fact, the climate of an organization may roughly be conceived as the "personality" of the organization; that is, climate is to organization as personality is to individual.

In this study, school climate is defined as a relatively enduring quality of the internal environment of a particular school that: (a) is experienced by the members (students, teachers, administrators, consultants and custodians), (b) influences their behaviour,

and (c) can be described in terms of the values, norms and beliefs of a particular set of attributes of the school. This definition was adopted from Taguiri and Litwin (1968), cited by Owens (1981). Moreover, this definition implies that the study is concerned about the educational environment of the entire school.

Previous studies have shown the connections between the school climate and variables associated with school effectiveness (Hoy and Hannum, 1997; Esposito, 1999). Through correlation analysis, the relationship between student achievements and climate in middle school in New Jersey was reported (Hoy and Hannum, 1997). The researchers found that general school health (climate) was positively related to student achievement in Mathematics, reading, writing (academic) and social development of the child. The results were significant even after accounting family influences such as resources and maternal education (Hoy and Hannum, 1997; Esposito, 1999).

HakiElimu (2013) conducted a study in Tanzania to investigate the effects of school characteristics (school climate) on students' academic achievement. They revealed that the performance of students might be affected by the following aspects; viz. school ownership (i.e. central government own, community, religious own and private or individual owned schools), school location (rural or urban), school resources, community involvement and teaching and learning factors (i.e. teachers-student ratio, availability of teaching and learning facilities such as books, desks and chairs, availability of essential utilities such as water, electricity, toilets, etc. teachers' characteristics, including teachers' professional qualifications, experience,

age, sex etc. as well as teachers' working conditions e.g. availability of public services, housing etc. and lastly teachers' motivation systems). It was concluded that, the above named factors could affect students' academic performance.

The results of the review showed that the optimal presence of these different variables contributed significantly positive to several attribute of students' academic performance. Educational researchers and reformers have concluded that school climate does influence the learning environments of the school and the performance of the students (Bossert, 1988; Hoy and Sabo, 1998; HakiElimu, 2013).

The challenge facing many schools administrators, educational stakeholders and the Ministry of education is to improve school performance in terms of students' achievement. While the socioeconomic status (SES) is widely agreed as a predictor of student achievement, it is also an extremely difficult factor to change in the community (Coleman *et al.,* 1966). However, since school climate is positively related to school performance, then it would be necessary for schools administrators, educational stakeholders and the Ministry of education to work harder and harder toward improving school climate in order to enhance the likelihood of high performance. According to Hoy and Hannum (1997), it seems easier to improve the school health than it is to change the socioeconomic status of the community. Therefore, by improving the school climate/health teachers become satisfied with their job because of the supportive working environments, consequently, the fear for administrators and other educational stakeholders on school performance (examination results) will no longer exist.

In light of the above context and background, this study sought to investigate the relationship between school climates and the students' academic achievements (using the performance in the 2013 CSEE as a measure of school performance).

### 1.3 Statement of Problem

School climate reflects the physical and psychological aspects of the school that are more susceptible to change and provide the preconditions necessary for teaching and learning to take place. Hoy *et al.* (1991) argue that the climate is directly associated with the interrelationship of the buildings, head master/mistress and the teachers in that school, as it is based on their perception of behaviour common to the organization. Therefore if the climate of particular school is not conducive, the teaching and learning processes cannot be achieved at the predetermined levels.

Freiberg (1998) showed that a healthy school climate contributes to effective teaching and learning and conversely, an unhealthy environment may be a significant barrier to learning. School climate is evident in the feelings and attitude expressed by students, teachers, other staff and sometimes parents about the school. It is the way students, teachers and staff feel about being at school each day. School climate is significant element in discussions of potential solutions to problems such as bullying, inter-students conflicts, suicides, character education, moral education, improving school reforms and academic performance.

The pass rates in Certificate of Secondary Education Examination (CSEE) results have been fluctuating from year to year. From the year 2000 to 2009, highest results

were observed in 2004 (91.5 %) and lowest in 2009 (72.5 %), also the percentage of candidates who failed started to increase again from 2008 (16.3 %) to 27.5% in 2009 (URT, 2010). The worse CSEE results were experience in 2012 where only 5.9 % passed (division I-IV) (HakiElimu, 2013) and after standardizing, the results were as follows; 6.4 % passed (division I-III), and 28.1 % passed at a level of division IV and the rest (65.5 %) failed the examination (URT, 2012). This situation calls for revisiting of the learning environments (including school climate/health) in public secondary schools.

It can be concluded that, students' performance is declining and our next generation is demanding for more effectiveness of public secondary schools. Can our institutions/public secondary schools evolve and re-establish a positive climate? In order to lead and to hire the next generation, transparency and accountability will matter, and organizations/ public secondary schools will need a climate that embrace and instil these values – especially values which reflect our societies and those which will lead to school effectiveness.

## 1.4 Research Objectives

### 1.4.1 General Objective

To assess the relationship and influence of school climate on secondary schools' performance in Mvomero district, Morogoro.

### 1.4.2 Specific Objectives

The specific objectives of this study are:

i) To determine the type of school climate existing in secondary schools in Mvomero as perceived by staff members.

ii) To determine the relationship between secondary school climate and school performance.

iii) To determine how the secondary school climate influence school performance.

### 1.5. Research Hypotheses

The hypotheses of this study are

*Ha1*: The Secondary School operates on a-conducive or positive school climate.

*Ha2:* There is significant relationship between secondary school climate and School performance.

*Ha3:* The secondary school climate determines school performance.

### 1.6 Significance of the Study

From the year 2010 to date, students' performance in the CSEE has been deteriorating, hitting a historical low in 2012 where only 5.9 % of candidates who took the exam passed. After the standardizations, the percentage increased to 34.5 %. This situation has been a cause for alarm that prompts for educational stakeholders to call for immediate government intervention to revise the learning environments (school climate) in public secondary schools.

Since school are often judged by the average level of students achievements, success or failure and whether positive or conducive school climate is highly related to the success in academics of the students, then the results of this study will behove the

ministry of education, educational administrator, head of schools, teachers and educational stakeholders to work hard toward improving school climate in order to enhance the likelihood of high performance of schools in Tanzania. In addition to that, the findings of this study will help to encourage policy makers and the community in general to strive to improve the school climate.

### 1.7 Delimitation of the Study

The following are the delimitations of this study

i) Only public secondary schools were used, as they are the main stream of providing education to majority of Tanzanians.

ii) The present study was limited to eight secondary schools in Mvomero District, Morogoro Region.

iii) In order to account the effect of Social Economic Status (SES), the selected secondary schools were from rural areas or township of the District.

iv) Recognizing the debate pertaining on the arena of measuring students' achievements, the National Examinations Results for Form Four were used as performance criterion.

v) Three questionnaires were used for climate data gathering. i.e. the OHI-S, OCDQ-RS and PCI.

### 1.8 Assumptions of the Study

The following assumptions were used as the basis for conducting this study.

i) Government secondary schools are the main-stay (channel) of secondary education in Tanzania.

ii) The schools are the social entity, and their social interactions and performance will depend much on School climate.

iii) Respondent (teachers) are well aware of the concept of organizational climate and its implications on students' performance.

iv) Respondents will provide objective and impartial answers to the questions contained in the research instruments.

### 1.9 Limitation of the Study

Limitations of the study are those factors or conditions beyond the control of the researcher, which hinder one from obtaining the required data and may place restrictions on the conclusions of the study (Kombo and Tromp, 2006). The study has some limitations that must be taken into consideration. One is the fact that the number of participants in schools was relatively small. The other limitation is that the study mainly analyses how school climate influences performance, but it can well be that performance influences also school climate.

### 1.10 Definition of Terms

**School Climate:** In this study school climate is defined as a relatively enduring quality of the internal environment of a particular school that: (a) is experienced by the members (students, teachers, administrators, consultants and custodians), (b) influences their behaviour, and (c) can be described in terms of the values, norms and beliefs of a particular set of attributes of the school.

**Secondary School:** The secondary education in Tanzania consist of two cycles, viz. the first cycle consist of four years of schooling and the second cycle which consist

of two years of schooling. In this study, the first cycle (ordinary secondary school) is concerned. The entry qualification into this cycle is PSLE (Primary School Leaving Examination).

**School Performance:** In the fourth year of ordinary secondary education, students undertake the national examination administered by the National Examination Council of Tanzania (NECTA). The Examination Results are grouped into five grades, viz. Division I, II, III, IV and 0. The number of students in each division was used as performance criterion.

**Classification of subtest and climate index:** The openness and healthy indices are interpreted the same way as the *subtest scores*, that is, the mean of the "average" school is 500. Thus, a score of 650 on openness and healthy represents a highly open/health staff.

### 1.11 Organisation of the Study

The study consists of five chapters. Chapter one, is the introduction of the study which describes statement of the problem being investigated, objectives and hypothesis of the study, significance of the study, delimitations and basic assumption of the study, limitations of the study, definition of major terms and the organisation of the study.

The review of different research reports, books, journals, articles, papers and models dealing and related to organisational climate (school climate) and school performance (students' academic achievements) are discussed in chapter two.

The description of the study area, research design and procedures of the study are discussed in chapter three. The chapter also describes the instrumentation, population, sampling design methodology and techniques for statistical analysis. The descriptive and inferential statistical data along-with their possible interpretations are presented in that chapter. Chapter five represents the summary of the study, summary of the key findings of the study, conclusion and recommendation based on statistical analyses

# CHAPTER TWO

# 2.0 LITERATURE REVIEW

## 2.1 Introduction

This chapter explores, describes and compares the researches from organizational climate, working environment, school climate, and measuring school climate and school performance in terms of students' achievement. The surveyed literature in this work indicates that researchers had explored the importance of positive or conducive (open, health and humanistic) school climates in creating a productive environment where students are likely to succeed (Miles, 1965; Willower *et al.,* 1967; Hoy and Forsyth, 1986).

## 2.2 Historical Perspective and the Nature of the School Working Environment

The concept of organizational climate originated in the late 1950s as social scientists studied variations in work environments. Pioneer researchers who were interested in educational organizations (Pace and Stern, 1958; Halpin and Croft, 1963) made the initial efforts to define and measure dimensions of organizational climate. Thereafter, the usefulness of the concept was soon recognized by other scholars of business organizations (Taguiri, 1968).

Climate was initially used as a general notion to express the enduring quality of organizational life. Taguiri (1968) observed that "a particular configuration of enduring characteristics of the ecology, milieu, social system and culture would constitute a climate, as much as a particular configuration of personal characteristics constitutes a personality."

Gilmer (1966) specified organizational climate as “those characteristics that distinguish the organization from other organizations and that influence the behaviour of people in the organization.” Litwin and Stringer (1968) suggested that perception is a critical ingredient of climate and defined it as; "a set of measurable properties of the work environment, based on the collective perceptions of the people who live and work in the environment and demonstrated to influence their behaviour."

According to Gilmer (1966), the notion of psychological climates was introduced in the industrial psychology literature by Gellerman (1960), but other writers (Halpin and Croft, 1963; Forehand and Gilmer, 1964; Taguiri, 1968) have also noted that definitions of climate are quite similar to early descriptions of personality types.

**2.3 Schools Working Condition in Developed Countries**

The unpromising teaching environment has a global coverage. For instance, in Brazil, DiGropello (2004) revealed that in the early 1990s the schools in Brazil had inadequate funding, poorly trained teachers, rigid pedagogies and over regulated management. All these made teachers work under a pressing environment leading to poor students’ academic performance. In United States of America (USA), Ralph (1996) revealed that training packages to teachers and educational managers in that country had irrelevant contents. These caused teachers to face difficulties in the instructional process. The situation also made that nation at risk in relation to the nation’s economic, social and cultural prospects (Ralph 1996).

## 2.4 The Status of School Working Environment in Africa

The status comprises a number of factors at stake. This factors include school physical infrastructure, teaching-learning materials, pedagogical skills of teachers, government policies and programmes, teachers' remunerations, funding and the like, which in one way or another affect teachers' working morale and automatically affects work results (students' performance). The poor teaching environment seems to be widespread in Africa. Although the educational policy planners appear to be aware of the teachers' role in assuring quality of education, their working environments have not been improved to a great extent (Mosha, 2000). The worse or poor working conditions of teachers in rural areas are not appealing enough to attract people (Mkumbo, 2013).

The problems besetting African countries seemed common despite minor differences. In Nigeria, for instance, it was revealed that government schools had large class sizes, inadequate infrastructure and teaching-learning materials (James *et al.*, 2006). Thus, despite of higher salaries in government schools compared to private ones, teachers opted to teach in private schools which seemed to have at least a better working environment than public schools (James *et al.,* 2006). Teachers recruitment in most African schools is minimal compared to the number of enrolled pupils, thus increased the teachers' workload (Ishumi, 1994).

Moreover, the school environment in developing countries, particularly in Africa is worsened by politicians (UNESCO, 2005). For instance, it is revealed that the expansion of enrolment beyond school capacity in secondary level is popular among

politicians as their means to gain political power. They do not consider the quality but quantity (UNESCO 2005, Omari, 2013).

**2.5 School Climate**

Upon entering any school, students, visitor and those who work within the establishment immediately experience the climate of school. This intangible quality produces feelings, either positive or negative, for all who set foot on the ground of school. The notion was also supported by Hoy and Forsyth (1986) who defined school climate as individual perception of the schools work environment. The climate of school can be defined as the set of internal characteristics that distinguishes one school from another and influence the behaviour of its members (Hoy and Hannum, 1997). Organizational climate is an experiential phenomena based on how participants perceive the organizational environment (Taguiri and Litwin, 1968). Climate, in an organization, is based on individualistic perceptions aggregated as a group (James *et al.*, 1988).

Undoubtedly, the most well known conceptualization and measurement of organizational climate in schools is the pioneering study of elementary schools by Halpin and Croft (1962, 1963). Their approach was to identify the critical aspects of teacher-teacher and teacher-head master/mistress interactions in schools. Halpin (1966) express the organizational/school climate as personality of a school and describes the institution on the basis of their social interactions between the teacher and the head master/mistress and among members of the teaching staff. School climate has been described more recently as the collective perceptions of the

individual within an organization and a reflection of the organization's culture (Hoy *et al.,* 1990). The term "school climate" is used by many organizational theorists to describe the general tone, feel or atmosphere of schools. Hoy and Miskel (1996) defined school climate as the set of internal characteristics that distinguishes one school from another and influences the behaviour of each of its members. School climate is seen as an enduring quality of the environment that is experienced by all of the participants.

Lowe (1995) noted that while forces outside of the school influence the climate, it can be described as largely the result of behaviours and attitude exhibited within the organization. Hoy *et al.* (1991) indicates that the climate is directly associated with the interrelationship of the buildings, headmaster/mistress and the teachers in that school, as it is based on their perception of behaviour common to the organization. Browne (2002) viewed the school climate as it reflects the physical and psychological aspects of the school that are more susceptible to change and that provide the preconditions necessary for teaching and learning to take place. This has a significant element in discussions about improving academic performance and school reform. Additionally, creation of an orderly environment is an essential component of an effective school (Edmonds, 1979).

In this study, those institutional patterns and behavioural practices that enhance or impede good working conditions were analysed. Moreover, the study was concerned about the educational environment of the entire school. It is recognized that there are other educational environments (e.g. the individual classroom).

## 2.6 Secondary School Climate Frameworks

Climate of the school can be conceived and measured from several perspectives. Hoy and Forsyth (1986) describe four personality metaphors (climate frameworks), namely, (i). Teacher – Headmaster/mistress behaviours (open to closed), (ii) Organizational dynamics (healthy to unhealthy), (iii) Pupils control orientation – describes the organizational climate of interaction between staff and student (humanistic to custodial), and (iv) Managerial systems (exploitative to participative). These frameworks help in conceptualizing the school climate, each of these perspectives provides the supervisor with a valuable set of conceptual capital to analyse, understand and improve supervisory setting. However, only the first three frameworks will be described, discussed and used in this work.

### 2.6.1 Teacher – Headmaster/mistress behaviour: Open to Closed

Probably the most well-known conceptualization of school climate and its measurement was developed by Halpin and Croft (1962) in their pioneering study of elementary schools. They viewed the climate of the school as a combination of two aspects or social behaviour: teachers – teachers, and teacher – headmaster/mistress interactions (Halpin and Croft, 1962). The model of open to closed climates discussed into this work however, is a contemporary refinement and modification of the original work (Hoy and Forsyth, 1986).

