HUMAN RESOURCE PRACTICES AND THEIR IMPACT ON ACADEMIC PERFORMANCE OF PUBLIC SCHOOLS IN BUNGOMA COUNTY, KENYA

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DECLARATION

The research thesis is my own work and to the best of my knowledge, has not been presented for the award of any degree in any university or college.

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RECOMMENDATION

To the Institute of Postgraduate Studies

The research thesis entitled **"Human Resource Practices and their Impact on Academic Performance of Public Schools in Bungoma County, Kenya"** by **Wanyama Kadian Wanyonyi** is presented to the Institute of Postgraduate Studies and Research of Kabarak University. We have reviewed the research thesis and recommend it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration (Human Resource Management).

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DEDICATION

This thesis is dedicated to my wife Everlyne Wanyonyi and our children Favour Nekesa, Dorcas Chikhabi, Joy Beth and Joesteen Benaiah.

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ABSTRACT

Examination results from Bungoma County have shown poor Kenya Certificate of Primary Education (KCPE) and Kenya Certificate of Secondary Education (KCSE) performance in the period of 2002-2012. There is however, need establish the Human Resource (HR) practices in institutions and determine their impact on the academic performance. The purpose of this research was to examine how the human resource practices impact on the academic performance of public schools in Bungoma County. The study was guided by Universalistic, Contingency and Configurational models and the Need Theory. The study adopted descriptive and correlational survey designs with the target population consisting of 1,031 schools and 9,884 teachers and 762 support staff. Simple and proportionate random sampling was used to select 100 schools and 100 head teachers, 130 teachers and 75 support staff. The questionnaires and interview schedules were used to collect the data which was analyzed using descriptive and inferential statistics, namely, regression analysis and ANOVA. The results of this study show that motivation and performance management as HR bundles have positive and significant impact on academic performance of public schools in Bungoma County while the work environment had a profound negative impact. This was an indication that these HR bundles do have a significant impact on academic performance, though at different levels. Therefore, based on the study findings, the following were study conclusions: HR practices identified in public schools in Bungoma County included training and development, staff appraisal, compensation, rewards and promotion and were being practised to some extent. It meant that strengthening these HR practices in public schools could result in improved academic performance. Motivation as a HR bundle had a positive and significant association with academic performance of public schools. This was an indication that deficiency of appropriate HR bundles of motivation like recognition and rewarding, promotion, training and development, compensation and incentives could reduce employees' work motivation and job satisfaction leading to poor academic performance. Performance management as a HR bundle had a positive and significant relationship on the academic performance of public secondary schools in Bungoma County. Therefore, if the school management employs communicating feedback and transparency, employee engagement in setting targets and decision making, performance appraisal and evaluation, then, academic performance of their institutions will be enhanced. The work environment negatively affects the academic performance of public schools. This means that improving and closely monitoring the working conditions, staffing levels, physical and instructional materials, teaching workloads and housing facilities could led to improved academic performance in public schools in Bungoma. The results illustrate that striking equilibrium among the HR bundles like motivation, performance management and work environment could have positive and significant impact on academic performance in public schools in Bungoma County. It is recommended that the school management and the Ministry of Education should ensure that HR practices such as staff training and development, performance appraisal, communicating feedback, employee engagement, compensation, rewards and promotion are fully implemented; remuneration and benefits for staff should be comparable with salaries paid in other occupations requiring similar or equivalent qualifications, skills and responsibilities; teaching and learning environment policies and practices should consider learners' environment; teacher/support staff performance appraisal system conducted regularly, fairly and in a transparent manner to enhance teacher professional competencies. The results will be useful to policy makers, practitioners, professionals as well as stakeholders in the Ministry of Education in Kenya in examining the extent to which HR practices affect academic outcomes in education sector and performance of teaching staff in various public schools. **Key Words: HR Practices, Academic Performance, Motivation, Work Environment, Performance Management and Public Schools**

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LIST OF ABBREVIATIONS AND ACRONYMS

DEO	District Education Officer
DIFC	Decentralized Information Flow Control
HRD	Human Resource Development
HSD	Honestly Significant Difference
KESI	Kenya Education Staff Institute
KIE	Kenya lnstitute of Education
LSD	Least Significant Difference
MOE	Ministry of Education
NACOSTI	National Commission for Science, Technology and Innovation
OECD	Organisational, Economic, Cooperation Development
PE	Physical Education
RCA	Richard Chang Associates
SHRM	Strategic Human Resource Management
SMASSE	Strengthening Mathematics and Science in Secondary Education
TSC	Teachers Service Commission
UNDP	United Nations Development Programme

OPERATIONAL DEFINITION OF SIGNIFICANT TERMS

Academic performance: - performance: **-** refers to the act of performing something successfully using knowledge as distinguished from merely possessing it. It also comprises of an event in which generally one group of people (the performer or performers) behave in a particular way from another group of people. Performance in this study was limited to academic performance in both KCPE and KCSE examinations. Academics: comes from the word *akademeia* in ancient Greece meaning the cultural accumulation of knowledge, its development and transmission across generations and its practitioners and transmitters. Therefore academic performance is defined in terms of examination performance and was measured through KCSE & KCPE mean scores as these were the standard measurement of academic performance nationally.

Attrition: - refers to the reduction of the workforce due to voluntary and involuntary terminations of employment, deaths and employee retirements (ILO, 2012). In this study attrition referred to the number of teaching force who have left the teaching profession through terminations of employment, deaths and employee retirements.

Benefit: - refers to financial or non-financial compensation related to employment in addition to base salary, such as allowances for housing, transport, health care, insurance, retirement, day care, sick leave or other forms of social protection, funding of education, among others (ILO, 2012).

Bungoma County: - is one of the former districts of Western province. Bungoma County lies between latitude 0 degrees 253 North and 35 degrees to the East. It covers an area of 2068.5 square Kilometers with a population of about 1.4 million people (Kenya County Facts Sheets, 2011).

Compensation: - is the total amount of the monetary and non-monetary pay provided to an employee by an employer in return for work performed as required.

Contingency or Fit Perspective: - is a model that integrates HR practices and policies to the overall organizational objectives with the aim of improving performance.

Cronbach's alpha: is a measure of internal consistency, that is, how closely related a set of items are as a group. A "high" value of alpha is often used (along with substantive arguments and possibly other statistical measures) as evidence that the items measure an underlying (or latent) construct.

Employees: - refer to a pool of human resources under the firm's control in a direct employment relationship. For the purpose of this study, employees (workers) refer to non-managerial employees who are below the management levels of the organization (Normala, 2006).

Employee Engagement: - refers to a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). In this study employee engagement will be limited to employees' setting of targets and decision making process during performance management.

Financial Incentives: - these are additional financial compensation to base salary intended to encourage acceptance of work assignments in certain geographic areas or subjects, or to motivate and reward teachers or other staff for their performance.