#### 2.6.1.1 Open and Closed

An *open school climate* is characterized by a school climate where both the teachers' and headmaster/mistresses' behaviour are authentic, energetic, goal-directed, and

supportive, and in which satisfaction is derived from both task accomplishment and social-need gratification (Hoy *et al.,* 1991). In order to place each institution or a school along a continuum from open to closed, Organizational Climate Description Questionnaires (OCDQ) were used to quantify or measure the climate or personality of the school (Halpin and Croft, 1962). In this study, the questionnaire (OCDQ-RS) for secondary school was used (Appendix 2).

The distinctive characteristics of the open school climate are cooperation, respect, and openness that exist within the teachers and between the teachers and headmaster/mistress. The headmaster/mistress listens and is receptive to teacher ideas, gives genuine and frequent praise, and respects the competence of teachers (high supportiveness). Headmaster/mistress also gives their teachers freedom to perform without close scrutiny (low directiveness). Likewise, the teachers support open and professional behaviour (high engagedness) among teachers, they cooperate and are committed to their job and teaching. Teachers find the working environment facilitating rather than frustrating (low frustrating). In brief, the behaviour of both the headmaster/mistress and teachers are genuine and open.

A *closed school climate* is the antithesis of the open school climate (Sweetland and Hoy, 2000). The climate is characterized by teacher's relations that are disengaged, frustrating, distant, suspicious, and not professional. The headmaster/mistress's leadership is seen as controlling and rigid (high directiveness) as well as unsympathetic and unresponsive (low supportiveness). Likewise, the teachers' support is not open and non-professional behaviour (low engagedness) among them

prevails. Teachers find the working environment frustrating rather than facilitating (high frustrating). These misguided tactics are accompanied not only by frustration and apathy but also by suspicion and a lack of respect of teachers for their colleagues as well as the administration (low intimacy). In brief, the behaviour of both the principal and teachers is not genuine and is closed. These schools are characterized by people going through the motions, without concern for the overall purpose of the institution. Headmaster/mistress's often stress routine, busy work, rules, and regulations. Teachers in schools deemed to be on a closed climate tend to appear frustrated and apathetic.

### 2.6.2 Organization Dynamics: Healthy to Unhealthy

Another framework for defining and measuring school climate was developed at Rutgers University in New Brunswick, New Jersey – United States of America (USA). The idea of positive health in an organization calls for the attention to factors that facilitate the growth and development as well as conditions that impede positive organizational dynamics (Miles, 1965). Miles (1965) defined a healthy organization as one that "not only survive in its environment, but continues to cope adequately over the long haul, and continuously develops and extends its surviving and coping abilities." According to Parson (1967), as cited in Hoy *et al.* (1991), all social systems, if they grow and develop, must satisfy the four basic conditions of: (a) adaptation, - the problem of acquiring sufficient resources and accommodating their environment, (b) goal attainment, -the problem offsetting and implementing goals, (c) integration, -the problem of maintaining solidarity within the system and lastly, (d) latency, -the problem of creating and preserving the unique values of the system.

An instrument called organizational health inventory for secondary school (OHI-S) was developed by Miles (1965) for assessing school health (Appendix 4).

### 2.6.2.1 Healthy and Un-healthy

A *healthy school* is protected from unreasonable pressure from community and parental. The school board successfully resists all narrow efforts of vested interest groups to influence its policy (high institutional integrity). The headmaster/mistress of a healthy school is a dynamic leader, integrating both task-oriented and relations oriented leader behaviour. Such behaviour is supportive of teachers and yet provides high standards for performance (high consideration and initiating structure). Moreover, the headmaster/mistress has an ability to affect the actions of superiors, which is demonstrated by the ability to get what is needed for the effective operation of the school (high influence).

Teachers in a healthy school are committed to teaching and learning. They set high but achievable goals for students, maintain high standards of performance, and promote a serious and orderly learning environment. Furthermore, students work hard on their school work, are highly motivated and respect other students who achieve academically (high academic influence). Classroom supplies, instructional materials, and supplementary materials are always available (high resource support). Finally, in healthy schools, teachers like each other, trust each other, are enthusiastic about their work, and identify positively with the school. They are proud of their school (high morale). Miles (1965) was the first to use the health metaphor to examine the climate of schools. The health of school is explained as the

characteristics and interactions that allow the organization to survive and grow within its environment.

The *unhealthy* school is vulnerable to destructive outside forces. Teachers and administrators are bombarded by unreasonable parental demands, and the school is buffeted by the whims of the public (low institutional integrity). Hoy and Tarter (1997) describe a *sick* school climate as one that is constantly attacked from within and without. In a sick school, parents and other influential community, groups interfere with the goals of the organization. The school is without an effective headmaster/mistress. The headmaster/mistress provides little direction or structure (low initiating structure), exhibits little encouragement and support for teachers (low consideration), and has little clout with superiors (low influence). Teachers neither feel good about their colleagues nor their jobs. They act in aloof, suspicious, and in defensive manner (low morale). Instructional materials, supplies, and supplementary materials are not available when needed (low resource support). Finally, there is little press for academic excellence. Neither teachers nor students take academic life seriously; in fact, academically oriented students are ridiculed by their peers and viewed by their teachers as threats (low academic emphasis).

### 2.6.3 Pupils Control Orientation: Humanistic to Custodial

Still another way of conceptualizing the climate of the school is in terms of the dominant patterns that teachers and headmaster/mistress favour to control students. Coleman (1961) presented the importance of pupils control and tension caused by the antagonism between students and teachers. Tenure laws and provisions of the

negotiated contracts, creates condition under which defining the responsibilities of staff members, in terms of students supervision is necessary.

Willower *et al.* (1967) developed an instrument to measure the climate of the school, in terms of student's management, called the pupils control ideology (PCI) (Appendix 6). The PCI needs to be administered to the professional staff members of a school. An individual's score on the PCI indicates her or his placement on a continuum from humanistic to custodial. This score is considered an indicator of classroom management style.

#### 2.6.3.1 Humanistic and Custodial orientations

The model for the *humanistic orientation* in the school is conceived as an educational community in which members learn through interaction and experience (Willower *et al.,* 1967). Student learning and behaviour are viewed in psychological and sociological terms rather than moralistic ones. The withdrawn student is seen just as much of a problem as the troublesome one. Teachers believe that students can learn to be responsible and self-regulating individuals. Moreover, the humanistic teacher is optimistic about the student and has open and friendly relations with students. A humanistic orientation leads teachers to desire a democratic classroom climate with its attendant flexibility in status and rules, open channels of two-way communication, and increased self-determination (Willower *et al.,* 1967). Teachers and students are willing to act on their own volition and accept responsibility for their actions.

The rigidly traditional school serves as a model for the *custodial orientation*. This kind of organization provides a highly controlled setting concerned primarily with

the maintenance of order. Students are stereotyped in terms of their appearance, behaviour, and parents' social status. Teachers do not attempt to understand student misbehaviour; in fact, they view misbehaviour as bad and believe that irresponsible and undisciplined persons should be controlled through punitive sanctions (Willower *et al.,* 1967). Watchful mistrust and autocratic control are the critical aspects of a custodial perspective. The general climate of a secondary school will be more accurately defined and described by studying all of the interactions between constituency groups in a school. Therefore, use of a combination of OCDQ-RS, OHI-S and PCI is beneficial and more reliable than using anyone of the mentioned instrument singly (Appendices 2, 4, 6).

**2.7. School Performance**

No matter where you turn, you cannot escape the pervasive discussions, debate and hyperbole that surround the topics of school performance and evaluating student's outcomes. Although evaluating school performance is a given in today's educational environment, there are still varying perspectives on how to best meet the challenge (Anne and Maaja, 2007). There are numerous criteria for measuring and/or evaluating the performance of schools.

Focusing at the school performance criteria brought out by different studies, one can see that they can divide them roughly into three categories or groups, namely, (i) Pupil's success - academic performance and non – academic skills, (ii) The contribution, satisfaction and cooperation of the stakeholder of the school and (iii) The importance of school environment (Anne and Maaja, 2007). Grifft (2003) shows

that different performance criteria receive different attention in schools. Some school emphasize mainly on the pupils' academic performance while other schools consider it important to maintain the satisfactions of the school personnel, good interpersonal relations, and good cooperation with parents and society in general. Grifft (2003) further argued that all the criteria should be equally considered and if a school has paid little attention to some area, this should be changed in order to make the school's work more efficient.

Therefore, in order to have the actual meaning of the school performance, the multi – faceted system was introduced (Heistad and spicuzza, 2000). According to Heistad and spicuzza (2000), the mult-faceted system incorporates the followings. First, a hybrid model of critical indicator that report *on level of performance, cross – cohort changes, growth or gain scores and value – added measure*. Secondly, Specific standards exams or test, set in a collaborative manner by key stakeholders, and standards then aligned with the curricular criteria of a specific country and real - world consequences, and lastly, a cycle of continuous school improvement planning.

The multi - faceted system seems to be the most effective measure of school performance (Heinstad and spicuzza, 2000). The models incorporated in the multi – faceted system are:-

**i) A hybrid model**

This model reports on the following: (a) level of performance, (b) cross – cohort changes, (c) growth or gain score, and (d) value - added measures:-

a) ***Level of performance:***

Meyer (1996) identifies three critical criteria for evaluating the usefulness of performance indicators; *first*, school performance indicators that are included in any accountability system must assess the type of skills demanded by society. For instance, in Tanzanian context, the skills demanded by society in Primary School level are writing, reading and numeracy (the 3Rs) according Malekela and Ndeki (1999).

The *second* characteristic of quality school performance indicator is its ability to accurately measure performance with respect to outcome it purports to measure (Meyer, 1996). That is, the indicators that are selected must meet a standard in which they cannot be "corrupted" thus, the instrument must be valid and reliable for the purpose for which they are selected. The administration of such instruments must occur following rigorous standardized procedures. Meyer (1996) describes additional concern about the ability to corrupt an accountability system.

*Finally,* over and above the compatible concern, performance indicator selected must measure the unique contribution schools "add" for each measure outcome. Although many systems rely on average test score performance to rank order or evaluate school performance, mean score are highly flawed indices of school effectiveness (Meyer, 1993). Despite the flawed nature of equating school performance with point -in- time mean performance, many educational stakeholders and families resort to evaluate or making judgments about school performance based on data of the test score.

b) ***The cross–cohort indicator***

This examines change across time, albeit for different groups of students. Cross cohort measures include; students enrolled at specific sites and compare across different group of students, the change in indicators such as the number of students passing examination, change in percent of students performing at certain level of high standard tests (form four examination) as well as changes in attendance and suspension rates. The gain indices include percent of continuously enrolment of student making nationally normed growth, comparisons among the different racial/ethnic group, accelerated fans at the top and bottom of the achievement distribution, and improvement on oral reading measures.

***c) Students growth or gain score***

Incomplete view of performance can results in poor decision making at best and all but ensures that schools will draw false conclusions when trying to determine the effectiveness of school policies on student's outcome (Meyer, 1996). Meyer (1996) proposed using what are now referred to as students gain score. The achievements scores for each student are compared to previous year performance. Therefore, when using this model, each child serves as his or her own control (Sanders *et al.,* 1997).

***d) Value added methodology or value added measure***

Meyer (1996) postulates that growth indicators are good, but an even better model is an extension of the growth model referred to as the value – added methodology. This model uses the statistical regression model that include factor that influence students achievement such as family and community characteristics (Meyer 1996). Thus,

Meyer (1996) and others have argued that failure to account for external sources of student achievement could lead to biased or contaminated indicators of school performance.

**ii) Standard Based Assessment Model**

Selected Northwest Evaluation Associatism (NWEA) bank of multiple – choice reading, math, science and English items that are pre-calibrated using Rasch – model (RIT) needs to be administered to students, the researcher must choose items from the item – bank that best aligned with their country curriculum standards and the level of students (i.e. Tanzanian curriculum). These items will then subjected to item biased reviews. Any items that will be modified from the original format will be piloted and recalibrated. Students who are severely disabled and students with severe English language deficiencies are excluded from these tests.

**iii) Continuous School Improvement Plans**

The model is based on detailed information reports provided to all school sites titled. "School Improvement Report" these documents set the stage for important site – based analysis and planning to occur. The school improvement Report (SIR) includes data like:

a) Student's performance on state high stake graduation assessments.

b) Student's performance on High Standard measure

c) The scaled score information on the Northwest Achievement level Test and school and grade – level information on the percentage of students "on course" to pass in the content areas of Math's and Readings.

d) Staff and students responses to a district, Regional and National administrated survey.

e) Staff and students characteristics.

These critical reviews are the way to report back to interested stakeholders about school performance and to examine the strengths and weaknesses of the current programming so that areas of need may be prioritized. Once areas of need are prioritized, school teams are assigned the task to develop a School Improvement Plan (SIP). The SIP has the following advantage to the school performance:

a) The School Improvement Plans (SIPs) are used to carefully craft the short – term and long – term goal and objectives a school will put in place to affect change.

b) The School Improvement Plans (SIPs) address how resources will be allocated to support the identified initiatives at each site.

School must identify a system of continuous measurement to ensure that mid – course corrections can be made – if sufficient progress is not made – as well as to allow definitive statement about overall school outcome. The SIP, in essence they become the school "road map" for charting an academic path and documenting how information will be gathered and used to evaluate overall school performance.

Heistad and spicuzza (2000) gives out the indicators of effective school, these include:-

a) Student achievement level to the state/national standard.

b) Change in achievement level compared to performance standard (i.e. cross – cohort analysis)

c) Student achievement gain compared to national expected norm growth (i.e. continuous membership post-test – pre-test).

d) Student achievement compared to predicted level of performance based on pre-test score and students' demographics (i.e. value – added analysis).

e) Student's attendance and graduation rates.

f) School climate, including safety and respected based on student and staff survey responses.

g) Student's participation in advanced course work.

However, because of the following reasons the scores in public or national examination were employed as performance criterion for Secondary Schools. First, previous studies used the mean public or national examination scores as central criterion for measuring the performance of schools (Goldstein (2001), Brown (2002)). Second, using the examination scores is rather objective and easily available method/means for comparing schools with one another. Third, in Tanzania, people perceive better schools are those which perform well in Final National Exams and lastly, the public interest and on-going debate and discussions around the Form four National examinations results in Tanzania.

Therefore, in the empirical part of this study, the results from the Certificate for Secondary Education Examination (CSEE) results from National Examinations Council of Tanzania (NECTA) were used as performance criterion for Secondary schools.

**2.8 Relationship between School Climate and School Performance**

Studies have identified the human organizational attributes that differentiate the more effective from the less effective schools. There is, however, a substantial body of research indicating that the effectiveness of schools, in terms of student learning and development, is significantly influenced by the quality and characteristics of the school climate. Owens (1981) argues.-

*"Not surprisingly, research suggests that schools that emphasize supportive, open communications, collaboration, intellectuality, and that reward achievement and success outperform (in terms of achievement, attendance, drop-out rate, frustration, alienation) those that emphasize constraint, restrictiveness, rigidity, coldness, lack of excitement and reward conformity"*

From a research basis, we are dealing with two variables (Owens, 1981). School climate and the internal attributes of the school (e.g., leadership style, decision making style, etc.) constitute the independent variables. The dependent variables, on the other hand, constitute the indicators of organizational effectiveness. These can be both objective (e.g., test scores, drop-outs, absences, etc.) and subjective (e.g., attitude surveys, ratings, etc.).

Therefore, several studies have shown links between the school climate and variables associated with school effectiveness. Hoy and Hannum (1997) examined the relationships between student achievements and climate in middle school in New Jersey. The hypothesis of the study was that all aspects of school health are

positively related to students' achievement. Through correlation analysis, Hoy and Hannum (1997) illustrated that general school health (climate) was positively related to student achievement in Mathematics, reading, and writing. Esposito (1999) examined the parents' perceptions of school climate and the children's academic and social development. Esposito (1999) found that the overall school climate does influence the academic and social development of the child. The findings were significant even after accounting family influences such as resources and maternal education.

It can be concluded that the climate of a school is established by the headmaster/mistress and school staff and is, therefore, capable of change. If the staff can establish and change the climate in the school, then the level of achievement can also be changed. Furthermore, research has shown that climate can impact on student achievement. Positive learning environments and positive learning outcomes appear to go together (Haertel *et al.*, 1981) as cited in Sackney (1988). In that regard a model of school climate improvement attributes is highly needed. As such, the attributes can be used as the basis for climate improvement activities.

Therefore, climate diagnosing, monitoring, and improvement are not worthwhile. As we know educational researchers and reformers have concluded that school climate cause difference in the learning environments of the school, in performance of the students and morale (Bossert, 1988; Sackney, 1988; Hoy and Sabo, 1998). Good climates equate with good schools. Therefore climate improvement is to be fostered and encouraged.