Human Resource (HR): - in this study, HR is used interchangeably with human capital, employees, human labour, to imply human beings who are employed and are working in an organization/firm to achieve organisational, societal and individual goals.

Human Resource Bundles: - refers to grouping of appropriate HR practices. In this study, HR bundles were categorised into three namely, motivation (training & development, compensation, reward & recognition and promotion), performance management (communicating feedback, employee engagement in setting targets & decision making, performance appraisal & evaluation) and work environment (employee welfare, housing, instructional materials). The choice of the three HR

bundles left out other HR practices like recruitment and selection, placement and induction since the study focused only the employees who were already in the system.

Human Resource Management (HRM): - is a system, a philosophy, policy and practices that can influence individuals that work in an organization (it is a discipline). HRM refers to a distinctive approach to employment management which seeks to obtain competitive advantage through the deployment of a highly committed and skilled workforce, using an array of techniques (Huang, 2004)

HR Practices: - Functions or activities relating directly to management of human resource. These are organizational activities directed at managing the pool of human resources and ensuring that the resources is employed towards the fulfillment of organizational goals (Wright & Snell, 1991). HRM practices include staffing, training and development, performance appraisal, compensation management, safety and health and industrial relations. In this study, HR bundles were categorised into three namely, motivation, performance management and work environment.

Impact: - refers to long term effect of HR practices (period of 10 years) on the performance of public schools in Bungoma County.

Incentives: - refer to financial or non-financial rewards (compensation) designed to motivate individuals to accept a particular job or responsibility or to achieve certain objectives, for example salaries, secondary benefits, and intangible rewards, recognition or sanctions, form of payment or cash transfers like salary, pension, insurance and bonuses. Others are indirect such as subsidized meals, clothes or housing. Non-financial incentives come in many forms such as gifts, rewards, travel (Wright and Snell, 2000).

Motivation: - as a power that strengthens behaviour, gives route to behaviour, and triggers the tendency to continue. Motivation was operationalized through rewards and recognition, training and development and compensation and incentives. Motivation refers to the initiation, direction, intensity and persistence of behaviour. Motivation concerns energy, direction, and persistence – all aspects of

activation and intention (Ryan and Deci, 2000). Hence, individual motivation is a translation of effort and/or strength of behavioural intention into performance.

Performance Appraisal or Review: refers to a method by which a teacher‘s job performance is evaluated as part of assessing teaching effectiveness or as part of guiding and managing career development (International Labour Organization: ILO, 2012). In this study, there will be regular checking of the strengths and weaknesses and allows the teacher to participate in the exchange of views.

Professional Development/ In-Service Education and Training: - is the process by which teachers reflect upon their professional skills and practices, maintain and develop them further through study or training (ILO, 2012).

Performance Management (PM): - refers to the accomplishment of a given task measured against preset known standards of accuracy, completeness, cost, and speed. It includes activities which ensure that goals are consistently being met in an effective and efficient manner. Performance management is also known as a process by which organizations align their resources, systems and employees to strategic objectives and priorities (Olsen, 2013). The term performance management can also refer to a systematic process for improving organizational performance by developing the performance of individuals and teams" (Armstrong, 2006). Performance management was measured through communicating feedback, employee engagement in setting targets & decision making, performance appraisal & evaluation (Burkart, Holzner and Holzner, 2006). As used in this study PM did not address goal measurement, performance monitoring, development of the capacity to perform, rating and reward of good performance which are pertinent issues in PM.

Retention: - refers to the ability of an education system or organization to retain its teachers or other education staff. The term may refer to the strategies employers adopt to retain employees in their workforce, as well as the outcome.

R-squared (R^2) values: - these depict the relationship between two data series and how well the model predicts the future outcomes.

School Factors: - School factors in this study were measured through school size, resource base, staff attitude and commitment, staff turnover, performance management and syllabus coverage.

School Performance: - this was operationalized through KCPE and KCSE mean scores, which are national examination and are viewed to be standardised. The study used both KCPE and KCSE mean scores in Bungoma County as the baseline study since no study of this nature has been carried out for the period of 2002-2012.

Skills: - Skills are learned abilities-things we do well, especially in this study efficient and effective utilisation of skills to foster improved academic performance in public schools in Bungoma County.

Staffing: - refers to getting the right number of people with the right skills, experience, and competencies in the right jobs at the right time and at the right cost.

Teacher Gap: - is the difference between the number of teachers currently employed and the number needed to ensure education for all learners within defined pupil–teacher ratios and other variables.

Work Environment: refers to surroundings of the employee at place of work. In this study, work environment was measured through terms like staffing, employee welfare, facilities/infrastructure, housing and instructional materials.

CHAPTER ONE

INTRODUCTION

1.1 Background

It is a global assertion that education is the solid rock of development (Adegbemile, 2011). The reason for this is that it is expected that the educational system will produce the quality and quantity of human resources required for the economy's growth using the right mix of inputs. Ibukun (2009) affirms that no nation or society can rise above the quality of her education. Ibukun (2003) and Brock–Utne (2006) opines that investment in basic education and training is an ingredient to human capacity building. Such capacity, they note is the foundation needed to realize increased productivity, most importantly technological innovation. The educational system is vital in producing personnel that is required to function in various facets of national life and development process (Analoui, 2007). With a growing focus on the importance of 'knowledge societies' for equipping countries with a suitable workforce, issues around human resources within the education sector have come under greater scrutiny (Analoui). One of the strongest and most often used arguments for investment in education is the economic argument based upon the Human Capital Theory (Analoui and Karami, 2003). The basic premise of Human Capital Theory is that investment in human resources results in improved productivity in an organisation (Armstrong, 2001).

Development of human resources in both public educational and private sector institutions has become critical in an increasingly knowledge-based globalizing economy (Analoui, 2007). Lack of necessary skills and well-managed public educational and private institutions

for long-term, sustainable growth is a priority to be included in every development activity in Africa because of its implications for improved development management and good performance management (Wood, 2000). Africa's future economic growth will depend less on its natural resources, which are being depleted and are subject to long-run price declines and more on its labour skills and its ability to accelerate a demographic transition (World Bank, 2000). The World Bank's observation is underscored by the reality that the most valuable and critical organizational resource is its people (Analoui, 2002). Recognizing that people conceive, plan, and execute all tasks, coordinate and organise inputs and produce outputs, it can thus be safely assumed that endeavours would succeed or fail because of the people involved (Powell, 2001).