## 2.9 Conceptual Framework

This study complements those variables described in the general introductory part as it attempts to link the variables. The overall secondary school climate was assessed by Organizational Climate Descriptive Questionnaire - For Secondary Schools (OCDQ-RS), in terms of school health; the climate will be assessed by Organizational Health Inventory-For Secondary School (OHI-S) and in terms of student management aspects, school climate will be assessed by Pupil Control Ideology (PCI). However, the school performance will be assessed in terms of results from the National form four examinations (2013) in secondary schools.

The study aims at documenting the relationship and influence of Schools' Climate (independent variable) on Schools Performance (dependent variable). Figure 2.1: Describe the study in pictorial terms.

## 2.10 Knowledge Gap

The above review of related literature demonstrates the importance of having a-conducive working environment in public schools. Teachers have been teaching in over-crowded classes with non-conducive working conditions while ensuring effective teaching. Conducive school climate also manifests the nature and character of teachers, the teaching profession and the way the governments support their schools and its impacts on the overall quality of education. Yet, at present there is no enough information related to the subject of secondary school climate and its effects in students' performance in Tanzania. Therefore, this study attempt to add this information to the current available information on the subject.

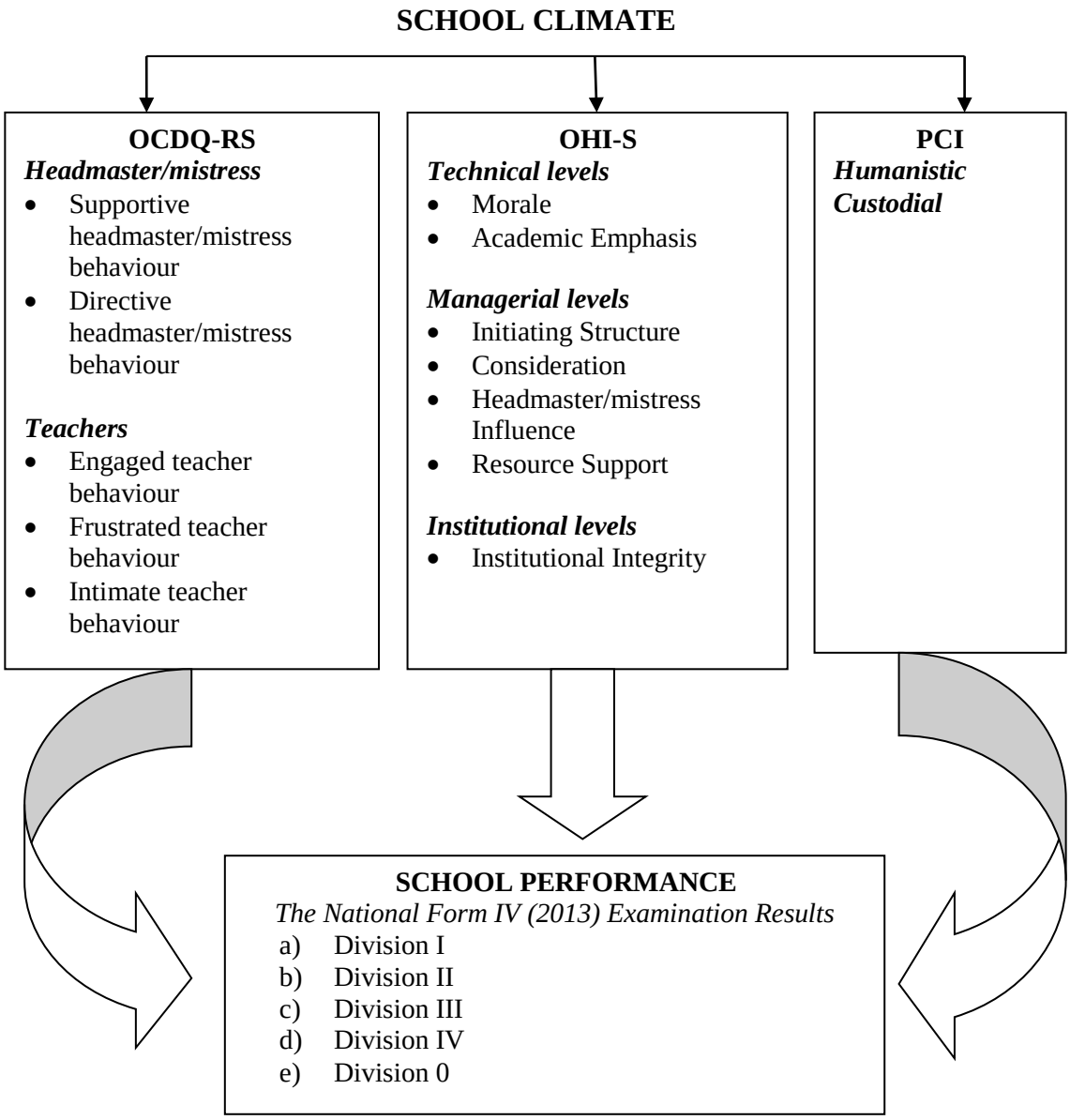


**Figure 2.1**: Conceptual framework diagram linking the variables of the study

Source: Adopted from Brown (2002)

# CHAPTER THREE

# 3.0 RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter deals with procedural steps of data collection and analyses. It includes the description of the study area, null hypotheses, research design, methodology including population, sampling strategy and instrumentation. Collection and analysis of data are also discussed in detail in this chapter.

## 3.2 The Description of the Study Area

This study was carried out in Mvomero district. Mvomero District is located in the North of Morogoro region and is administratively divided into seventeen wards. The name Mvomero is drawn from the name of the famous Mvomero River which passes through the district. The origin of the name Mvomero is from the word '*vomea*' which means sinking. The district occupies a total of 7,325 square kilometres. For the case of secondary education development, in 2009 Mvomero District was administratively divided into three divisions, viz. Turiani, Mvomero and Mlali. The district has a total of twenty secondary schools and every ward in the district has at least one secondary school. Some wards, for example, Mtibwa, Diongoya and Mvomero have two secondary schools each (Mvomero District Council, 2009).

For the purpose of understanding of the relationship and influence school climate has on school performance in secondary schools in Mvomero District, eight (08) secondary schools were selected in this study.

### 3.3 Null Hypotheses

The relationship and influence between school climate and school performance (students' academic achievements) would be confirmed or rejected through testing of the following null hypotheses

*$H_O1$:* The Secondary School operates on non-conducive or negative school Climate.

*$H_O2$:* There is no significant relationship between secondary school climate and School performance.

*$H_O3$:* The secondary school climate does not determine school performance.

### 3.4 Research Approach

This study used quantitative research approach. In non-experimental quantitative research, which has been adopted in this study**,** the researcher identified variables (independent and dependent) and looked for relationships among them but did not manipulate the variables. Major forms of non-experimental research are relationship studies including *ex post facto,* correlational research design and survey research design.

### 3.5 Research Design

The study largely employed the *ex post facto* research design. The designation *ex post facto*, from Latin for "after the fact," indicates that *ex post facto* research design is conducted after variation in the variable of interest has already been determined in the natural course of events. This method is sometimes called *causal comparative*

because its purpose is to investigate cause-and-effect relationships between independent and dependent variables. Researchers use it in situations that do not permit the randomization and manipulation of the characteristic of variables.

This design allows a researcher to predict an outcome, such as the prediction that ability, quality of schooling, student motivation, and academic coursework influence student achievement. This design can also be used when a researcher know and can apply statistical knowledge based on calculating the correlation statistical test.

### 3.6 Population, Sample and Sampling

The population in this study comprises all Secondary School in Mvomero District (n=20). The study sample will comprise 40 % of all Secondary Schools in the population, i.e. Eight (08) Secondary Schools. These schools were selected because of the following reasons, (i) they are found in divisions (administrative authority) which are close to each other (Turiani and Mvomero), (ii) the divisions are close by, hence, the Social Economic Status (SES) of the community in those divisions was assumed to be almost the same and (iii) these schools performed poorly in the national form four exam (CSEE) of 2013.

The total number of teachers in these schools was 205. Therefore, a conventional sampling strategy that was employed in this study with a 95 % confidence level and a five (5) % confidence interval. On using this randomly sampling strategy proposed by Cohen *et al*. (2007), the number of respondents expected to be included in the study sample were 132 teachers (Appendix 10). However, in determining the sample

size, the researcher took account of non-response, attrition and respondent mortality, i.e. some participants will fail to return questionnaires, leave the research, and return incomplete or spoiled questionnaires (e.g. missing out items, putting two ticks in a row of choices instead of only one) (Cohen *et al.,* 2007). Therefore, an overestimate on the size of the sample was done in order to build in redundancy (Gorard, 2003). Hence, the number of respondents expected to be included in the study sample were 160 teachers (i.e. 20 teachers from each school). However, the headmaster or mistresses were not included. Therefore, the selection of this sample was quite appropriate.

Each Secondary school was assigned a number (01- 08) to be entered on the *Climate questionnaires* and *NECTA results* for the identification of climate and performance (national examination results) of a particular Secondary School, and in order to link the two variables together. The instruments (OCDQ-RS, OHI-S and PCI) were expected to be administered to 160 teachers for the determination of Secondary School Climate. The researcher spent 20-30 minutes at each school during their normal daily meeting informing the teachers about the study and asked for their consent to participate.

### 3.7 Instruments for Data Collection

#### 3.7.1 Measure of School Climate

Three instruments were used for collecting data regarding the assessment of organizational climate (school climate). Use of organisational climate questionnaires in assessing the climate of an organisation seems to be an effective way than the

other forms of data collection (Browne, 2002; Anne and Maaja, 2007). Given all of the strategies that could be used to measure the climate of the schools, the OCDQ-RS, OHI-S and PCI was selected because they of their superiority in predicting students achievement (Hoy *et al.*, 1991; Hoy and Hannum, 1997). Copies of these questionnaires are found in Appendices 2, 4 and 6. Their names and details are given.

#### 3.7.1.1 Organizational Climate Descriptive Questionnaire - For Secondary Schools (OCDQ-RS)

The OCDQ-RS is a 34-item climate instrument (Appendix 2) mapped with five dimensions (Appendix 3) describing the behaviour of secondary teachers and the headmaster/mistress. Each of these dimensions is measured by a subtest of the OCDQ-RS. The reliability scores for the scales are relatively high: Supportive (0.91), Directive (0.87), Engaged (0.85), Frustrated (0.85), and Intimate (0.71). The instrument, unlike the original OCDQ, OCDQ-RS was designed for secondary schools. It measures two aspects of headmaster/mistress leadership-supportive and directive behaviour, and three aspects of teacher interactions-engaged, frustrated, and intimate behaviour.

#### 3.7.1.2 Organization Health Inventory (OHI-S)

The Organizational Health Inventory for Secondary (OHI-S) is a 44-item instrument (Appendix 4) that maps the organizational health of secondary schools along seven dimensions. Viz, Institutional Integrity, Initiating Structure, Consideration, Head master/mistress's Influence, Resource Support, Morale and Academic Emphasis

(Appendix 5). Each of these dimensions is measured by a subtest of the OHI-S. At the technical level, the teacher's morale and the academic press of the school are seen as critical ingredients of good school health. At the managerial level, the leadership and support of the head master/mistress in terms of consideration, initiating structure, influence with superiors, and resource support are key elements. Finally, healthy schools have institutional integrity; they cope with disruptive external forces and direct their energies toward the educational mission.

#### 3.7.1.3 Pupils Control Ideology (PCI)

The Pupils Control Ideology (PCI) is a 20 - item instrument (Appendix 6) that maps the school climate of student's classroom management on a continuum from humanistic at one extreme to custodial at the other (Appendix 7). Unlike the OCDQ-RS and OHI-S, the PCI is not specific for a particular level of learning (i.e. Primary or Secondary Schools). The focus of the PCI is to investigate the relationships between staff members and students. Humanistic schools are those where the members of the school community learn through cooperative interactions and experience (Hoy and Forsyth, 1986).

In a humanistic school, there is no need for strict rules and specific consequences because high levels of self-discipline and communication exist. In contrast, a school with strict rules is characterized by rigidity and strong sense of hierarch and is common to an institution with a custodial orientation. Teachers view misbehaviour as a personal affront and view students as subject who must be controlled through punitive sanctions.

### 3.7.2 Measure of School Performance

In Tanzania, three examinations – P7 (Primary School Leaving Examination - PSLE), S4 (Certificated of Secondary Education Examination - CSEE), S6 (Advance Certificate of Secondary Education Examination - ACSEE) – determine and define the quality of teaching, learning, and learning outcomes (Omari, 2013). However, the Form IV (S4) examination is probably the most important examination which determines whether one will join the middle class (high school, vocational trainings and higher learning institutions) to enjoy bread and butter, or will just remain in the lower stratum of the society to cut wood and take care of goats, cows, and farms.

National form four results for the year 2013 were used for school performance assessments. The results are presented at the website of the National Examinations Council of Tanzania - NECTA (www.necta.go.tz). The Certificate of Secondary Education Examination (CSEE) results are given in divisions I, II, III, IV and 0, the divisions were considered as the basis of assessment and comparison. The divisions were chosen in the first place because they are those used as entry qualification for high schools and other higher education institutional, such as colleges and universities.

Students who score Division I-III have a good chance of joining higher education levels, but those who score division IV and 0 don’t have that chance. However, according to NECTA, students who score division I-IV are regarded as having passed the examination.

### 3.8 Validity and Reliability of Instruments

Cohen *et al*., (2007) argue that validation of the instruments is a process of establishing documented evidence, which provides a high degree of accuracy that a specific process consistently produces its predetermined specifications and quality attributes. In this study validity of the instruments was assessed through discussion between the researcher and the research supervisor, then with fellow postgraduate students during the face to face session as well as with the facilitators of the session and finally the discussion was approved with research supervisor. Therefore all inconsistencies and ambiguities of some words used were corrected to fit the study area before final production of the instruments.

The questionnaires used are standardized with high validity and high level of reliability for each sub test and have been normalized using normative data of New Jersey schools in USA (Hoy *et al.,* 1991). Therefore, their reliability were very high. The reliability scores for the scales for OCDQ-RS are relatively high: Supportive (0.91), Directive (0.87), Engaged (0.85), Frustrated (0.85), and Intimate (0.71). And the reliability scores for the OHI-S scales are also relatively high: Institutional Integrity (0.91), Initiating Structure (0.89), Consideration (0.90), Head master/mistress's Influence (0.87), Resource Support (0.95), Morale (0.92), and Academic Emphasis (0.93).

Finally, the reliability of the scale of PCI is consistently high-usually 0.80 - 0.91 (Willower *et al.,* 1967; Packard, 1988). The construct validity of the scale has been supported in a number of studies (Willower *et al.,* 1967; Packard, 1988).

### 3.9 Data Analyses

The data were analysed in interval scale of measurement. The analyses of data included the exploratory (descriptive) and confirmatory (inferential) statistics. The analysis of the data was performed using Microsoft Excel (MS Excel) and Statistical Package for Social Science (SPSS) version 16.

#### 3.9.1 Descriptive Statistics

To assess the climate, the subtest mean scores from each Secondary school were calculated and converted to standardized scores. The current database on secondary schools used for standardization was drawn from a large, diverse sample of schools in New Jersey in United State of America (Appendix 3, 5 and 7). The school climate was described as *conducive or positive*, only if the school climate had two (i.e. 67 %) or all three properties (open, healthy or humanistic) of the conducive or positive school climate. For the *non-conducive or negative* climate case, the school climate had two (i.e. 67 %) or all three of the negative properties (close, unhealthy or custodial) of the non-conducive or negative school climate.

#### 3.9.2 Inferential Statistics

To explore the relationships among variables under the study, Product - moment (Bivariate) correlation was used. Product- moment (r) is appropriate way to describe the relationship between the variables, because – this statistical technique bears very small standard error than the other Bivariate correlation techniques (Anastasi, 1990). Multiple regression analysis was used to determine if the school climate influence or predict performance in secondary schools. The null hypotheses ($H_0$) were tested at a

$p < 0.05$ level of significance. In multiple regression analysis, the R square indicates how much variance in the dependent variable is explained by the independent variable. However, the adjusted R square is more accurate (Cohen *et al.*, 2007), and its use was advocated, as it automatically takes account of the number of independent variables.

The adjusted R square is usually smaller than the unadjusted R square, as it also takes account of the fact that one is looking at a sample rather than the whole population (Cohen *et al.*, 2007). Muijs (2004) suggests that, for a goodness of fit with an adjusted R square, the following classification should be used, an adjusted R square < 0.1 - poor fit, 0.11– 0.3- modest fit, 0.31 – 0.5- moderate fit and > 0.5 – strong fit.

The SPSS was used for the analysis of variance (ANOVA). The final column, marked 'Sig.'; this is the significance level; in this study $p < 0.05$ is the accepted level. If the level of significance of $p < 0.05$ is met, then, we have a statistically significant relationship between the independent variable and the dependent variable.

Also the effect size of the predictor variables is given by the beta weightings. The Beta weight is the amount of standard deviation unit of change in the dependent variable for each standard deviation unit of change in the independent variable. In interpreting the effect size, Muijs (2004) gives the following guidance: 0 – 0.1 weak effects, 0.1 – 0.3 modest effects, 0.3 – 0.5 moderate effects and > 0.5 strong effects.

### 3.10 Ethical Consideration

The basic ethical principle in organizing data collection is that no harm should come to participants as a result of their participation in the study (Cohen *et al.,* 2007). Therefore, the researcher ensured the protection of human rights to all participants involved in the study by considering the following issues.

#### 3.10.1 Research Permit

Permission to conduct this study was obtained by having a letter from the Director of Morogoro Regional Center, who issued an introduction letter for data collection. The letter enabled the researcher to have access to Morogoro Region Administrative Secretary (RAS) and finally to Mvomero District Administrative Secretary (DAS) who in turn issued a permit that allowed the researcher to access relevant respondents.

#### 3.10.2 Informed Consent

The researcher sought consent from participants to provide information and data having explained to them the research objectives and assuring them that all information and data volunteered would be treated as confidential and would be used for the research purposes only. This assisted participants to have a clear understanding of the aim of study and exercise their right to participate or not.

#### 3.10.3 Privacy and Confidentiality

This is the state of the freedom from interference or public attention. It is considered in two perspectives: the sensitiveness of the information given and the use of names

of people providing information. Sensitive information refers to how personal or potential threatening the information is. In order to ensure privacy among participants, all data collected were stored carefully so as to protect them from unauthorized persons. The data were also registered by numbers rather than names.

The right of confidentiality insists that individuals identified are not silent features to the research. Cohen *et al.* (2007) argue that a participant is considered anonymous when the researcher or person cannot identify the participant or subject with the information provided. Therefore, the researcher ensured that research instruments prepared and in the findings reporting bore no identifying marks such as names or personal details. Names of schools were replaced with numbers from 01 to 08.

### 3.11 Generalization of the Research Finding

Generalizability is applied by researchers in an academic setting. It can be defined as the extension of research findings and conclusions from a study conducted on a sample population to the population at large, the generalization is affected by external validity. External validity refers to the degree to which the results can be generalized to the wider population, cases or situations (Cohen *et al.,* 2007). Lindner and Wingenbach (2002), in their review of Researches found that non-response error was a threat to external validity.

There many questions faced by faculty, graduate students, and researchers engaged in survey research. For instance, what do you do to enhance the external validity of your study? However, if certain procedures are followed in handling the data, the

external validity can be enhanced. Here are some of the key points to consider about generalizing the findings in survey research (Radhakrishna, 2008):

a) The population and sample;

b) Response rates; and

c) Comparison of early, late, and non-respondents

The findings of this study can be *generalized to the entire population* basing on the following reasons. The discussion will base on the given key points above.

**Population or Sample**. This determines how the subjects for the study were selected. Knowing how the subjects were selected will help determine whether or not we can generalize the findings. In this study, by using random (probability) sampling a population representative sample was selected. Therefore, the sample was a true representative of the population, because it was obtained without the bias of the researcher (Cohen *et al.*, 2007), the findings of this study can be generalised to the entire population.

**Response rate.** The next step is to know how many subjects responded to the survey (questionnaires). Calculate the response rate of the survey. Suppose you get 100% response, the question of generalizing the findings does not arise because everyone responded. But if it is a sample, you may have to generalize to a population. That is not always the case. You rarely get 100% response. For instance, in this study, only 74 teachers out of 132 (before adding to 160 in building redundancy) responded to questionnaires, this is only 56 % of the sample.

Lindner *et al.,* (2001) suggested that procedures for handling nonresponse issues be implemented when less than an 85% response rate is achieved. However, to reduce further the threat of nonresponse error, it is recommended that a minimum response rate of 50% be achieved (Fowler, 2001). In this study, a minimum response rate is 54 %, this is greater or higher than 50 % as proposed by Fowler (2001). Therefore, the nonresponse rate (46 %) in this study does not affect the external validity of the study hence a generalisation can be made to the entire population

**Comparing early, late and non-respondents**. This case identifies the subjects who responded to the first mailing within the deadline date, and label them as early. Similarly, identify all other subjects who responded to subsequent mailings, and label them as late. After the data collection is complete, identify and label the non-respondents. According to Miller and Smith (1983), non-respondents tend to be similar to late respondents in responding to surveys. Therefore, compare the early and late respondent groups on key variables. If you find *non-significant differences* between early and late respondents, you can statistically conclude that non-respondents are perhaps similar to late respondents and thus generalize the findings to the population. However, since this study did not take into account the issue of early, late and non-respondent, therefore there is nothing that can be concluded using this criterion

Using strategies suggested in this section and describing procedures used to handle non-response error would not only enhance the external validity of the study, but also improve the criteria, standards, and level of rigor in research carried. However, the

decision to generalize research findings to the accessible population or general population needs to be clarified in research reports so that readers could interpret results with caution and for the purpose of replicating these studies in similar and/or other settings.

# CHAPTER FOUR

# 4.0 RESULTS AND DISCUSSION

## 4.1 Introduction

Chapter four contains the descriptions, data analysis and discussion of the results. This chapter has been further divided into four sections. Section one provides the demographic information and questionnaire returning rate, second section provides the descriptions of the school climate in Mvomero district, the third one describes the relationship between school climate and school performance. The last section describes the influence of school climate on secondary school performance.

## 4.2 Demographic Information and Questionnaires Returning Rate

Out of the 480 questionnaires sent (i.e. 160 for OCDQ-RS, 160 for OHI-S and 160 for PCI) to teachers of the eight selected secondary schools, only 74 questionnaires for OCDQ-RS, 72 questionnaires for OHI-S and 71 questionnaires for PCI were returned. All returned questionnaires were completely filled. The total number of returned questionnaires was 217 (45.2%). A detailed breakdown from each school and for each type of questionnaire is shown in Table 4.1.

Out of 74 participants (teachers) included in this study, 30 were female and 44 were male. The majority of respondents (79.7 %) were aged between 25-34 years. Of the remaining respondents (12.2 %) were aged between 24 years and below, 5.4 % of the respondents were aged between 35-44 years, and the remaining (2.7 %) respondent, one was aged between 45-54 years and another had the age between 55 years and above.

**Table 4.1: Number of Climate Questionnaires Returned Per Secondary School**

| School No. | OCDQ-RS | OHI-S | PCI | School Number | OCDQ-RS | OHI-S | PCI |
|---|---|---|---|---|---|---|---|
| **01** | 11 | 11 | 11 | **05** | 09 | 09 | 09 |
| **02** | 13 | 13 | 13 | **06** | 08 | 07 | 07 |
| **03** | 09 | 10 | 09 | **07** | 08 | 08 | 08 |
| **04** | 08 | 08 | 08 | **08** | 07 | 06 | 06 |

OCDQ-RS = Organizational Climate Descriptive Questionnaire for Secondary Schools

OHI-S = Organizational Health Inventory for Secondary School

PCI = Pupil Control Ideology

The majority (70.3 %) of the participants in the study started teaching at their respective schools in the year 2013. Therefore they had more than 2 years of service in those schools. Of the remaining participants, thirteen (13) had 3-4 years of service, five (05) had 4-7 years, two (02) had 8-10 years, and one (01) had worked at a certain secondary school for 16 years, and one did not respond to the question.

The participants of this study included 45 graduates who had Bachelor degree (Education); 27 had Diploma in Secondary education; one had both a Diploma in Secondary education and a Bachelor of Arts in Public Administration. One person marked “other”, had a Bachelor of Arts in Rural Development. The respondents (teachers) were teachers by profession except one respondent who had a Bachelor of Arts in Rural Development.

### 4.3 School Climate in Mvomero District

The researcher used the organizational climate description questionnaire for secondary school (OCDQ-RS), the organizational health inventory for secondary

school (OHI-S) and the pupil control ideology (PCI) to determine the climate of each of the eight Secondary Schools included in the study.

**Table 4.2 The Standardised Scores and Climate Index of all Eight School Measured by OCDQ-RS[1]**

| School Number | Standardised Scores | | | | | Openness Index | Classification |
|---|---|---|---|---|---|---|---|
| | Supportive | Directive | Engaged | Frustrated | Intimate | | |
| **01** | 315 | 717 | 18 | 447 | 364 | 292 | Closed Climate |
| **02** | 502 | 637 | 489 | 526 | 755 | 457 | Closed Climate |
| **03** | 380 | 591 | 196 | 545 | 486 | 360 | Closed Climate |
| **04** | 418 | 733 | 258 | 521 | 617 | 356 | Closed Climate |
| **05** | 497 | 515 | 845 | 337 | 618 | 623 | Open Climate |
| **06** | 371 | 632 | 354 | 477 | 603 | 406 | Closed Climate |
| **07** | 357 | 738 | 580 | 476 | 699 | 430 | Closed Climate |
| **08** | 342 | 691 | 163 | 505 | 692 | 335 | Closed Climate |
| **General Climate Of all Schools (Mean)** | 398 | 657 | 363 | 479 | 604 | 406 | Closed Climate |

[1]OCDQ-RS = Organizational Climate Descriptive Questionnaire for Secondary Schools

**Table 4.3 The Standadised Scores and Climate/Health Index of all Eight School Measured by OHI-S[1]**

| School Number | Standardised Scores | | | | | | | Healthy Index | Classification |
|---|---|---|---|---|---|---|---|---|---|
| | Institutional Integrity | Initiating Structure | Consideration | Headmaster/mistress Influence | Resource Support | Morale | Academic Emphasis | | |
| **01** | 489 | 371 | 365 | 559 | 362 | 564 | 350 | 447 | Unhealthy |
| **02** | 525 | 476 | 603 | 520 | 460 | 565 | 513 | 523 | Healthy |
| **03** | 398 | 371 | 341 | 480 | 393 | 384 | 459 | 404 | Unhealthy |
| **04** | 441 | 357 | 299 | 501 | 426 | 503 | 416 | 420 | Unhealthy |
| **05** | 396 | 370 | 342 | 590 | 390 | 380 | 452 | 419 | Unhealthy |
| **06** | 416 | 387 | 404 | 510 | 261 | 455 | 457 | 413 | Unhealthy |
| **07** | 448 | 412 | 416 | 524 | 393 | 536 | 592 | 474 | Unhealthy |
| **08** | 485 | 453 | 262 | 496 | 305 | 349 | 567 | 417 | Unhealthy |
| **General Climate Of all Schools (Mean)** | 450 | 400 | 379 | 523 | 374 | 467 | 476 | 439 | Unhealthy |

[1]OHI-S = Organizational Health Inventory for Secondary School

**Table 4.4 Mean Score and Continuum of PCI[1] for all Eight Schools**

| School Number | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | All Schools |
|---|---|---|---|---|---|---|---|---|---|
| **Mean Score** | 60 | 66.8 | 63.1 | 68.3 | 63.3 | 64 | 61.1 | 68.5 | 64.4 |
| **Continuum Classification (Humanistic/ Custodial)** | Custodial | Custodial | Custodial | Custodial | Custodial | Custodial | Custodial | Custodial | Custodial |

[1]PCI = Pupil Control Ideology

**Table 4.5 Performance of Students in CSEE from Eight Secondary Schools in the Year 2013[1]**

| School Number | Percent (%) likehood of advancing to High school and higher learning[2] | | Total Number of students who sat for the examination | Number of Students in each exam Division | | | | |
|---|---|---|---|---|---|---|---|---|
| | With Chance | Without Chance | | I | II | III | IV | 0 |
| **01** | 2.4 | 97.6 | 85 | 01 | 00 | 01 | 21 | 62 |
| **02** | 0.9 | 91.0 | 112 | 01 | 03 | 06 | 19 | 83 |
| **03** | 1.5 | 98.5 | 67 | 00 | 00 | 01 | 07 | 59 |
| **04** | 4.5 | 95.5 | 67 | 00 | 00 | 03 | 13 | 51 |
| **05** | 9.2 | 90.8 | 87 | 00 | 02 | 06 | 24 | 55 |
| **06** | 5.4 | 94.6 | 110 | 00 | 01 | 05 | 17 | 87 |
| **07** | 11.8 | 88.2 | 76 | 01 | 03 | 05 | 13 | 54 |
| **08** | 12.2 | 87.8 | 82 | 01 | 03 | 06 | 14 | 58 |
| **Total** | 7.1 | 92.9 | 686 | 04 | 12 | 33 | 128 | 509 |

[1]Source: http://www.necta.go.tz/matokeo/CSEE2013/olevel.htm

[2]Students in divisions I, II and III can advance to high school and higher leaning while those in divisions IV and Zero cannot

### 4.3.1 The Testing of Hypothesis 1

The first hypothesis state that the Secondary School operates on a-conducive or positive school climate (*Ha1*) and the Secondary School operates on non-conducive or negative school climate (*Ho1*). Based on the results, we accept the null hypothesis (*Ho1*) as the climates of individual schools and general climate of all eight secondary schools involved in this study were described as *non-conducive* or *negative*. This is because the climate consists of all the three elements (close, unhealthy and custodial)

of non-conducive or negative school climate (Hoy *et al.,* 1991). The mean score levels on all the types of climate measure were 406 (Closed) for OCDQ-RS, 439 (Unhealthy) for OHI-S and 64.4 (Custodial) for PCI respectively (Table 4.2 – 4.4).

The use of a combination of OCDQ-RS, OHI-S and PCI described the climate of secondary school accurately. According to Hoy *et al.* (1991) it was seen beneficial and more reliable than using anyone of the mentioned instrument singly. This was evident when analysing climates of school number two (02) and school number five (05). If OHI-S were not used, probably the climate of such school number two would have not been described accurately (Table 4.3). Likewise in school number five (05), if OCDQ-RS were used, probably the climate of such school would have not been described accurately (Table 4.2).

The climate measured by OCDQ-RS in all eight schools was perceived as close climate, except climate of school number five (05) which was described as open climate (Table 4.2). According to Hoy *et al.* (1991), a closed climate always is characterized by followings. The headmaster/mistress's leaderships were controlling and rigid (high directiveness) as well as unsympathetic and unresponsive (low supportiveness). Likewise, the teachers' support is not open and non-professional behaviour (low engagedness) among them. In addition, the teachers in Mvomero district find the working environment or settings frustrating rather than facilitating (high frustrating). Also teachers lack respect for their colleagues as well as the administration (low intimacy). In brief, the headmaster/mistress and teacher's relations are disengaged, frustrating, distant, suspicious, and not professional. Such

schools are characterized by people going through motions, without concern for the overall purpose of the institution (Hoy *et al.*, 1991).

The school healthy, measured by OHI-S, in all eight schools is characterized by followings; the climate of all eight schools was describe as *unhealthy;* except school number two which had *healthy climate* (Table 4.3). The unhealthy schools are vulnerable to destructive outside forces (Hoy and Tarter, 1997). According to Hoy *et al.* (1991), unhealthy climate is characteristics by; first, teachers and administrators are bombarded by unreasonable parental demands, and the school is buffeted by the whims of the public (low institutional integrity), teachers also feel unsecured and living in un-autonomous school. Secondly, the headmaster/mistress provides little direction or structure to his or her subordinates (low initiating structure), and also exhibits little encouragement and support for teachers (low consideration), and has little clout with superiors (low influence). Teachers feel neither good about their colleagues nor their jobs. They act aloof, suspiciously, and defensively (low morale). Instructional materials, supplies, and supplementary materials are not available when needed (low resource support). Finally, there is very little press or emphasis for academic excellence. Teachers and students are not taking academic life seriously; in fact, academically oriented students are ridiculed by their peers and viewed by their teachers as threats (low academic emphasis).

All analysed school in Mvomero district are rigidly traditional school and hence serves as a model for the *custodial orientation* (Table 4.4). These schools always provide a highly controlled setting concerned primarily with the maintenance of

order (Willower *et al.,* 1967; Hoy *et al.,* 1991). Students are stereotyped in terms of their appearance, behaviour, and parents' social status. Teachers do not attempt to understand student misbehaviour; they view misbehaviour as bad and believe that irresponsible and undisciplined persons should be controlled through punitive sanctions (Willower *et al.,* 1967). Watchful mistrust and autocratic control are the critical aspects of a custodial perspective.