Becker, Huselid and Ulrich (2001) argue that because organizations consider human capital one of the most salient organizational assets in establishing and maintaining a competitive advantage, many are investing considerable resources to support employee and organizational development activities such as training and development, performance appraisal among other activities. Globalization, technological advancements, and talent wars in recruiting and retaining high performers, are among the other major reasons that organizations seek to leverage training outcomes to foster workplace performance improvement, facilitate development of individual and organizational effectiveness, and establish and maintain market share within the rapidly changing business environment as echoed by Branham (2005) and Michaels, Handfield-Jones and Axelrod (2001).

The human resource (HR) environment can be a more important determinant of productivity in the service sector like education than in the manufacturing sector, given the much larger share of total production costs accounted for by employment, and the much more extensive direct contract between employees and customers in services (Ann and Bartel, 2000). However, most of the prior research on HR and organizational performance has focused on the manufacturing sector than the service sector despite the fact that today most employees work in service sector industries (Ann and Bartel). This is the gap the study sought to fill in by focusing on the impact of HR practices on the performance of public schools in Bungoma County, Kenya. Therefore, organizations can improve the quality of current employees by providing comprehensive training and development activities after selection to equip employees with necessary skills, knowledge and enhance teambuilding and human relationship.

Finally, the way in which a workplace is structured should affect organizational performance to the degree that skilled and motivated employees are directly involved in determining what work is performed and how this work gets accomplished. Employee participation systems (Wagner, 1994), internal labour markets that provide an opportunity for employees to advance within a firm (Osterman, 1987), and team-based production systems (Levine, 1995) are all forms of work organization that have been argued to positively affect firm performance. In addition, it has been argued that the provision of job security encourages employees to work harder. Therefore, employees who are employed on contract cannot perform optimumly. Ichniowski, Shaw and Prennushi (1994) noted that workers will only expend extra effort if they expect a lower probability of future layoffs. Because it is also

unlikely that rational employees will identify efficiency-enhancing changes in work structures if such changes would eliminate their jobs, the provision of job security should encourage information sharing (Levine, 1995).

All countries are seeking to improve their schools, and to respond better to higher social and economic expectations. As the most significant and costly resource in schools, teachers are central to school improvement efforts. Improving the efficiency and equity of schooling depends, in large measure, on ensuring that competent people want to work as teachers, that their teaching is of high quality, and that all students have access to high quality teaching (Hope, 2001). However, according to OECD (2005) student learning is influenced by many factors, including: students' skills, expectations, motivation and behaviour; family resources, attitudes and support; peer group skills, attitudes and behaviour; school organisation, resources and climate; curriculum structure and content; and teacher skills, knowledge, attitudes and practices. Schools and classrooms are complex, dynamic environments, and identifying the effects of these varied factors, and how they influence and relate with each other-for different types of students and different types of learning-has been, and continues to be, a major focus of educational research (Atkins, Brown and Hammond, 2007).

This study was anchored on the Universalistic, Contingency or Configurational Models in trying to examine the effectiveness of HRM practices on academic performance. Need Theory was also used since needs represent an internal energy force that directs behaviour toward actions that permit the satisfaction and release of the need itself (that is, satiation), (Murray, 1938). Human beings' needs can be primary or viscerogenic, directly related to our

biological nature (for example, the need for food), or they can be secondary or psychogenic, related to our personality. There were three theories on performance management that were used to explore the application of performance management, namely Goal-Setting Theory, Control Theory and Social Cognitive Theory. Moreover, Systems Theory was adopted to explain how the work environment variables like staffing levels, employee welfare, instructional and physical facilities and housing affect academic performance of public schools in Bungoma County.

Therefore, public schools in Kenya particularly in Bungoma County were hypothesised to experience the following HR practices outcomes which have negatively impacted on performance of public schools: shortage of teaching staff who are skilled, poor information flow and performance management, poorly developed systems of hiring staff, teacher quality, rewards and development of staff, poor, low job-satisfaction and motivation due to poor remuneration, lack or inadequacy of facilities/materials hampering effective personnel management in the school, inappropriate system of promotion, inadequate funds for training and development of teachers and head teachers (Sifuna, 1990). Very few researchers have addressed the HR practices and their outcomes in public secondary schools (Raigama, 2010). These are key HR practices with implications on teacher education system. It is against this background that a study on the HR practices and their impact on performance of schools in Bungoma County will be studied.

1.2 Statement of the Problem

Although most employees in Kenya work in the service industries, research on the impact of HR practices on organizational performance has focused more on the manufacturing sector. Studies carried out in the financial and manufacturing sectors show that HR practices can either increase or reduce organizational performance by a high margin of up to 62% (Raigama, 2010).The poor academic performance at both KCPE and KCSE in Bungoma County (see Appendices 9 and 10) is usually attributed to several factors that include poor work environment in terms of inadequate teaching facilities; a non-participatory performance management structure, lack of transparency in HR appraisal and promotions, lack of adequate motivation through training opportunities and remuneration. Human resource practices such as the work environment, performance management and motivational attributes have varying effects on productivity in different economic sectors but the impact of these HR bundles on the academic performance of public schools in Bungoma County have not been established. A comprehensive analysis of how HR practices affect performance in the educational sector in Bungoma County was thus essential. It was in light of this that this study was carried out in Bungoma County to identify and establish the extent to which HR practices affect academic performance at both KCPE and KCSE levels in public schools.

1.3 Purpose of the Study

The purpose of this study was to examine how HR practices affect the academic performance of public schools in Bungoma County, Kenya. To achieve this, the study determined the impact of HR bundles like motivation, performance management and work environment on academic performance of public schools in Bungoma County.

1.4 Objectives of the Study

The study was guided by the following specific objectives with regard to public schools in Bungoma County, Kenya.

i) To establish the HR practices in public schools in Bungoma County in relation to academic performance.

ii) To determine the impact of motivation on academic performance of public schools in Bungoma County.

iii) To examine the impact of performance management on academic performance of public schools in Bungoma County

iv) To establish the impact of the work environment on academic performance of public schools in Bungoma County.

v) To assess the overall impact and extent of HR practices on the academic performance in Bungoma County and develop a framework for mitigation.

1.5 Research Question

i) What are the HR practices in public schools in Bungoma County in relation to academic performance?

1.6 Research Hypotheses

The study was guided by the following research hypothesis:

$H_0$1: There is no significant impact of HR practices on academic performance of public schools in Bungoma County.

$H_0$2: There is no significant impact of motivation on academic performance of public schools in Bungoma County.

$H_0$3: There is no significant impact of performance management on academic performance of public schools in Bungoma County.

$H_0$4: There is no significant impact of the work environment on academic performance of public schools in Bungoma County.

$H_0$5: There is no significant difference in the way motivation; performance management and work environment affect academic performance of public schools in Bungoma County.