This findings on school climate concurred with the study done on the working environment on government secondary school (Brown, 2002). According to those studies, government schools appeared to have negative or poor school working environment when compared to non-governmental (religious based and private) owned secondary school (HakiElimu, 2013; Mkumbo 2013).

### 4.4 Relationship between School Climate and School Performance

Nine hundred and forty two (942) students in all eight secondary schools sat for the national form four examinations in 2013. However, the results of 256 students were withheld while the results of the remaining (686) were displayed on the NECTA webpage. Table 4.5 presents the performance of eight secondary schools in the district.

From the Table 4.5, only 7.1 % of students had a chance of progressing for further studies (division I, II and III), the rest (92.9 %) were categorized as failed in all eight secondary schools. However, based on the NECTA classifications, only 25.8 % of students who sat for CSEE in 2013 in all eight schools were declared as having

passed because they were found in the score range of division I to division IV, and the rest (74.2 %) scored division zero and were declared as failure ones.

### 4.4.1 The Testing of Hypothesis 2

The second hypothesis state that, there is relationship between secondary school climate and school performance (*Ha2*) and there is no relationship between secondary school climate and school performance (*Ho2*). The second null hypothesis (*Ho2*) was rejected. School Climate is an influencer of School Performance. It was found that the subtests of intimate teachers' behaviour, frustrated teachers' behaviour, initiating structure, academic emphasis, institution integrity and headmaster/mistress influence do influence the school performance or division categories. However, all of these subtests were from the OCDQ-RS and the OHI-S and were found to be significantly correlated ($p < 0.05$ or $p < 0.01$) with division categories (Table 4.6 and Table 4.7)

Three significant correlations exist between the climate subtest of OCDQ-RS and division categories Table 4.6. First, the subtest of intimate teachers' behaviour indicated a statistically high strong positive correlation ($p < 0.05$) with division II (Table 4.6). Secondly, if a significant factor of $p < 0.01$ were chosen, Division III would also have had strong positive significant correlation with intimate subtest (Table 4.6).

The score on intimate subtest is very high (Table 4.2), this indicates that, in these schools there is strong and cohesive network of social relationships among the staff

members (teachers). Also teachers know each other well, are close personal friends, and regularly socialize together, the level of student academic achievement is a higher (Hoy *et al*., 1991; Browne, 2002).

Lastly, the most significant ($p < 0.05$) finding in this research was that the frustrated teachers' behaviour subtest from OCDQ-RS was significantly negatively correlated with Division IV. The score on frustrated teachers' behaviour subtest is slightly below average (Table 4.2). However, this value is still high regarding the impact of this subtest on the students' learning environment. While the relationship does not show causation, it does indicate that schools where there is a pattern of interference from both administration and colleagues that distract them from the basic task of teaching. Routine duties and assigned nonteaching duties are excessive; moreover, teachers irritate, annoy and interrupt each other, and the level of academic achievement for students is always poor (Hoy *et al*., 1991; Browne, 2002).

One subtest of OCDQ-RS was not significant correlated with division categories despite of having moderate strong positive relationships with division categories. The reason for insignificance might be due to small number of respondents. Therefore, when $r > 0.6$ and significance level falls within $0.05 < p < 0.1$, then the relationship was considered important in this study. The engaged teachers' behaviour was related with division III, as $r = 0.662$ at $p = 0.074$ level of significance. While this relationship is not considered statistically significant at $p < 0.05$ or 0.01 and does not show causation, it does indicate that in such schools teachers are proud of their school, enjoy working with each other, and are supportive of their colleagues.

Teachers are committed to the success of their students, they are friendly with students, trust students, and are optimistic about the ability of students to succeed; schools with these characteristics always have higher students' academic performance (Hoy *et al*., 1991; Browne, 2002).

**Table 4.6 Correlation[1] between Climate Sub Test of OCDQ-RS[2] and Division Categories obtained at CSEE in 2013**

| **OCDQ-RS[2]** | **Division Categories at CSEE in 2013** | | | | |
|---|---|---|---|---|---|
| | **I** | **II** | **III** | **IV** | **0** |
| **Supportive** | -0.289 | 0.284 | 0.483 | 0.382 | 0.182 |
| **Directive** | 0.534 | -0.027 | -0.218 | -0.295 | -0.197 |
| **Engaged** | -0.203 | 0.527 | 0.662 | 0.407 | -0.009 |
| **Frustrated** | 0.153 | -0.119 | -0.287 | -0.779* | 0.188 |
| **Intimate** | 0.197 | 0.821* | 0.868** | -0.016 | 0.178 |

*Significant at $p < 0.05$ (2 tail)

**Significant at $p < 0.01$ (2 tail)

[1]Pearson Correlation (r) with N = 8

[2]OCDQ-RS = Organizational Climate Descriptive Questionnaire for Secondary Schools

There is a substantial body of literature indicating that the students' academic achievement is significantly related the school climate assessed by OCDQ (Hoy and Hannum, 1997). The findings of this study concurred with the study done by Sweetland and Hoy (2000). Through their study, they assessed the climate of 86 middle schools in New Jersey by using OCDQ. The finding of their study indicated a significant relationship between engaged teachers behaviour, intimate teacher

behaviour, frustrated teachers and performance (students' academic achievement) and teacher empowerment. Students' academic achievement and teacher empowerment are the elements of effective schools (Sweetland and Hoy, 2000).

**Table 4.7 Correlation[1] between Climate Sub Test of OHI-S[2] and Division Categories Obtained at CSEE at 2013.**

| OHI-S[2] | Division Categories at CSEE in 2013 | | | | |
|---|---|---|---|---|---|
| | I | II | III | IV | 0 |
| Institutional Integrity | 0.067 | 0.113 | 0.194 | 0.887** | -0.111 |
| Initiating Structure | 0.694 | 0.824* | 0.630 | 0.053 | 0.416 |
| Consideration | 0.336 | 0.372 | 0.277 | 0.264 | 0.682 |
| Headmaster/mistress Influence | 0.848** | 0.406 | 0.182 | 0.230 | 0.276 |
| Resource Support | 0.098 | 0.050 | -0.098 | -0.004 | -0.270 |
| Morale | 0.444 | -0.041 | -0.172 | 0.237 | 0.255 |
| Academic Emphasis | 0.392 | 0.860** | 0.675 | -0.294 | -0.022 |

*Significant at $p < 0.05$ (2 tail)

**Significant at $p < 0.01$ (2 tail)

[1]Pearson Correlation (r) with N = 8

[2]OHI-S = Organizational Health Inventory for Secondary School

There were also four significant correlations ($p < 0.05$ or $p < 0.01$) between the OHI-S sub tests and School Performance (division categories) (Table 4.7). First, the subtest of initiating structure shows a strong correlation with division II. This relationship has an intuitive appeal that is, in schools where the headmaster/mistress makes his or her attitudes and expectations clear to the staff members (teachers) and maintain definite standards of performance, the academic achievements is always high. Secondly, if a significant factor of $p < 0.01$ were chosen, Division II would also

have had strong positive significance correlation with the subtest of academic emphasis. While not a sign of causality, this relationship has intuitive appeal because the stronger the press in the school for academic achievement the higher the number of students in division II category.

Third, the subtest of headmaster/mistress influence indicated significant correlation ($p < 0.01$) with division I. This indicates in schools where the headmaster/mistress has an ability to affect the actions of superiors. The influential headmaster/mistress is persuasive, works effectively with the superintendent, and simultaneously demonstrates independence in thought and action. Schools with these characteristics have higher academic achievements (Hoy *et al.,* 1991). Lastly, the subtest of institution integrity was significantly related ($p < 0.05$) with division IV, respectively (Table 4.7). This indicates that, in non-autonomous schools, the schools are vulnerable to narrow, vested interests of community groups. Indeed, teachers are not protected from unreasonable community and parental demands. Table 4.3 shows the average score on institutional integrity is 450 (below average), as such in these schools, the pass rate will always be poor or low.

While not significant, three moderately strong positive relationships exist between school climate assessed by OHI-S and division categories (Table 4.7). The reason for insignificance might be due to small number of respondents. Therefore, when $r > 0.6$ and significance levels falls within $0.05 < p < 0.1$, then the relationships that bear these characteristics were considered important in this study. First, academic emphasis is related, at a moderate level, to the division III, as $r = 0.675$ at $p = 0.066$

level of significance. While this relationship is not considered statistically significant and does not show causation, it does indicate the schools where higher but achievable goals are set for students, the learning environment is orderly and serious; obviously the academic performance is high.

Secondly, initiation structure is related to division I, as r = 0.694 at p = 0.056 level of significance and division III, as r = 0.630 at p = 0.094 level of significance. While the relationship is not considered statistically significant, it does indicate school where the head master/mistress makes his or her attitudes and expectations clear to the staff members (teachers) and maintain definite standards of performance, the pass rate always is high. Finally, the subtest of consideration is related to division IV, as r = 0.682 at p = 0.062 level of significance. While the relationship is not statistically significant, it does indicate the school where teachers experience headmaster/mistress's behaviour that is not friendly, unsupportive, and non-collegial. The headmaster/mistress's does not look out for the welfare of staff members and is not open to their suggestions (Low consideration). Table 4.3 shows the average score is 379 (very low consideration), as such in these schools, the pass rate will always be poor.

The relationship between school climate (assessed by OHI) and students' academic achievement was supported by Hoy and Hannum (1997) and Brown (2012). The general school health (climate) was positively related to student achievement in Mathematics, reading, and writing (Hoy and Hannum, 1997). Also the results from this study agreed with the results of the study conducted in Indianapolis, Indiana in

the USA. The Organisational Health Inventory (OHI) was used to collecting data for assessing the climate of 45 elementary schools. The analysis indicated high correlation level of academic emphasis - the subtest of school climate and the students' academic achievement in reading and mathematics (Goddard *et al.,* 2000).

Sweetland and Hoy (2000) also assessed the climate of 86 middle schools in New Jersey by using OHI. The finding of their study indicated a significant relationship between teacher empowerment and collegial leadership. Teacher empowerment and collegial leadership are the elements of effective schools (Sweetland and Hoy, 2000). Brown (2002) found that the levels of institutional integrity and academic emphasis on the OHI-E in schools were positively and significantly associated with the school performance (students' academic achievement).

**Table 4.8 Correlation[1] between Sub Tests of PCI[2] and Division Categories obtained at CSEE at 2013**

| PCI[2] | Division Categories at CSEE in 2013 | | | | |
|---|---|---|---|---|---|
| | I | II | III | IV | 0 |
| Humanistic | - | - | - | - | - |
| Custodial | -0.041 | 0.261 | 0.433 | -0.186 | 0.089 |

[1]Pearson Correlation (r) with N = 8

PCI[2] = Pupil Control Ideology

There were no significant correlation ($p < 0.05$) between PCI sub tests and division categories (Table 4.8). In addition, only one subtest (custodial orientation) dominated the whole climate measured using PCI (see Table 4.4). While the relationship is not considered statistically significant, it does indicate that schools that had a highly

controlled setting concerned primarily with the maintenance of order, teachers view misbehaviour as bad and believe that irresponsible and undisciplined persons should be controlled through punitive sanctions (custodial orientations), the academic performance is always poor (Table 4.5). The fourteen sub tests from the questionnaires were then grouped to signify three (OCDQ-RS, OHI-S and PCI) general school climates. Then, the unified climates (OCDQ, OHI and PCI) were tested for correlation with division categories (Table 4.9).

**Table 4.9 Correlation[1] between types of climate (i.e. OCDQ-RS, OHI-S and PCI) and division Categories obtained at CSEE at 2013.**

| **Types of Climate** | **Division Categories at CSEE in 2013** | | | | |
|---|---|---|---|---|---|
| | **I** | **II** | **III** | **IV** | **0** |
| OCDQ-RS | -0.302 | 0.425 | 0.611 | 0.509 | 0.032 |
| OHI-S | 0.645 | 0.581 | 0.365 | 0.242 | 0.359 |
| PCI | -0.041 | 0.261 | 0.433 | -0.186 | 0.089 |

[1]Pearson Correlation (r) with N = 8

There were no significant correlation ($p < 0.05$) between the type of climates (OCDQ-RS, OHI-S and PCI) and division categories (Table 4.9). Therefore, when $r > 0.6$ and significance levels falls within $0.05 < p < 0.1$ the relationship was considered important in this study. Using this criterion, one relationship existed where climate assessed by OHI-S was related to division I, as $r = 0.645$ albeit at $p = 0.084$ level of significance. While this relationship does not show causation, specifically in this study, it does indicate that in schools where the climate is described as healthy, the students' academic achievement is always higher (Hoy *et al.*, 1991).

### 4.5 Influence of School Climate on School Performance

Multiple regressions analysis enables the researcher to predict and weight the relationship between two or more *explanatory* – independent variables and an *explained* – dependent variable (Cohen *et al.,* 2007). Tables 4.10 – 4.14 shows the results of multiple regression analysis done on types of climate and division categories. In the discussion party, the descriptions and classifications given by Muijs (2004) were adopted.

#### 4.5.1 The testing of Hypothesis 3

The third hypothesis stated that the secondary school climate determines school performance (*Ha3*) and the secondary school climate does not determine school performance (*Ho3*). The third null hypothesis (*Ho3*) was rejected. School climate is the predictor of performance (division categories). Although there were no statistical significance ($p < 0.05$) found using multiple regressions with school climates assessed by OCDQ-RS, OHI-S and PCI with division categories. The beta weighting shows that there are noticeable effects of independent variables on dependent variables. (Table 4.10 - 4.14).

Results in Table 4.10, show that the adjusted R square is moderate (0.309), indicating that 30.9 % of the variance in the dependent variable is explained by the independent variables. Similarly, the analysis of variance shows non-significance, indicating that there is no relationship between the independent and dependent variable (division I). From Table 4.10, the Beta weighting of the three independent variables can be described as follows; The independent variable '*climate measured by OCDQ-RS*'

had a negative effect on the division I (β = - 0.440), but this was not statistically significant (at 0.242, $p < 0.05$). The independent variable '*climate measured by OHI-S*' had a strong positive effect on the division I (β = 0.726), but this was not statistically significant (at 0.086, $p < 0.05$).

The independent variable '*climate measured by PCI*' had a negative effect on the division I (β = - 0.097), but this also was not statistically significant (at 0.774, $p < 0.05$). One can observe that, relative to each other, '*climate measured by OHI-S'* exerted the greatest influence on the division I (Muijs, 2004). This tell us that, for every standard deviation unit change in the independent variable (climate measured by OHI-S), the dependent variable (Division I) will rise by 0.726 (72.6 %) of one standard deviation unit (Cohen *et al.,* 2007). The scores on initiation structure and headmaster/mistress influence were described as very low and slightly above average (Table 4.6 and Table 4.7), respectively.

Therefore, improving these subtests, the number of students in division I will increase because the subtest of initiation structure was significantly correlated ($0.05 < p < 0.1$) and headmaster/mistress influence was significantly correlated ($p < 0.01$) with division I.

**Table 4.10 Multiple Regression Analysis of School Climates vs. Performance (Division I)**

| A summary of the R, R square and adjusted R square in multiple regression analysis - **Model Summary** | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | 0.778[a] | 0.605 | 0.309 | 0.444 |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

Significance levels in multiple regression analysis - **ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1.210 | 3 | 0.403 | 2.043 | 0.250[a] |
| | Residual | 0.790 | 4 | 0.197 | | |
| | Total | 2.000 | 7 | | | |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

b. Dependent Variable: Division I

The beta (β) coefficients in a multiple regression analysis - **Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -1.759 | 3.771 | | -0.467 | 0.665 |
| | OCDQ-RS | -0.002 | 0.002 | -0.440 | -1.372 | 0.242 |
| | OHI-S | 0.010 | 0.004 | 0.726 | 2.271 | 0.086 |
| | PCI | -0.016 | 0.051 | -0.097 | -0.307 | 0.774 |

a. Dependent Variable: Division I

The results on Table 4.11 show that, the value of adjusted R is modest (Muijs, 2004). Indicating that, only 16 % of the variance in the dependent variable can be explained by the independent variables. The analysis of variance was not statistically

significant (as 0.355, $p < 0.05$), indicating that there was no relationship between the independent and dependent variables.