1.7 Justification of the Study

HR practices have been studied extensively among manufacturing and small and medium enterprises, but very few studies in the service industries like education have been conducted. These theoretical and empirical studies have generally focused on HRM practices on organisational performance (Guest, Michie, Sheehan and Metochi, 2000). Very few researchers have addressed the HR practices and impact on performance of public schools in Bungoma County, Kenya. Therefore, this study addressed this gap in relation to education sector in Bungoma County, Kenya. Bungoma County is ranked third largest in Kenya in terms of population after Nairobi and Kakamega Counties respectively. It has experienced relatively high Learner-Teacher Ratio and consequently not impressive performance in both KCPE and KCSE examinations for the period 2002-2012 has been recorded (MOE, 2009).

1.8 Significance of the Study

While addressing the human resource, various HR practices have enormous strategic and financial resource implications for policy makers. This research and its findings shall be considered important to provide insight into the various HRM practices needed to successfully perform in the service sector like education in Kenya. In terms of theoretical significance, this study proposes to fill the gap in the body of knowledge in the practice of HR in Kenyan educational system by establishing the HR practices in public schools; determining the impact of motivation on performance of public schools; examining the impact of performance management on performance of public schools; establishing the impact of the work environment on performance of public schools and assessing the overall impact and extent of HR practices on the academic performance in Bungoma County and developing a framework for mitigation. This study intends to further the previous research in HR practices using Universalistic, Contingency or Configurational Models; Performance management and Motivational theories. Furthermore, the study intends to generate a new framework for further research pertaining to HRM practices and academic performance in public schools in Bungoma County.

From a practical perspective, the findings of this study may be useful to educational and HRM managers, academicians, the teachers, support staff, Human Resource Development practitioners and Ministry of Education to design their HRM practices within a strategic condition at the micro or macro organizational level in order to improve academic performance in public schools. It may give an insight into the HR practices affecting performance of teaching staff in various public schools. The study may further provide the

policy makers with information on the HR practices on organisational performance as a proactive means of promoting development of human resource in Bungoma County. Therefore, the findings from this study may be useful in determining the relationship between HR practices and academic performance of public schools in Bungoma County.

1.9 Assumptions of the Study

The study was based on the following assumptions: there were HR practices affecting academic performance in public schools in Bungoma County; intervening variables had no impact on the academic performance in public schools in Bungoma County; the abilities of the learners and teachers were the same in these schools; the schools in the target population had been in existence for the period of 2002-2012 which measures trends transcending the two governments in Kenya and it was noted that HR practices need adequate period to measure; the respondents were co-operative and gave voluntarily accurate information; all respondents were honest, objective and found appropriate time to fill the questionnaires. It was also assumed that the findings and recommendations of the study will be useful to the relevant stakeholders, HRD practitioners, future researchers, academicians, policy makers and administrators in the Ministry of Education of the Government of Kenya.

1.10 Scope of the Study

The study was carried out in Bungoma County and only covered HR practices and their impacts on the performance of public schools. The County had 777 public primary, 254 public secondary, 140 private primary and 15 private secondary schools (see Appendices 13 and 14). Public schools were used in this study since they are the majority and a true

representation of the Kenyan educational system. Since Bungoma County is large, the study focused on the sampled public schools in the nine districts, excluding private schools and performance was only limited to academics and excluded co-curricular activities. The study only covered the academic periods of 2002-2012.

1.11 Limitations of the Study

The researcher encountered the following barriers and challenges: it was not easy to reach out to all 100 sampled schools and 230 teachers in the nine districts in Bungoma County. Therefore, research assistants drawn from the County were used. The research assistants knew the terrain better, though navigating the rough terrain made the exercise more expensive than planned. Moreover, the interviews used in the data collection were time consuming and costly and the researcher was compelled to set time frames within which the interviews were conducted to save time and reduce costs.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter searches for the gaps in the existing literature by various authors through reviewing of the relevant literature on the HR practices and their impact on the performance of public schools in Bungoma County, Kenya. This forms the basis of the study whose purpose is to fill the research gaps.

2.2 Overview of Human Resource Practices and Organisational Performance

Firms have increasingly recognized the potential for their people to be a source of competitive advantage. Creating competitive advantage through people requires careful attention to the practices that best leverage these assets. This change in the mindset of executive decision-makers has spurred an increasing body of academic research attempting to reveal a relationship between a firm's HR practices and its performance (Wright, Gardner and Moynihan, 2003).

Much of this research has demonstrated statistically significant relationships between measures of HR practices and firm profitability (Guthrie, 2001). While these studies have been useful for demonstrating the potential value created through HR practices, they have revealed very little regarding the processes through which this value is created (Wright and Gardner and Wright, 2003). Some authors have referred to this as the `black box' problem, noting that the conceptual development of the mediating mechanisms through which HRM

has an impact on profitability has thus far eluded empirical testing (Purcell, Hutchinson, Kinnie, Rayton and Swart, 2003). This study filled in the gap by seeking to establish the relationship between HR practices and academic performance in public schools in Bungoma County which was culturally and geographically different.

Guthrie (2001) examined the impact of HR practices on turnover and firm productivity among a sample of firms in New Zealand. He noted that HR practices had an impact on turnover, and that the relationship between retention and productivity was positive when firms implemented high-involvement HR practices, but negative when they did not. This study was conducted in the manufacturing firms but not service industry like education. This is the knowledge gap which the study sought to fill in.

The body of research examining the relationship between HR practices and firm performance has grown exponentially over the past few years. The seminal work in this area was produced by Huselid and Becker (2000), who examined the relationship between HR practices and corporate turnover, profitability and market value. Huselid and Becker surveyed senior HR executives in a sample of 968 publicly traded corporations in the US regarding the percentage of employees who were covered by a set of HR practices generally considered representative of a High-Performance Work System (HPWS). After controlling for a number of variables, they found that their HR index was significantly related to the gross rate of return on assets (a measure of profitability) and Tobin's Q (the ratio of the market value of a firm to its book value). This study provided the foundation for much of the research that followed. Much still this study focused on the manufacturing industry and its output,

corporate turnover, profitability and market value, but this study sought to establish how HR practices affected academic performance in the teaching profession in Bungoma County. Moreover, this study was carried out in the US which is a developed economy, 12 years before this study was carried.

A number of researchers examining the relationship between HRM and firm performance have taken a micro approach, investigating single HRM practices such as staffing, training, goal-setting, compensation, and so forth, and the effects of those practices on organizational level outcomes (Normala, 2006). Russell, Terborg and Powers (1985) examined the relationship between training, organizational support, and performance of organizations in a sample of sixty-two retail stores. Their study utilized both archival data information obtained from a company developed attitude survey. The findings provided evidence that both training and organizational support was positively and significantly related to store performance.