**Table 4.11 Multiple Regression Analysis of School Climates vs. Performance (Division II).**

| A summary of the R, R square and adjusted R square in multiple regression analysis - **Model Summary** | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | 0.721[a] | 0.520 | 0.160 | 1.296 |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

Significance levels in multiple regression analysis - **ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 7.282 | 3 | 2.427 | 1.445 | 0.355[a] |
| | Residual | 6.718 | 4 | 1.679 | | |
| | Total | 14.000 | 7 | | | |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

b. Dependent Variable: Division II

The beta (β) coefficients in a multiple regression analysis - **Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -15.971 | 10.997 | | -1.452 | 0.220 |
| | OCDQ-RS | 0.005 | 0.005 | 0.357 | 1.010 | 0.370 |
| | OHI-S | 0.018 | 0.012 | 0.510 | 1.448 | 0.221 |
| | PCI | -0119 | 0.149 | 0.276 | 0.793 | 0.472 |

a. Dependent Variable: Division II

According to Muijs (2004), the beta weighting (β = 0.357) for OCDQ-RS was described as having moderate effect, for OHI-S was described as having strong (β = 0.510) and modest effect (β = 0.276) for climate measured by PCI on division categories.

However, all the three independent variables did not correlate significantly with the division II as was $p > 0.05$. This insignificance might be a result of low response rates (Table 4.1). Using the beta weightings, this tell us that, for every standard deviation unit change in the independent variable (climate measured by OCDQ-RS, OHI-S and PCI), the dependent variable (Division II) will rise by 0.357 (35.7 %), 0.510 (51.0 %) and 0.276 (27.6 %) respectively, of one standard deviation unit (Cohen *et al.,* 2007). Therefore improving the subtests of intimate teachers' behaviour, initiating structure and academic emphasis (Table 4.6 and 4.7), the number of students in division II category will raise because these subtests were significantly correlated ($p < 0.05$ or $p < 0.01$) with division II.

Table 4.12 shows that, the value of adjusted R (0.416) is moderate (Muijs, 2004), indicating that, 41.6 % of the variance in the dependent variable (division III) can be explained by the independent variables (School climates). The analysis of variance (ANOVA) was not statistically significant (as 0.184, $p < 0.05$), indicating that there is no relationship between the independent and dependent variables. This might be the result of low response rate.

The values of beta weighting (Table 4.12) were analysed using the classification given by Muijs (2004). The climate assessed by OCDQ-RS (independent variable)

had a positive strong effect (β = 0.607) on division III (dependent variable), climate assessed by OHI-S had modest effect (β = 0.243) on division III, and that assessed by PCI had moderate effect (β = 0.476) on division III.

**Table 4.12 Multiple Regression Analysis of School Climates vs. Performance (Division III)**

| A summary of the R, R square and adjusted R square in multiple regression analysis - **Model Summary** | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | 0.816[a] | 0.666 | 0.416 | 1.656 |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

Significance levels in multiple regression analysis - **ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 21.903 | 3 | 7.301 | 2.662 | 0.184[a] |
| | Residual | 10.972 | 4 | 2.743 | | |
| | Total | 32.875 | 7 | | | |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

b. Dependent Variable: Division III

The beta (β) coefficients in a multiple regression analysis - **Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -27.026 | 14.054 | | -1.923 | 0.127 |
| | OCDQ-RS | 0.013 | 0.006 | 0.607 | 2.060 | 0.108 |
| | OHI-S | 0.013 | 0.016 | 0.243 | 0.829 | 0.454 |
| | PCI | 0.313 | 0.191 | 0.476 | 1.641 | 0.176 |

a. Dependent Variable: Division III

This indicates that, for every standard deviation unit change in the independent variable (climate measured by OCDQ-RS, OHI-S and PCI), the dependent variable (Division III) will rise by 0.607 (60.7 %), 0.243 (24.3 %) and 0.476 (47.6 %) respectively, of one standard deviation unit (Cohen *et al.*, 2007).

The results shows that, by improving the subtest of intimate teachers' behaviour we are likely to improve the performance in division III, this is because the intimate subtest is correlated significantly ($p < 0.01$) with division III (Table 4.6). Also by improving the subtests of engaged teachers' behaviour, initiation structure and academic emphasis we are likely also to improve the performance in division III. However, these three subtests were not statistically significant ($p < 0.05$), but they are important in this study because $r > 0.6$ and significance level falls within $0.05 < p < 0.1$(Table 4.6 and Table 4.7).

The results in Table 4.13 show that, the value of adjusted R (-0.216) is weak (Muijs, 2004). Indicating that, this model is very poor. The analysis of variance was not statistically significant (as 0.655, $p > 0.05$), hence indicating that there is no relationship between the independent and dependent variables. The beta weighting for OCDQ-RS ($\beta = 0.468$) was described as moderate effect, for OHI-S modest effect ($\beta = 0.163$) and weak effects ($\beta = -0.152$) for climate measured by PCI on division categories. However, all the three independent variables did not correlate significantly with the division IV as their significant correlation coefficients were 0.333, 0.721 and 0.735 respectively, these values do not fall within $p < 0.05$. On using the beta weightings, this indicate that, for every standard deviation unit change

in the independent variable (climate measured by OCDQ-RS and OHI-S), the dependent variable (Division IV) will rise by 0.468 (46.8 %) and 0.163 (16.3 %) of one standard deviation unit. While for the climate assessed by PCI, the dependent variable (IV) will drop by -0.152 (-15.2 %) of one standard deviation unit.

**Table 4.13 Multiple Regression Analysis of School Climates vs. Performance (Division IV)**

A summary of the R, R square and adjusted R square in multiple regression analysis - **Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.553[a] | 0.305 | -0.216 | 5.923 |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

Significance levels in multiple regression analysis - **ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 61.691 | 3 | 20.564 | 0.586 | 0.655[a] |
| | Residual | 140.309 | 4 | 35.077 | | |
| | Total | 202.000 | 7 | | | |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

b. Dependent Variable: Division IV

The beta (β) coefficients in a multiple regression analysis - **Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 12.460 | 50.257 | | 0.248 | 0.816 |
| | OCDQ-RS | 0.025 | 0.022 | 0.468 | 1.100 | 0.333 |
| | OHI-S | 0.022 | 0.056 | 0.163 | 0.383 | 0.721 |
| | PCI | -0.248 | 0.683 | -0.152 | -0.363 | 0.735 |

a. Dependent Variable: Division IV

The teachers in these schools feels unsecured and are frustrated, therefore by improving the subtests of institutional integrity (to high institutional integrity) and frustrated teachers' behaviour (to low frustrated teachers' behaviour) the performance is likely to be improved by reducing the number of students in division IV.

Table 4.14 show that, the value of adjusted R (-0.513) is weak (Muijs, 2004), this model is poor. Also, the analysis of variance (ANOVA) was not statistically significant (as 0.885, $p > 0.05$), indicating that there is no relationship between the independent and dependent variables of this study (Table 4.14).

According to Muijs (2004), the beta weighting for OCDQ-RS ($\beta = -0.026$) was described as having a weak effect, for OHI-S as having moderate effect ($\beta = 0.361$) and weak effects ($\beta = 0.077$) for climate measured by PCI on division categories.
These values show the effects of independent variables on the dependent variables (Cohen *et al.,* 2007). However, all the three independent variables did not statistically significantly ($p < 0.05$) correlate with the division 0. The significant correlation coefficients were 0.959, 0.488 and 0.877 for ODCQ-RS, OHI-S and PCI respectively, these values do not agree with $p < 0.05$ level of significance. The reason for this insignificant effect might be due to the low response rate (Table 4.1).

Using the beta weightings, this tell us that, for every standard deviation unit change in the independent variable (climate measured by OHI-S and PCI), the dependent variable (Division 0) will rise by 0.361 (36.1 %) and 0.077 (7.7 %) of one standard

deviation unit. While for the climate assessed by OCDQ-RS, the dependent variable (division 0) will drop by -0.026 (-2.6 %) of one standard deviation unit. However, without considering the causation of the relationship, improving the consideration subtest, we are likely to improve the performance and reduce the number of students in division 0 category.

**Table 4.14 Multiple Regression Analysis of School Climates vs. Performance (Division 0)**

A summary of the R, R square and adjusted R square in multiple regression analysis - **Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.368[a] | 0.136 | -0.513 | 16.787 |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

The beta (β) coefficients in a multiple regression analysis - **ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 176.710 | 3 | 58.903 | 0.209 | 0.885[a] |
| | Residual | 1127.165 | 4 | 218.791 | | |
| | Total | 1303.875 | 7 | | | |

a. Predictors: (Constant), OCDQ-RS, OHI-S, PCI

b. Dependent Variable: Division 0

Significance levels in multiple regression analysis - **Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -9.050 | 142.445 | | -0.064 | 0.952 |
| | OCDQ-RS | 0.003 | 0.063 | -0.026 | -0.054 | 0.959 |
| | OHI-S | 0.122 | 0.160 | 0.361 | 0.763 | 0.488 |
| | PCI | 0.320 | 1.935 | 0.077 | 0.166 | 0.877 |

a. Dependent Variable: Division 0

The results (Tables 4.10 - 4.12) show that the variance on independent variables (division I, II, and III) can be explained by dependent variables (Climate measured by OCDQ-RS, OHI-S and PCI). While not statistically significant, several strong positive effects ($\beta > 0.5$) of independent variable on dependent variable exist (Tables 4.10 - 4.14). Therefore, any influence resulting beta $\beta > 0.5$ and without considering the significance levels, then those effects of independent variables on dependent variable were considered important in this study. The climate assessed by OCDQ-RS shows that it had strong effect ($\beta = 0.607$) on division III, also the climate measured by OHI-S had strong effect ($\beta = 0.726$) on division I and had also strong effect ($\beta = 0.510$) on division II.

Without considering the criteria above ($\beta > 0.5$), there were also some effects that can be described as moderate. This has a beta ($\beta$) which range from 0.3 - 0.5 (Muijs, 2004). The climate measured by OCDQ-RS had moderate effect on division II and IV. Also climate measured by OHI-S had moderate effect on division 0. Lastly, the climate measured by PCI had moderate effects on division III.

Furthermore, previous studies have shown that school climate can impact on student achievement. Positive learning environments and positive learning outcomes appear to go together (Haertel *et al.*, 1981) as cited in Sackney (1988), and vice versa. In that regard a model of school climate improvement attributes is highly needed. As such, the attributes can be used as the basis for climate improvement activities.

# CHAPTER FIVE

# 5.0 CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Introduction

This chapter deal with the presentation of summary of the study, the summary of the major findings, the chapter also describe the discussion of the conclusion and recommendations of the study.

## 5.2 Summary of the Study

This study aimed at determining the climate of eight secondary schools in Mvomero district, Morogoro. It also examined the relationship and influence between school climate and students' academic achievement. The study employed quantitative approach within *ex post facto* research design. The population of the study consist of 205 teachers, 132 teachers were randomly sampled using a sampling strategy of 95 % confidence level and a 5 % confidence interval as proposed by Cohen *et al.,* (2007).

However, in determining the sample size, an overestimate on the size of the sample was done in order to build in redundancy (Gorard, 2003) because of issues like non-response, attrition, respondent to fail to return questionnaires, leave the research, and return incomplete or spoiled questionnaires. Therefore, after the overestimate, the number of respondents (study sample) was 160 teachers. However, only 74 teachers responded to the research tools. Data were collected through climate questionnaires namely Organisational Climate Descriptive Questionnaire for Secondary School

(OCDQ-RS), Organisational Health Inventory for Secondary School (OHI-S) and Pupils Control Ideology (PCI).

Finally the data were subjected to Statistical Package for Social Sciences (SPSS) for descriptive and inferential statistics and then presented in tables. The study reviled that all the secondary schools in Mvomero district operated into *non conducive* or *negative* school climate; also the finding shows that there is a relationship between school climate and school performance (students' academic achievement) and lastly, the school climate seems to influence the school performance.

### 5.3 Summary of Key Findings

This study has revealed that the type of school climate that dominated is *non-conducive* or *negative* as perceived by the teachers.

a) The climate measured by OCDQ-RS appears to be a *closed* climate in all schools except for school number five which had open climate with highest climate index of 623 (Table 4.2).

b) Likewise, the climates assessed by OHI-S showed *unhealthy* climate except for school number two which had open climate with slightly above average (523) (See Table 4.3)

c) The climates determined by the PCI appears to be in *custodial orientation*, and is dominant in all schools, with mean value of 64.4 (Table 4.4)

Indeed it is possible to improve school climate if the heads of schools are trained on what is expected of them.

The findings of this study indicate that there is a relationship between climate subtests of the OCDQ-RS and OHI-S with school performance in terms of division categories (division I, II, III, IV and 0).

a) The OCDQ-RS subtest of intimacy teacher's behaviour was found to be the subtest which indicated a high positive significant correlation ($p < 0.05$) with division II and was significantly ($p < 0.01$) correlated with division III.

b) However, the frustrated teachers' behaviour subtest from OCDQ-RS was negatively correlated with Division IV.

c) The OHI-S subtest of initiating structure showed a strong positive significant correlation ($p < 0.05$) with divisions II.

d) Likewise, the subtests of headmaster/mistress influence, academic emphasis and institutional integrity both form OHI-S indicated significance ($p < 0.01$) with division I, II and IV, respectively.

However, there were other relationships, which were statistically not significant. This might be the result of low number of respondents, it is suggested therefore that, when $r > 0.6$ and significance levels falls within $0.05 < p < 0.1$ the relationship should be considered important in this study. In testing whether the climate predicts school performance. The findings indicate that some of the variance in performance (division categories) can be explained by school climates. Surprisingly, all the climates assessments had no significance correlation ($p < 0.05$) with division I, II, III, IV and 0. Therefore, it was concluded that, there is no relationship between independent variables (climate assessed by OCDQ-RS, OHI-S and PCI) and dependent variables (division categories).

a) However, when using the beta weighting the study indicated existence of effect of dependent variables (school climates) on independent variables (division categories). The effects resulted by the beta weighting ranged from weak to strong (Muijs, 2004).

a) This tell us how many standard deviation units will be changed in the dependent variable (division categories) for each standard deviation unit of change in each of the independent variables (climate measured by OCDQ-RS, OHI-S and PCI) (Cohen *et al.*, 2007).

b) Therefore by improving the subtests of intimate teachers' behaviour, engaged teachers' behaviour, frustrated teachers' behaviour, initiation structure, academic emphasis, headmaster/mistress' influence, institutional integrity and consideration we are likely to improve the performance by increasing the number of students in division I, II and III categories and reduce the number of students in division IV and 0 categories.

## 5.4 Conclusion

The findings of this study showed that secondary schools in Mvomero operate in *non-conducive* or *negative* school climate and also they are characterised by having poor academic results. This study also demonstrated that there is a relationship between school climate (climate assessed by OCDQ-RS and OHI-S) and school performance (students' academic achievement)

Schools that are having non-conducive or negative climate are characterized by people who are going through motions, without concern for the overall purpose of

the institution (Hoy *et al.,* 1991; Brown, 2002). Teachers in these schools deemed to be on a *closed climate* and tend to appear frustrated and apathetic. Also these schools are also describes as *unhealthy* schools as they are vulnerable to destructive outside forces. Teachers and administrators are bombarded by unreasonable parental demands, and the school is buffeted by the whims of the public. Hoy and Tarter (1997) describe a *sick* (*unhealthy*) school climate as one that is constantly attacked from within and without. In a sick school, parents and other influential community, groups interfere with the goals of the organization. The school is without an effective headmaster/mistress. Finally, these types of schools are rigidly traditional schools and serve as a model for the *custodial orientation.* These kind of schools provides a highly controlled setting concerned primarily with the maintenance of order (Willower *et al.,* 1967). Therefore, the first research hypothesis (*Ha1*) was not proven.

From the results of this study, it can also be concluded that significant relationships do exist between the climate of eight secondary schools and their corresponding levels of school performance or division categories. Specifically, the levels of intimate teachers' behaviour were found to be positively and significantly associated with school performance. The levels of frustrated teachers' behaviour were also found to be significantly negatively associated with the school performance. These two are the subtests of OCDQ-RS. From the subtest of OHI-S, the levels of institutional integrity, initiation structure, headmaster/mistress's influence and academic emphasis both were found to be significantly positively associated with the school performance or division categories. The subtest of engaged teachers'

behaviour was related to division III, the subtest of academic emphasis was related to division III, the subtest of initiation structure was related to divisions I and III and lastly, consideration was related to division IV. Therefore, the second research hypothesis (*Ha2*) was asserted.

The results indicated that the variance on independent variables (division categories) can be explained by dependent variables (School Climates). While not statistically significant, several strong positive effects ($\beta > 0.5$) of independent variable on dependent variable exist. Therefore, any influence resulting into beta ($\beta > 0.5$) and without considering the significance levels, then those effects of independent variables on dependent variable were considered important in this study. The climate assessed by OHI-S had strong effect on divisions I and II, and climate measured by OCDQ-RS shows that they had strong effects on division III. Also moderate effects of independent variable on dependent variables existed. Therefore, the third research hypothesis (*Ha3*) was also affirmed.

The OHI-S questionnaire seems to overweight the other tools used in assessing the climate of schools and proved to be the accurate instrument in assessing the climate and establishing its relationship with school performance (division categories). Four out of seven subtest of OHI-S (Table 4.7) were statistically significant ($p < 0.05$ or $p < 0.01$) correlated with division categories, while only two subtest of OCDQ-RS (Table 4.6) was significantly correlated and none of the subtests from PCI were significant correlated with division categories. When a new criteria ($r > 0.6$ and significance levels within $0.05 < p < 0.1$) was introduced, again the three subtests of

OHI-S (Table 4.7 ) were related to division categories and only one subtest from OCDQ-RS (Table 4.6) was related to division categories while none of the subtests of PCI were related to division categories.

In assessing whether the climate influence or predict school performance, the climate assessed by OHI-S had strong effects on divisions I and II, and climate measured by OCDQ-RS shows that they had strong effects on division III. While no effect on division categories were seen from the climate measured by PCI. Therefore, OHI-S as a research tool, seems to be very reliable than the other tools (OCDQ-RS and PCI). This tells us that, the educational stakeholders must create a healthly school climate which will finally foster academic achievement in all division categories, especial division I, II and III.

Generally, these findings demonstrate that "school climate can make the school to perform well or poor. Positive or conducive school climates encourage the working environment for teachers and it also smoothens the leadership for headmaster/ mistress.

Previous studies have shown that climate impacts the future of schools (Brown, 2012); it may affects growth and sustainable developments, innovation, creativity, decision making, competitive advantage, self-regulation, efficiencies, quality of school output and performance in general (Anne and Maaja, 2007). Heads of schools, educational stakeholders and teachers in general should continue to look at climate of their schools and determine if the climate can be improved so as enhance the evolution and growth of such schools.

The climate of schools needs to be positive or conducive (open, healthy and humanistic) as necessary for the survival and thrive of schools. If climate of schools does not become positive or conducive and foster the better learning environment, the public secondary schools will not survive or thrive. The positive or conducive climate in schools is inevitable (Hoy *et al.,* 1991).

In secondary schools whose personnel, for example, feels that people are proud of their organization, the employees are rewarded for their good work, positive changes take place constantly, the well-being of organizational members is important, etc., the performance is higher and vice versa. The correlation between headmaster/mistress' consideration and teachers' morale with performance is also important.

Therefore in schools where the employees perceive that all important matters are discussed with others, people help each other with job-related problems, in tough situations there is a strong feeling of togetherness, etc., the performance is higher and vice versa.

## 5.5 Recommendations

### 5.5.1 Recommendations for further Research

The study had some few limitations that must be taken into consideration in the future research. First, the number of participants who responded was relatively small compared to the targeted population. The other limitation is that the study mainly analysed how school climate influences school performance, but it could also be true

that performance does influences school climate. To account for these limitations, the adequate number of participants must be involved into the next research; also there is a need to examine if the performance of a school can influence the school climate.

In this study, the national examinations results were used for measuring secondary schools' performance (students' academic achievement). In future research, other performance criteria (pupils' non -academic skills; contribution, satisfaction and cooperation by school stakeholders; school environment) and those described in chapter two (section 2.6) should be considered. Additionally, other aspects that might hinder the performance of schools need to be taken into account. These aspects include the social economic status (SES) of the parents, the location of schools (urban schools and rural schools) and whether the school is public and private owned.

Further study is proposed to investigate why the teachers in these schools are only of custodial nature and not humanistic. A humanistic teacher is optimistic about the students and has open and friendly relations with students. A humanistic orientation leads teachers to desire a democratic classroom climate with its attendant flexibility in status and rules, open channels of two-way communication, and increased self-determination (Willower *et al.,* 1967).

This study did not assess teachers' level of involvement in the teaching activities, as well as their teaching competencies and pedagogical skills. This might contribute to the observed mass failure in these schools. Further studies on this topic are proposed

to observe, over a period of time, the extent of teachers' actual level of involvement in the teaching task and their teaching competencies and pedagogical skills.

### 5.5.2 Recommendations for Policy and Practice

It is crucial for headmaster or headmistress to understand the concept of Conducive school climate and attempt to implement it. Anyone who has held jobs with different employers should understand these concepts. Whether conducive or non-conducive, climate of a school does have an impact on the elements of school effectiveness (academic and non-academic achievement elements).

Several organizations have stories of how climate played a force in their success and/or failures. Therefore, "If you do not manage school climate, it manages you, and you may not even be aware of the extent to which this is happening".

Given the strong positive significant relationship that have been shown to exist between academic emphasis and division II, as the school performance criteria in this study, leaders would be wise to work to build a tone or a feel where high academic achievement is expected and rewarded in each school. Programmes designed to encourage teachers to expect more from their students as well as those designed to establish norm or culture of high achievement are those most likely to be associated with improved student academic performance.

The institutional integrity, initiation structure, headmaster/mistress's influence and academic emphasis (subtests of OHI-S) showed more impact than intimate teachers'

behaviour and frustrated teachers' behaviour (subtest of OCDQ-RS) towards the national examinations results. Research recommends that employees need, for example, more recognition, encouragement, freedom of activity and acceptance. Therefore school administration should take into account that the school personnel need to be valued highly, and also other motivators besides wage, needs to be introduced. Therefore other motivators should be more actively applied to encourage employees (e.g., teachers) to work better.

This study has demonstrated that in certain circumstances, the school climate and performance are related. Therefore, in order to improve the performance of schools, the following aspects should be taken into account: If one intends to achieve better results in the national examinations, then, in addition to teaching pupils, it is relevant to improve the school climate. This research showed that not only direct work obligations but also the environment around them is important for school personnel.

In schools, the morale of teachers is an important factor to ensure that teachers give out their best at all times so that students receive the best possible education. Young minds are easily influenced and affected by what they see and learn (Magendri, 2011). Raising the morale of teachers will create a positive school climate and this will help schools to focus on providing a well-rounded educational programme in which teachers and students are willing participants.

The school administration should take into account that the personnel of schools are more satisfied with interpersonal relationships than with task and management

practices in an organization (average estimation on directive headmaster/mistress' behaviour are higher than those of supportive behaviour, consideration). The aspects of resources support, morale of teachers and humanistic orientation on a PCI prove again that the areas need additional attention.

The selected schools were those that performed poorly in the district and region as well, also the study showed a strong positive association between institutional integrity with division IV (marginal failure) as the performance criterion. Policy makers and educational leaders should foster a feeling of protecting teachers and school programmes from unreasonable community and parental demands. To build a culture where schools are not vulnerable to narrow, vested interests of community groups and tone where schools are able to cope successfully with destructive outside forces (high institutional integrity).

In addition, policy makers and educational leaders should foster a feeling of comradeship between teachers. Schools where teachers trust one another (high morale) and are dedicated to their students are more likely to be considered high achieving institutions. Educational stakeholders would be wise to foster a sense of comradeship between teachers, as well as encourage the head of schools to collaborate with and show support for their teachers (high supportive headmaster/mistress' behaviour).

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# APPENDICES

## APPENDIX 1: DEMOGRAPHIC INFORMATION OF TEACHERS

**Directions:** *Put √ mark in the box for your selection*

**i) Sex**

a) Male [ ] or Female [ ]

**ii) Age of the respondent**

a) 24 years and bellow [ ]

b) Between 25 and 34 years [ ]

c) Between 35 and 44 years [ ]

d) Between 45 and 54 years [ ]

e) 55 years and above [ ]

**iii) When did you start teaching at this school?**

a) Since (year)……..

**iv) Educational Qualifications**

a) Form Six lever [ ]

b) Diploma in Education [ ]

c) Bachelor Degree (Education) [ ]

d) Others [ ], please state…….

## APPENDIX 2: THE ORGANIZATIONAL CLIMATE DESCRIPTION

**For Secondary Schools (OCDQ-RS)**

**Directions:** The following are statements about your school, Please indicate the extent to which each statement characterizes your school from **rarely occurs** to **very frequently occurs**

**Responses:** (**1**) Rarely Occurs. (**2**) Sometimes Occurs. (**3**) Often Occurs.
(**4**) Very Frequently Occurs.

**Statements:**

a) The mannerisms of teachers at this school are annoying. [ ]

b) Teachers have too many committee requirements. [ ]

c) Teachers spend time after school with students who have individual problems.[ ]

d) Teachers are proud of their school. [ ]

e) The head master/mistress sets an example by working hard himself/herself. [ ]

f) The head master/mistress compliments teachers. [ ]

g) Teacher-head master/mistress meetings are dominated by the head Master/Mistress. [ ]

h) Routine duties interfere with the job of teaching. [ ]

i) Teachers interrupt other staff members who are talking in the staff meeting. [ ]

j) Student government has an influence on school policy. [ ]

k) Teachers are friendly with students. [ ]

l) The head master/mistress rules with an iron fist. [ ]

m) The head master/mistress monitors everything teachers do. [ ]

n) Teachers' closest friends are other staff members at this school. [ ]

o) Administrative paper work is burdensome at this school. [ ]

p) Teachers help and support each other. [ ]

q) Students solve their problems through logical reasoning. [ ]

r) The head master/mistress closely checks teacher activities. [ ]

s) The head master/mistress is autocratic. [ ]

t) The Morale of Teachers is high. [ ]

u) Teachers know the family background of other staff members. [ ]

v) Assigned non-teaching duties are excessive. [ ]

w) The head master/mistress goes out of his/her way to help teachers. [ ]

x) The head master/mistress explains his/her reason for criticism to teachers. [ ]

y) The head master/mistress is available after school to help teachers when assistance is needed. [ ]

z) Teachers invite other staff members to visit them at home. [ ]

aa) Teachers socialize with each other on a regular basis. [ ]

bb) Teachers really enjoy working here. [ ]

cc) The head master/mistress uses the constructive criticism. [ ]

dd) The head master/mistress looks out for personal welfare of the staff. [ ]

ee) The head master/mistress supervises teachers closely. [ ]

ff) The head master/mistress talks more than listens. [ ]

gg) Students are trusted to work together without supervision. [ ]

hh) Teachers respect the personal competence of their colleagues. [ ]

## APPENDIX 3: PROCEDURES FOR COMPUTING CLIMATE BY USING-OCDQ-RS

### Administering the Instrument

The OCDQ-RS is best administered as part of a faculty meeting. It is important to create a non-threatening atmosphere where teachers give candid responses.

### Scoring

The responses vary along a four-point scale defined by the categories "rarely occurs", "sometimes occurs", "often occurs", and "very frequently occurs." (1 through 4, respectively).

Step 1: Score each item for each respondent with the appropriate number (1, 2, 3, or 4).

Step 2: Calculate an average school score for each item. Round the scores to the nearest hundredth. This score represents the average school item score. You should have 34 average school item scores before proceeding.

Step 3: Sum the average school item scores as follows:

Supportive Behaviour (S)=5+6+23+24+25+29+30

Directive Behaviour (D)=7+12+13+18+19+31+32

Engaged Behaviour (E)=3+4+10+11+16+17+20+28+33+34

Frustrated Behaviour (F)=1+2+8+9+15+22

Intimate Behaviour (Int)=14+21+26+2

To compare your school profile with other schools convert each school score to a standardized score. The current data base on secondary schools is drawn from a

large, diverse sample of schools in New Jersey. The average scores and standard deviations for each climate dimension are summarized below:

| | Mean (M) | Std. Deviation (SD) |
|---|---|---|
| Supportive Behaviour (S) | 18.19 | 2.66 |
| Directive Behaviour (D) | 13.96 | 2.49 |
| Engaged Behaviour (E) | 26.45 | 1.32 |
| Frustrated Behaviour (F) | 12.33 | 1.98 |
| Intimate Behaviour (Int) | 8.80 | 0.92 |

To make the comparisons easy, standardize each of your subtest scores. Standardizing the scores gives them a "common denominator" that allows direct comparisons among all schools.

Computing Standardized Scores (SdS) of the OCDQ-RS

First: Convert the school subtest scores to standardized scores with a mean of 500 and a standard deviation of 100, which we call SdS scores. Use the following formulas:

SdS for S =100(S -18.19)/2.66 + 500

Then compute the difference between your school score on S and the mean for the normative sample (S -18.19). Then multiply the difference by one hundred [100(S-18.19)]. Next divide the product by the standard deviation of the normative sample (2.66). Then add 500 to the result. You have computed a standardized score (SdS) for the supportive behaviour subscale (S).

Next: Repeat the process for each dimension as follows:

SdS for D=100(D-13.96)/2.49+500

SdS for E=100(E-26.45)/1.32+500

SdS for F=100(F-12.33)/1.98+500

SdS for Int=100(Int-8.80)/.92+500

Openness Index, an overall openness can be computed as follows:

Openness = [(SdS for S) + (1000-SdS for D) + (SdS for E) + (1000-SdS for F)] / 4

This openness index is interpreted the same way as the subtest scores, that is, the mean of the "average" school is 500. Thus, a score of 650 on openness represents a highly open staff. The numbers have changed into categories ranging from high to low by using the following conversion table:

| | |
|---|---|
| Above 600 | Very High |
| 551-600 | High |
| 525-550 | Above Average |
| 511-524 | Slightly Above Average |
| 490-510 | Average |
| 476-489 | Slightly Below Average |
| 450-475 | Below Average |
| 400-449 | Low |
| Below 400 | Very Low |

**APPENDIX 4: THE ORGANIZATIONAL HEALTH INVENTORY**

**For Secondary Schools (OHI-S)**

**Directions:** The following are statements about your school, Please indicate the extent to which each statement characterizes your school from **rarely occurs** to **very frequently occurs**

**Responses:** (**1**) Rarely Occurs. (**2**) Sometimes Occurs. (**3**) Often Occurs. (**4**) Very Frequently Occurs.

**Statements:**

a) Teachers are protected from unreasonable community and parental demands.[ ]

b) The Head master/mistress gets what he or she asks from superiors. [ ]

c) The Head master/mistress is friendly and approachable. [ ]

d) The Head master/mistress asks the staff members to follow standards rules and regulations. [ ]

e) Extra materials are available if requested. [ ]

f) Teachers do favours to each other. [ ]

g) Students in this school can achieve the goals that have been set for them. [ ]

h) The school is vulnerable to outside pressures. [ ]

i) The Head master/mistress is able to influence the actions of his or her superiors.[ ]

j) The Head master/mistress treats all the staff members as his or her equal. [ ]

k) The Head master/mistress makes his or her altitudes clear to the school. [ ]

l) Teachers are provided with adequate materials for their classrooms. [ ]

m) Teachers in this school like each other. [ ]

n) The school sets high standards for academic performance. [ ]

o) Community demands are accepted even when they are not consistent with the educational program. [ ]

p) The Head master/mistress is able to work well with the superintendent. [ ]

q) The Head master/mistress puts suggestions made by the staff members into operational. [ ]

r) The Head master/mistress lets the staff members know what is expected of them. [ ]

s) Teachers receive necessary classroom supplies. [ ]

t) Teachers are indifferent to each other. [ ]

u) Students respect others who get good grades. [ ]

v) Teachers feel pressure from the community. [ ]

w) The Head master/mistress's recommendations are given serious considerations by his or her superiors. [ ]

x) The Head master/mistress is willing to make changes. [ ]

y) The Head master/mistress maintains definite standard of performance. [ ]

z) Supplementary materials are available for classroom use. [ ]

aa) Teachers exhibit friendliness to each other. [ ]

bb) Students seek extra work so they can get good grades. [ ]

cc) Select citizen groups are influential the board. [ ]

dd) The Head master/mistress is impeded by the superior. [ ]

ee) The Head master/mistress looks out for the personal welfare of the staff members. [ ]

ff) The Head master/mistress schedules the work to be done. [ ]

gg) Teachers have access to the needed instructional materials. [ ]

hh) Teachers in this school are cool and aloof to each other. [ ]

ii) Teachers in this school believe that their students have the ability to achieve academically. [ ]

jj) The school is open to whims of the public. [ ]

kk) The morale of teachers is high. [ ]

ll) Academic achievement is recognized and acknowledged by the school. [ ]

mm) A few vocal parents can change the school policy. [ ]

nn) There is a feeling of trust and confidence among the staff. [ ]

oo) Students try hard to improve on previous work. [ ]

pp) Teachers accomplish their jobs with enthusiasm. [ ]

qq) The learning environment is orderly and serious. [ ]

rr) Teachers identify with the school. [ ]

## APPENDIX 5: PROCEDURES FOR COMPUTING CLIMATE BY USING-OHI-S

### Administering the Instrument

As the OCDQ-RS, the OHI-S is best administered as part of a faculty meeting too. It is important is to create a non-threatening atmosphere where teachers give candid responses. All of the health instruments follow the same pattern of administration.