A significant body of previous research has reported positive associations between HR practices and organizational performance. These studies focus on the impact of several specific HRM practices, such as compensation, training or performance management systems (Fey, Bjorkman & Pavlovskaya, 2000; Khatri, 2000; Paul & Anantharaman, 2003). The current literature shows that HRM practices, in the form of high performance/high involvement work practices, are associated with positive performance outcomes (Appelbaum, Bailey, Berg & Kalleberg, 2000), and higher financial success (Bae and Lawler, 2000). These studies looked at single HR practices and how they were associated with organisational performance from 2001-2003. This study was undertaken to focus on

how the HR bundles such motivation, performance management and work environment influence academic performance in Bungoma County.

Most of the studies in HR practices and organizational performance have been conducted in the West, on the domestic operations of US firms, with a smaller number of studies carried out in the UK and Europe and Asia (Huang, 2004 and Khatri, 2000). Although, empirical studies have established associations between HR practices and organisational performance, very little if any has been underscored in this area of Bungoma County. Furthermore, most of the studies on HR practices and performance have been focused in manufacturing firms but very few in the field of service industry (education particularly on academic performance of public schools in Bungoma County). This study focused on the three HR bundles, namely motivation, performance management and work environment and how these HR bundles impact on the academic performance of public schools in Bungoma County.

2.3 Empirical Literature on Motivation and Academic Performance of Schools

Appropriately qualified, well-supported and remunerated, highly motivated teaching personnel working in a stimulating teaching and learning environment are the most important element of any education system (ILO, 2012). The status of teachers and public esteem for the teaching profession are crucial to high-quality education delivery. As international standards adopted already in the 1960s emphasize, teaching is a profession requiring expert knowledge and specialized skills, acquired and maintained through rigorous, ongoing education and training, and a sense of personal and collective responsibility for the education and welfare of learners. Teachers who benefit from equitable, enlightened human resource

management and policies deliver better education and stay in the profession longer, reducing staff turnover and the associated costs and problems for education managers (ILO, 2000c).

According to Greenberg and Baron (2000) the definition of motivation could be divided into three main parts. The first part looks at arousal that deals with the drive, or energy behind individual (s) action. People turn to be guided by their interest in making a good impression on others, doing interesting work and being successful in what they do. The second part refers to the choice people make and the direction their behaviour takes. The last part deals with maintaining behaviour clearly defining how long people have to persist at attempting to meet their goals.

Motivation is a set of courses concerned with a kind of strength that boosts performance and directs towards accomplishing some definite targets (Khan, Farooq & Ullah, (2010). According to Rizwan, Farooq, and Ullah (2010), it is an accrual of diverse routes which manipulate and express our activities to attain some particular ambitions. The motivation of an individual envelops all the motives for which he selects to operate in a definite approach. In fact motivation is "inside another person's head and heart" (Khadim, Ghatari and Hasiri, 2002).

According to Berg, Elliot, and the United Nations Development Programme (1993), the mode of decision-making in organisations varies over time and the approaches to supporting improved public sector efficiency through better pay policy will be more effective if they take account of these wider political rhythms and the prevailing political background. Public

service pay needs to be distinguished from incentive pay. The impact of performance pay on motivation is ambivalent: while it appears to motivate a minority of staff, it seems that a large majority often do not see performance-related pay as an incentive. Job content and career development have been found to be the strongest incentives for public employees. Performance-related pay is unlikely to motivate a substantial majority of staff, irrespective of the design.

According to Antomioni (1999) motivation is defined as the amount of effort people are willing to put in their work depends on the degree to which they feel their motivational needs will be satisfied. On the other hand, individuals become de-motivated if they feel something in the organisation prevents them from attaining good outcomes.

A study was conducted in Pakistan to examine the job satisfaction among bank employees in Punjab. A structured questionnaire survey was used and data was gathered from 4 bank's employees. The value of correlation coefficient for recognition was 0.251 which shows that its relationship with job satisfaction is positive. Job satisfaction is directly associated with internal work motivation of employees that enhances as the satisfaction of employees increases (Salman *et al*., 2010). That is why a study says that deficiency of appropriate recognition and rewarding reduces employees work motivation and job satisfaction. Hence, administration of organizations and institutions should build up the arrangement for giving that rewards and recognition to enhance employee job satisfaction and motivational level (Reena *et al*., 2009).

The extent to which employees are motivated in their work depends on how well those employees are able to produce in their job. Motivation is expected to have a positive effect on quality performance; employees who are characterized by a high level of motivation show a higher work and life satisfaction. Having a high level of motivation is therefore in itself valuable for employees and a decrease in motivation might affect employees' negatively. Motivation leads to high level of initiative and creativity from the employee and where monitoring is difficult, motivation is therefore extremely important for ensuring high quality performance (Carter and Shelton, 2009).

Hersey and Blanchard's (Ajang, 2007) in their study of industrial employees, ranked: (1) full appreciation of work done, (2) feeling of being, (3) sympathetic help regarding personal problems, (4) job security, and (5) good wages/salaries as the five top motivational factors out of ten factors. Kovach (Ajang, 2007) carried out a similar study of industrial employees in 1981 and again in 1986 and concluded that by 1981 what workers wanted had changed, interesting work was in the first position and sympathetic help concerning personal problems had dropped to the ninth position. Kovach further reported that by 1986 the ranking had changed even further and the top five ranked motivational factors were: (1) interesting work, (2) full appreciation of work done, (3) feeling of being (recognition), (4) job security and (5) good wages/salary.

A survey by Wiley (Ajang, 2007) concluded the following collective rank by respondents: (1) good wages, (2) full appreciation of work, (3) job security, (4) promotions/expectations, and (5) interesting work. The ranked order of motivational factors according to a survey by

Lindner (Ajang, 2007) found the following ranking of five out of the ten motivational factors: (1) interesting work, (2) good wages/salary, (3) recognition, (4) job security, and (5) good working conditions. A survey by Ajang (2007) ranked as top five factors that motivate them as future employees as follows: job satisfaction, promotions/expectations, recognition, good salary, and organizational/management styles.

In a survey by Wiley (1997) in which approximately 550 questionnaires were administered to persons employed in different industries and divided into 5 subgroups namely (employment status, gender, age, income levels and occupation). The survey concluded the following collective rank by respondent's (1) good wages (2) full appreciation of work (3) job security (4) promotions/expectations and (5) interesting work.

Among financial, economic and human resources, the latest are more essential and have the capability to endow a company with a competitive edge as compared to others (Rizwan, Farooq and Ullah, 2010). Employee Performance fundamentally depends on many factors like performance appraisals, employee motivation, employee satisfaction, compensation, training and development, job security, organizational structure and others. Employee motivation is one of the policies of managers to increase effectual job management amongst employees in organizations. A motivated employee is responsive of the definite goals and objectives he/she must achieve, therefore he/she directs its efforts in that direction.