### Scoring

The responses vary along a four-point scale defined by the categories "rarely occurs," "sometimes occurs," "often occurs," and "very frequently occurs." (1 through 4, respectively). When an item is reversed scored, "rarely occurs" receives a 4, "sometimes occurs" a 3, and so on. Each item is scored for each respondent, and then an average school score for each item is computed by averaging the item responses across the school because the school is the unit of analysis.

Step 1: Score each item for each respondent with the appropriate number (1, 2, 3, or 4). Be sure to reverse score items 8, 15, 20, 22, 29, 30, 34, 36, 39.

Step 2: Calculate an average school score for each item. In the example above, one would add all 60 scores on each item and then divide the sum by 60. Round the scores to the nearest hundredth. This score represents the average school item score. You should have 44 school item scores before proceeding.

Step 3: Sum the average school item scores as follows:

Institutional Integrity (II)=1+8+15+22+29+36+39

Initiating Structure (IS)=4+11+18+25+32

Consideration (C)=3+10+17+24+31

Principal Influence (PI)=2+9+16+23+30

Resource Support (RS)=5+12+19+26+33

Morale (M)=6+13+20+27+34+37+40+42+44

Academic Emphasis (AE)=7+14+21+28+35+38+41+43

These seven scores represent the health profile of the school. You may wish to compare your school profile with other schools. To do this you will need to standardize each school score. The current data base on elementary schools is drawn from a large, diverse sample of schools in New Jersey. The average scores and standard deviations for each health dimension are summarized below:

| | Mean (M) | Std. Deviation (SD) |
|---|---|---|
| Institutional Integrity (II) | 18.61 | 2.66 |
| Initiating Structure (IS) | 14.36 | 1.83 |
| Consideration (C) | 12.83 | 2.03 |
| Principal Influence (PI) | 12.93 | 1.79 |
| Resource Support (RS) | 13.52 | 1.89 |
| Morale (M) | 25.05 | 2.64 |
| Academic Emphasis (AE) | 21.33 | 2.76 |

Computing Standardized Scores of the OHI-S

Convert the school subtest scores to standardized scores with a mean of 500 and a standard deviation of 100, which we call SdS score.

First: Use the following formula:

SdS for II=100(II-18.61)/2.66+500

Compute the difference between your school score on II and the mean for the normative sample (II-18.61). Then multiply the difference by one hundred [100(II-18.61)]. Next divide the product by the standard deviation of the normative sample (2.66). Then add 500 to the result. You have computed a standardized score (SdS) for the institutional integrity subscale.

Next: Repeat the process for each dimension as follows:

SdS for IS=100(IS-14.36)/1.83+500

SdS for C=100(C-12.83)/2.03+500

SdS for PI=100(PI-12.93)/1.79+500

SdS for RS=100(RS-13.52)/1.89+500

SdS for M=100(M-25.05)/2.64+500

SdS for AE=100(AE-21.33)/2.76+500

Health Index, an overall index of school health can be computed as follows:

Health = [(Sds for II) + (Sds for IS) + (Sds for C) + (SdS for PI) + (SdS for RS) +
(SdS for M) + (SdS for AE)] /7

This health index is interpreted the same way as the subtest scores, that is, the mean of the "average" school is 500. Thus, a score of 650 on the health index represents a very healthy school, one that is one and a half standard deviations above the average

school, and a score of 400 represents a very sick school climate. Most school scores, however, fall between these extremes and can only be diagnosed by carefully comparing all elements of the climate.

The numbers have been changed into categories ranging from high to low by using the following conversion table:

| | |
|---|---|
| Above 600 | Very High |
| 551-600 | High |
| 525-550 | Above Average |
| 511-524 | Slightly Above Average |
| 490-510 | Average |
| 476-489 | Slightly Below Average |
| 450-475 | Below Average |
| 400-449 | Low |
| Below 400 | Very Low |

## APPENDIX 6: CONCEPTUALIZATION OF PUPIL CONTROL IDEOLOGY (PCI)

**Directions:** The following are statements about your school, Please indicate the extent to which each statement characterizes your school from **strongly disagree** to **strongly agree.** Your answers are confidential.

**Responses:** (**1**) Strongly Disagree. (**2**) Disagree. (**3**) Undecided. (**4**) Agree. (**5**) Strongly Agree

**Statements:**

a) It is desirable to require pupils to stand on assigned area or position during assemblies. [ ]

b) Pupils are usually not capable of solving their problems through logical reasoning [ ]

c) Directing sarcastic remarks toward a defiant pupil is a good disciplinary technique. [ ]

d) Beginning teachers are not likely to maintain strict enough control over their pupils [ ]

e) Teachers should consider revision of their teaching methods if these are criticized by their pupils. [ ]

f) The best Head master/mistress gives unquestioning support to teachers in disciplining pupils. [ ]

g) Pupils should not be permitted to contradict the statements of teachers in class. [ ]

h) It is justifiable to have pupils learn many facts about a subject even if they have no immediate application. [ ]

i) Too much pupil time is spent on guidance and activities and too little on academic preparation. [ ]

j) Being friendly with pupils often leads them to become too familiar. [ ]

k) It is more important for pupils to learn to obey rules than that they make their own decisions. [ ]

l) Student governments are good "safety valve" but should not have much influence on school policy. [ ]

m) Pupils can be trusted to work together without supervision. [ ]

n) If pupil uses obscene or profane language in school, it must be considered a moral offense. [ ]

o) If pupils are allowed to get outside the classroom for the lavatory use without getting permission from the teacher who is in the class, this privilege will be abused. [ ]

p) A few pupils are just young hoodlums and should be treated accordingly. [ ]

q) It is often necessary to remind pupils that their status in school differs from that of teachers. [ ]

r) A pupil who destroys school material or property should be severely punished. [ ]

s) Pupils cannot perceive the difference between democracy and anarchy in the classroom. [ ]

t) Pupils often misbehave in order to make the teacher look bad. [ ]

## APPENDIX 7: PROCEDURES FOR COMPUTING CLIMATE BY USING-PCI

### Administering the Instrument

The PCI is best administered as part of a faculty meeting. It is important to create a non-threatening atmosphere where teachers give candid responses.

### Scoring Key

Items are scored 5, 4, 3, 2, or 1 corresponding to the extent of agreement, with strongly agree =5, agree =4, undecided =3, disagree =2, or strongly disagree =1 with each statement. Items 5 and 13 are reversed scored, that is, strongly agree =1, agree =2, undecided =3, disagree = 4, or strongly disagree = 5. The higher the cumulative score on the scale, the more custodial the perspective is judged to be.

### Computing the approaches (Humanistic to Custodial)

The scores on the PCI form are placement on a continuum from humanistic to custodial. This score is considered an indicator of classroom management style. Humanistic approach, teachers who score on the “humanistic” side (less than 50 on the PCI Form). And for Custodial approach, a more custodial orientation (50 or higher on the PCI Form).

## APPENDIX 8: RESEARCH PERMIT

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18 March 2014

Ref. NO. OUT/MOR/SC/P/Vol.1/13

Regional Administrative Secretary

P.O.Box 650

Morogoro

RE: Introduction of Mr. Nkuba Leonid L, Reg. No. HD/E/181/T.09 (MED APPS) Student

The individual named above is a student in the Master of Education in Administration, Planning and Policy Studies (MED APPS) programme of the Open University of Tanzania studying at Morogoro Regional Centre.

The student is interested in conducting Research titled **"The relationship and influence of School Climate on Secondary Schools' Performance: The case of Mvomero District, Morogoro"** for the fulfillment of the requirements of the programme of study.

I would appreciate if you could allow and provide the necessary environment for the student to carry out the exercise satisfactorily within the region.

We thank you in advance for your cooperation and continued support.

Yours sincerely,

Dr Massomo, SMS
Director Morogoro Regional Centre

Director
MOROGORO REG. CENTRE
OPEN UNIV. OF TANZANIA
P.O. Box 2062 MOROGORO

THE UNITED REPUBLIC OF TANZANIA

PRIME MINISTER'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

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**Regional Commissioner's Office,**
**P.O. Box 650,**
**MOROGORO.**

Ref. No: AB.175/245/01/129

27th March, 2014

District Administrative Secretaries,
**Mvomero**

**RE: RESEARCH PERMIT**

Please refer to the above captioned subject.

I have a great honour to introduce to you **Mr Nkuba Leonid L** a student in the Master of Education in Administration, Planning and Policy Studies (MED APPS) programme of the Open University of Tanzania studying at Morogoro Region Centre.

The title of the research in question is **"The relationship and influence of School Climate on Secondary Schools' Performance: The case of Mvomero District, Morogoro"**

The permit is granted from April, 2014 to May, 2014 will cover **Mvomero District.**

Please provide him with all needed assistance to enable the accomplishment of this research.

Thank you for your cooperation.

Tumaini Wapalila
**For: REGIONAL ADMINISTRATIVE SECRETARY**
**MOROGORO**

**Copy: - Director Morogoro Regional Centre,**
The Open University of Tanzania,
P. O. Box 2062,
**MOROGORO.**

" **Researcher**

**JAMHURI YA MUUNGANO WA TANZANIA**
**OFISI YA WAZIRI MKUU**
**TAWALA ZA MIKOA NA SERIKALI ZA MITAA**

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Ofisi ya Mkuu wa Wilaya
Wilaya ya Mvomero
S.L.P. 59
**MOROGORO**

**KUMB. NA.AB.19/293/01/257:**

**04/04/2014**

AFISA TARAFA
**MVOMERO, MLALI NA TURIANI**

**YAH: KIBALI CHA UTAFITI**

Tafadhali husika na mada tajwa hapo juu.

2. Nachukua fursa hii kumtambulisha kwako **Ndugu Nkuba Leonid L.** mtafiti kutoka Chuo Kikuu Huria cha Tanzania Kituo cha Morogoro ambaye anafanya utafiti katika Wilaya yetu.

3. Utafiti wake unahusu **"The Relationship and Influence of School Climate on Secondary Schools' Performance: The case of Mvomero District, Morogoro"**.

4. Ili kufanikisha utafiti huo kibali kimetolewa kwake kuanzia tarehe **Aprili, 2014** hadi **Mei, 2014**.

5. Tafadhali apewe ushirikiano wa kutosha kukamilisha utafiti wake.

FRAZIER J. MANG'ULA
**Kny: KATIBU TAWALA WILAYA**
**MVOMERO**

**Nakala:**
1. Mkurugenzi wa Kituo Mkoa
   Chuo Kikuu Huria cha Tanzania
   S.L.P. 2062
   Morogoro

K.N.Y. KATIBU TAWALA WILAYA
MVOMERO

2. Ndugu Nkuba Leonid L. - **Mtafiti**

## APPENDIX 9: SELECTED SECONDARY SCHOOLS AND THEIR RESPECTIVE DIVISIONS

| | SCHOOL | DIVISION |
|---|---|---|
| **1** | Wami Secondary School | **Mvomero** |
| **2** | Mvomero Secondary School | **Mvomero** |
| **3** | Hembeti Secondary School | **Mvomero** |
| **4** | Sungaji Secondary School | **Mvomero** |
| **5** | Murad Saddiq Secondary School | **Turiani** |
| **6** | Mtibwa Secondary School | **Turiani** |
| **7** | Diongoya Secondary School | **Turiani** |
| **8** | Nassoro Seif Secondary School | **Turiani** |

## APPENDIX 10

A full table of sample sizes for a probability sampling with three confidence levels (90 %, 95 % and 99 %) and three confidence intervals (5 %, 4 % and 3%)

| Population | Confidence level 90 per cent | | | Confidence level 95 per cent | | | Confidence level 99 per cent | | |
|---|---|---|---|---|---|---|---|---|---|
| | [1]Confi-dence | [2]Confi-dence | [3]Confi-dence | [1]Confi-dence | [2]Confi-dence | [3]Confi-dence | [1]Confi-dence | [2]Confi-dence | [3]Confi-dence |
| 30 | 27 | 28 | 29 | 28 | 29 | 29 | 29 | 29 | 30 |
| 50 | 42 | 45 | 47 | 44 | 46 | 48 | 46 | 48 | 49 |
| 75 | 59 | 64 | 68 | 63 | 67 | 70 | 67 | 70 | 72 |
| 100 | 73 | 81 | 88 | 79 | 86 | 91 | 87 | 91 | 95 |
| 120 | 83 | 94 | 104 | 91 | 100 | 108 | 102 | 108 | 113 |
| 150 | 97 | 111 | 125 | 108 | 120 | 132 | 122 | 131 | 139 |
| 200 | 115 | 136 | 158 | 132 | 150 | 168 | 154 | 168 | 180 |
| 250 | 130 | 157 | 188 | 151 | 176 | 203 | 182 | 201 | 220 |
| 300 | 143 | 176 | 215 | 168 | 200 | 234 | 207 | 233 | 258 |
| 350 | 153 | 192 | 239 | 183 | 221 | 264 | 229 | 262 | 294 |
| 400 | 162 | 206 | 262 | 196 | 240 | 291 | 250 | 289 | 329 |
| 450 | 170 | 219 | 282 | 207 | 257 | 317 | 268 | 314 | 362 |
| 500 | 176 | 230 | 301 | 217 | 273 | 340 | 285 | 337 | 393 |
| 600 | 187 | 249 | 335 | 234 | 300 | 384 | 315 | 380 | 453 |
| 650 | 192 | 257 | 350 | 241 | 312 | 404 | 328 | 400 | 481 |
| 700 | 196 | 265 | 364 | 248 | 323 | 423 | 341 | 418 | 507 |
| 800 | 203 | 278 | 389 | 260 | 343 | 457 | 363 | 452 | 558 |
| 900 | 209 | 289 | 411 | 269 | 360 | 468 | 382 | 482 | 605 |
| 1,000 | 214 | 298 | 431 | 278 | 375 | 516 | 399 | 509 | 648 |
| 1,100 | 218 | 307 | 448 | 285 | 388 | 542 | 414 | 534 | 689 |
| 1,200 | 222 | 314 | 464 | 291 | 400 | 565 | 427 | 556 | 727 |
| 1,300 | 225 | 321 | 478 | 297 | 411 | 586 | 439 | 577 | 762 |
| 1,400 | 228 | 326 | 491 | 301 | 420 | 606 | 450 | 596 | 796 |
| 1,500 | 230 | 331 | 503 | 306 | 429 | 624 | 460 | 613 | 827 |
| 2,000 | 240 | 351 | 549 | 322 | 462 | 696 | 498 | 683 | 959 |
| 2,500 | 246 | 364 | 581 | 333 | 484 | 749 | 524 | 733 | 1,061 |
| 5,000 | 258 | 392 | 657 | 357 | 536 | 879 | 586 | 859 | 1,347 |
| 7,500 | 263 | 403 | 687 | 365 | 556 | 934 | 610 | 911 | 1,480 |
| 10,000 | 265 | 408 | 703 | 370 | 566 | 964 | 622 | 939 | 1,556 |
| 20,000 | 269 | 417 | 729 | 377 | 583 | 1,013 | 642 | 986 | 1,688 |
| 30,000 | 270 | 419 | 738 | 379 | 588 | 1,030 | 649 | 1,002 | 1,737 |
| 40,000 | 270 | 421 | 742 | 381 | 591 | 1,039 | 653 | 1,011 | 1,762 |
| 50,000 | 271 | 422 | 745 | 381 | 593 | 1,045 | 655 | 1,016 | 1,778 |
| 100,000 | 272 | 424 | 751 | 383 | 597 | 1,056 | 659 | 1,026 | 1,810 |
| 150,000 | 272 | 424 | 752 | 383 | 598 | 1,060 | 661 | 1,030 | 1,821 |
| 200,000 | 272 | 424 | 753 | 383 | 598 | 1,061 | 661 | 1,031 | 1,826 |
| 250,000 | 272 | 425 | 754 | 384 | 599 | 1,063 | 662 | 1,033 | 1,830 |
| 500,000 | 272 | 425 | 755 | 384 | 600 | 1,065 | 663 | 1,035 | 1,837 |
| 1,000,000 | 272 | 425 | 756 | 384 | 600 | 1,066 | 663 | 1,036 | 1,840 |

[1]Confidence interval=5%, [2]Confidence interval = 4 % and [3]Confidence interval=3 %.

**Source:** Cohen *et al.* (2007).