Rutherford (1990) reported that motivation formulates an organization more successful because provoked employees are constantly looking for improved practices to do a work, so

it is essential for organizations to persuade motivation of their employees (Khan *et al*., 2010). Therefore, getting employees to do their best work even in strenuous circumstances, is one of the employees most stable and greasy challenges which can be made possible through motivating them. A lot of empirical studies on employees' motivation have been undertaken in manufacturing industries in developed countries yielding varied results but little has been underscored in educational institutions. Motivation as a key HR practice according to Abdulhadi (2009), in this study will be discussed under the following subtopics:

2.3.1 Rewards and Recognition on Academic Performance of Schools

No one works for free, nor should they. Employees want to earn reasonable salaries and payments, and employers desire their workers to feel that is what they are getting (Houran, 2002). Money is the fundamental inducement; no other incentive or motivational technique comes even close to it with respect to its influential value. It has the supremacy to magnetize, maintain and motivate individuals towards higher performance. Frederick Taylor and his scientific management associate described money as the most fundamental factor in motivating the industrial workers to attain greater productivity (Adeyinka *et al*., 2007).

In employee satisfaction, honor and acknowledgement are known as important component (Muhammad *et al*., 2010). Maurer (2001) proposed that organization success associate with employee satisfaction, through honor and respect, and conceive, these factors are important for job satisfaction (Jun, Cai and Shin, 2006). The research of Pascoe, Ali and Warne (2002) identifies that deficiency of acknowledgement and external honor on employees' work is important for system moral excellence. Employee job satisfaction diminishes due to

deficiency in recognition and rewarding. For gaining employees job satisfaction, it is necessary that management of organization foundation should originate the system that offering rewards and recognition on good work.

Flynn (1998) indicated high intent between employees, rise their team spirit, functioning, motive of the employees can be maintain by rewards and recognition. The aim of recognition and reward program is to extent employee job satisfaction and set a system to compensate and collaborate it to the employees so that they relate their honour. This study was conducted to establish if recognition and reward program had an impact on academic performance of public schools in Bungoma County.

Research has suggested that reward now cause satisfaction of the employee which directly influences performance of the employee (Khan *et al*., 2010). Rewards are management tools that hopefully contribute to a firm's effectiveness by influencing individual or group behaviour. All businesses use pay, promotion, bonuses or other types of rewards to motivate and encourage high level performances of employees (Reena *et al*., 2009). To use salaries as a motivator effectively, managers must consider salary structures which should include importance organizations attach to each job, payment according to performance, personal or special allowances, fringe benefits, pensions and so on (Adeyinka *et al*., 2007).

According to Maurer (2001) rewards and recognitions are essential factors in enhancing employee job satisfaction and work motivation which is directly associated to organizational achievement. Khan, Farooq & Ullah (2010) conducted a study in which he examined the

relationship between rewards and employee motivation in commercial banks of Pakistan. The study focused on four types of rewards of which one was recognition which he tested through Pearson correlation. The results showed that recognition correlates significantly (0.65) with employee work motivation (Khan *et al*., 2010).

An empirical study was conducted in Pakistan to measure the impact of reward and recognition on job satisfaction and motivation where 220 questionnaires were distributed and filled by employees of different sectors. The results showed that there exists a significant ($r=0.73$, $p<0.05$) relationship between recognition and employee work motivation (Rizwan *et al*., 2010). An empirical study was conducted by Reena *et al*. (2009) to examine the impact of reward and recognition programs on employee motivation and satisfaction. A questionnaire was distributed to 80 employees of Unilever and data was analyzed through SPSS version 16. The results showed that there is a statistically significant ($r=0.92$, $p<0.01$) direct and positive relation between recognition and employee work motivation (Rizwan *et al*., 2010).

According to Dewhurst *et al*., (2010), there are other means to reward employees that do not just focus on financial compensation. Some of these include the praise that employees are able to acquire from their managers, the opportunity to take on important projects or tasks, and even leadership attention. The latter refers to the treatment of the employees by their managers in such a manner that the employees are also considered to be leaders as well. These motivators constantly appear on most research studies and are excellent means to encourage the employee to work harder and produce better performance results. This is

largely due to the fact that the well-rewarded employee feels that he/she is being valued by the company that he/she is working for.

Therefore, the deficiency of appropriate recognition and rewarding reduces employees work motivation and job satisfaction. Hence, administration of organizations and institutions should build up the arrangement for giving the rewards and recognition to enhance employee job satisfaction and motivational level (Reena *et al*., 2009). This explains why the study was carried out to investigate the effect of rewards and recognition as form of motivation on academic performance of public schools in Bungoma County.

2.3.2 Training and Development on Academic Performance of Schools

One key factor in employee motivation and retention is the opportunity employees want to continue to grow and develop job and career enhancing skills. In fact, this opportunity to continue to grow and develop through training and development is one of the most important factors in employee motivation (Heathfield, 2012). Training has the distinct role in the achievement of an organizational goal by incorporating the interests of organization and the workforce (Stone, 2002). Nowadays training is the most important factor in the business world because training increases the efficiency and the effectiveness of both employees and the organization. The employee performance depends on various factors. But the most important factor of employee performance is training. Training is important to enhance the capabilities of employees. The employees who have more on the job experience have better performance because there is an increase in the both skills and competencies because of more on the job experience (Ul Afaq and Khan, 2008). Training also has impact on the return on

investment (Richard Chang Associates: RCA, 2007). The organizational performance depends on the employee performance because human resource capital of organization plays an important role in the growth and the organizational performance. So to improve the organizational performance and the employee performance, training is given to the employee of the organization.

Turning to the transfer of learning, the extent to which employees are able to apply the knowledge, skills and attitudes acquired during any Human Resource Development (HRD) intervention into the job context is viewed as a key consideration in HRD practice (Yadapadithaya and Stewart, 2003). Some theorists have argued that the extent to which training skills and learning are transferred to the job and the workplace is strongly motivated by the immediate superior's support in the transfer of the learning process (Santos and Stuart, 2003). Indeed, it was suggested in the strategic framework of HRD practice that top management support and line managers' involvement is an important feature in the effective management and implementation of HR training and development efforts. However, a lack of support, commitment, involvement and cooperation in the development of human resources has been criticised as affecting the performance of organisations and also affecting the effective development of employees' learning and motivation (Gilley and Maycunich, 2000).

It is very difficult for an employee to perform well at their job place without any pre-training (Garavan, 1997). Trained employees perform well as compared to untrained employees. It is very necessary for any organization to give its employees training to get overall goals of the organization in a better way (Kaynak, 2003 and Heras, 2006). Training and development

increase the overall performance of the organization (Shepard *et al*., 2003). Although it is costly to give training to the employees but in the long run it give back more than it took (Kaynak, 2003). Every organization should develop its employees according to the need of that time so that they could compete with their competitors (Heras, 2006).

Scholars, experts, social scientists and school administrators now recognize the fact that training is obviously indispensable not only in the development of the individuals but also facilitate the productive capacity of the workers (Olaniyan and Lucas, 2008). Training is not coaxing or persuading people to do what is wanted but rather a process of creating organizational conditions that will cause personnel to strive for better performance. Oguntimehin, Akintayo and Graig (2001) identified the functions of training as follow: increase productivity, improves the quality of work; improves skills, knowledge, understanding and attitude; enhances the use of tools and machine; reduces waste, accidents, turnover, lateness, absenteeism and other overhead costs, eliminates obsolesce in skills, technologies, methods, products, capital management and others. Findings from the interview schedules indicated that in service training of teachers in Bungoma County has been inadequate with attention focused on only heads of schools. A study by Ngure (2010) revealed that there was need for more of in-service training in order to enable school head teachers to integrate new knowledge and accommodate changes in the management of institutions so as to make them relevant to the society.

2.3.3 Compensation and Promotion on Academic Performance of Schools

Employee compensation includes all forms of pay and rewards received by employees for the performance of their jobs (Wright and Snell, 2000). Direct compensation encompasses employee wages and salaries, incentive-payments, bonuses, and commissions. Indirect compensation comprises the many benefits supplied by employers and non-financial compensation includes fringe benefits like free insurance, subsidized lunch; intrinsic rewarding jobs, a nice work environment, and flexible work hours to accommodate personal needs. "Employee benefits constitute an indirect form of compensation intended to improve the quality of the work lives and the personal lives of employees" (Snell and Bohlander, 2007, p. 448). The results of the study indicated a positive relationship between compensation and, promotion practices and employee perceived performance accounting for more than 62% while performance evaluations practices were not significantly correlated with perceived employee performance (Raigama, 2010). Thus, there is need to revise compensation practices and define clear career paths to enhance the performance of teachers.

A number of researchers have reported that HR practices are positively linked with organizational and employee performance (Guest, 2002; Park *et al*., 2003; Wright *et al*., 2003; Tessema and Soeters, 2006). The focus and thrust of these studies have been towards developed countries. Little research has been done to test the HR-performance link in developing countries like Kenya. Internal promotion; the availability of career possibilities within the firm tends to promote a higher degree of organizational commitment among employees (Guest, 1997) who perceive career possibilities with the firm. Additionally, an emphasis on internal promotion is likely to provide a sense of fairness and justice among the

employees who note that organizational tenure is valued in the company (Pfeffer, 1995). Teseema and Soeters (2006) found a significant and positive correlation between promotion practices and perceived employee performance; however, HR outcomes were used as mediating variables.

Sohrab and Khurram (2011) did a study on the impact of compensation, promotion and performance evaluation practices on the performance of university teachers of Azad Jammu and Kashmir. Authors concluded that compensation has strong and positive impact on performance of university teachers. Compensation is the major element to influence teachers. The more teachers are compensated fairly the more they will perform better. On the other hand the performance evaluation and promotion practices were insignificant with the performance of university teachers. The reason for this is most promotion and performance evaluation procedures are vague and not properly practiced. Baloch, Ali, Kiani, Ahsan and Mufty (2010) did a study about the HRM practices in order to examine their relationship with the perceived performance of employees in private and public sector banks of NWFP. Compensation, promotion and performance evaluation practices were significantly found to be correlated with employee performance. Banks were encouraged to pay proper attention to these three practices.

Shezad *et al*. (2008) did a study on impact HRM practices on perceived performance of university teachers of Pakistan. It was hypothesized that compensation, promotion and performance evaluation practices are significantly and positively related to perceived performance of university teachers of Pakistan. Compensation and promotion practices were

found to be significantly correlated with perceived performance of university teachers of Pakistan. Performance evaluation practice was found to be insignificantly correlated with the performance of university teachers of Pakistan. Tahir *et al*. (2010) did an empirical study on the impact of HRM practices on financial performance of banks which were selection, training, performance appraisal system, compensation system, career planning system and employee participation. All the practices were positively related to financial performance, but selection training, compensation and employee participation have stronger influence on financial performance of banks.

2.4 Empirical Literature on Performance Management and Academic Performance of Schools

The challenging economic conditions such as global competition, slow economic growth, and economic downturns, have caused the organizations starting to look internally for performance and productivity gains rather than wait for external improvements (for example, market growth or technological advances) (Boxall & Purcell, 2003; Buchner, 2007). Organizations have been focusing their attention on performance management (PM) as a way to improve organizational performance and productivity (Boxall & Purcell, 2003; Buchner, 2007). Performance management is defined as a systematic process aimed at enhancing human performance within the organization (Warren, 1982).

However, studies have established that very few employees believe that their company's PM systems help them improve their performance. This is because employees do not think that the systems establish clear performance goals, define realistic and fair performance

standards, or generate honest feedback (Watson Wyatt Worldwide, 2004). Pulakos and O'Leary (2011) argued that PM systems are ineffective because they focus more on administrative processes (that is, documentation) than on training managers and employees how to engage in effective performance management behaviors (for example, communicating clear goals and expectations). For example, although managers often provide informal feedback to their subordinates, they are reluctant to document subordinates' low performance because they fear damaging their relationship with them. Similarly, even though employees want guidance from their managers, they do not want it to be documented for fear that it may adversely affect their pay raises or advancements (Hosoda, Tokunaga and Ware, 2012).

For the organisations to increase the efficiency and effectiveness of PM, organizations are shifting their focus toward employee engagement because engagement has received research attention as a key determinant of performance (Macey, Schneider, Barbera, & Young, 2009). In fact, employee engagement has been a popular topic in organizations because it has been shown to bring benefits and competitive advantages to organizations (for example, Bates, 2004; Baumruk, 2004; Harter, Schmidt, & Hayes, 2002). For example, in a meta-analysis, Harter, Schmidt, Killham, and Agrawal (2009) reported that organizations with higher levels of engaged work groups were more productive, more profitable, less prone to accidents, and fewer absenteeism than organizations with lower levels of engaged work groups. In fact, these organizations had 3.9 times the earnings per share growth rate compared to organizations with lower levels of engaged work groups.

Traditionally, goal-setting is a management function but this study looks at it to be a two-way communication of goals between the organization and individual. Simply put, the participation of the employee in goal-setting must be encouraged rather than to follow the top-down approach (Ugaddan, 2013). It is important that the organizational vision and goals are crafted with the employees for them to clearly understand how their works fits into the organization, and how they could contribute to the achievement of such organizational goal. Likewise, it will strengthen the commitment in the achievement of goal is higher. The article have made mention about Peter Ducker's concept of "manager's letter" that encourages performers to write to their boss to facilitate communication. This concept is worth exploring to stimulate goal-sharing and communication. Lastly, the supervisor and employees understanding of the job duties will eliminate ambiguities regarding functions in the organizations (Ugaddan).

Communication has been widely accepted by scholars and academics as the life-hood of an organization, because communication is needed for exchanging information, exchanging opinions, making plans and proposals, reaching agreement, executing decisions, sending and fulfilling orders and conducting sales (Blalock, 2005; Alyssa, 2006 and Kotler, 2006). When communication stops, organized activity ceases to exist, and individual uncoordinated activities return in an organization. So, communication in an organization is as vital as the blood of life (Udegbe, Udegbe, Ogundipe, Akintola and Kareem, 2012), particularly in this study, public schools.

According to Kotler, (2006), communication is the means by which firms attempt to inform, persuade and remind consumers – directly or indirectly – about the products and brands that they sell. In a sense, communication represents the "voice" of the brand and is a means by which it can establish a dialogue and build relationships with consumers. Blalock (2005) posits that good communication matters because organizations are made up of people, and as Kent, former dean of Harvard Business School puts it, "In business, communication is everything." Research spanning several decades has consistently ranked communication skills as crucial for managers. Managers spend 75 to 80 percent of their time engaged in some form of written or oral communication. Although, often termed as 'soft' skill, communication in organizations provides the critical link between core functions. For example, the link between school administration and the various departments within the schools set up (Udegbe *et al*., 2012).

According to Blalock (2005), three reasons why good communication is important to individuals and their organizations are: 1. Ineffective communication is very expensive. The ability to communicate was rated as the most important factor in making a manager "promotable" by subscribers to Harvard Business Review. 2. The changing environment and increasing complexity of the 21st century workplace make communication even more important. The collaboration that allows organizations to capitalize on the creative potential of a diverse workforce depends on communication. 3. The world's economy is becoming increasingly globalized. By the end of the 20th century, 80% of U.S. products were competing in international markets. The direct investment of foreign-based companies in the U.S grew from $9trillion in 1966 to more than $300trillion in 2002.

According to the Management Study Guide (1998 – 2001), organisational communication involves constant flow of information. Feedback is an integral part of organisational communication. Organizations these days are very large and they involve a large number of people. There are various levels of hierarchy in an organization. The greater the number of levels, the more difficult is the job of managing the organization. Communication here plays a very important role in the process of directing and controlling the people in the organization (Udegbe *et al*., 2012). There should be effective communication between superiors and subordinates in the organization, between organizations and the society at large, between management and trade unions, among others. Communication is essential for the success and growth of an organization. Therefore, communication gaps should not be allowed to occur in any organization.

The rules, regulations, and policies of a company have to be communicated to the people within and outside the organization. Organisational communication is regulated by certain rules and norms. In early times, organisational communication was limited to paper work, telephone calls and among others, but now, with the advent of technology, there are cell phones, video conferencing, emails and satellite communications. to support business communication. Effective communication helps in building the goodwill of an organization. Hence, it is necessary that you think before you communicate, be an active listener, be focused on your audience; and in your response, be brief and be gone (Udegbe *et al*., 2012).

School leadership and management style are also important factors, which can either motivate or lower teacher morale and commitment. Nwankwo (1984) found that teachers feel highly motivated when they are consulted about decisions regarding their work. Unfortunately, too high a proportion of school managers (principals and head teachers) are highhanded and autocratic in their dealings with teachers (Ayeni 2005). The attitude of inspectors towards teachers in supervising their work is another important work-related motivational factor. Bamisaye (1998) found that unfair administrative and supervisory practices tend to undermine teacher morale. Therefore, this explains why the study sought to establish the extent to which teachers' involvement in decision making affects academic performance in public schools in Bungoma County.

Burkart, Holzner and Holzner (2006) argue that there has been a worldwide culture shift toward transparency, the more open flow of information, proactive disclosure, and an insistence on strengthened accountability for all institutions especially governments. Access to information legislation, where it exists, is seen to have played a role in supporting the shift to transparency and disclosure. Such legislation recognizes the public's right to know and the government's duty to disclose; and it provides mechanisms to enforce these principles. The process of transforming governmental systems, including public bureaucracies, toward greater openness and accountability has proved to be difficult and slow because of both political and bureaucratic resistance and the use of defensive strategies to minimize what are seen by governments as the negative consequences of access laws. The study investigated how information flow in public schools affects academic performance of public schools in Bungoma County.

According to the Education Policy of Gambia (2004-2015) the importance of ICTs is recognised as essential tools to better facilitate effective and efficient management of the education sector. This Information and Communications Technology policy will ensure, through the use of ICTs that quality education is accessible to one and all. An integrated ICT strategy, within a sound ICT infrastructure is vital for the successful achievement of the main objectives in education. This ICT strategy will be driven by the need to invest in ICTs in a way that will achieve the greatest benefit at the lowest cost for the good of the greater majority of society (Van der Spiegel, 1995). The key elements of the strategy will provide an integrated system to meet the needs of employees and promote computer, information literacy within education system, create and nurture an ICT culture, plan ICT human resource development, provide the necessary ICT resources (hardware, software and peopleware) to ensure efficient and effective administration of the sector, build strategic and rewarding partnerships nationally and internationally, with a view to involving more private sector participation in ICT in education. Therefore, the flow of information in the public schools is slow and this has a negative impact on academic performance because there is the delay of information within school departments and among schools. Most of these schools within Bungoma are not networked for easy flow of information between the MOE, TSC and schools. Therefore, the MOE should ensure that schools get valuable Internet access and web presence (MOE, 2011).

A review by UNESCO (2002) found that schools did not have information on the following variables: student repeaters, student deaths, student transfers and details about the teachers. Given this lack of information head teachers have two options when completing the census

form, to leave the section blank or to provide inaccurate information. Moreover, the schools did not have a standard form for record keeping and as a consequence no comparable data could be collected. UNESCO (2002) further discovered that the school inspectors who were appointed to support this process had little understanding about the importance of record keeping. There were also no incentives for the teachers to complete or forward the form.

There are many examples of how powerful the provision of information can be. One comes from Uganda where the publication of budget allocation to local schools empowered parents to claim delivery. In the course of 5 years the percentage of intended funds that actually reached local schools grew from 30% in 1995 to 90% in 2000. Popular versions of government policy and budgets in local languages should be a standard feature for empowering poor stakeholders. Local Human Development Reports similarly help informing and motivating poor people to claim their rights and use available services (Hongoro, Charles and Normand, 2002).

Although the ultimate goal of performance management is to enhance the performance of businesses, PM systems have often been ineffective because they are seen as an administrative burden between managers and employees (Pulakos & O'Leary, 2011). Additionally, a survey of 1,190 workers conducted by Watson Wyatt Worldwide (2004) showed that only 30% of workers felt that their companies' PM system helped them improve performance, and less than 40% said that the system established clear goals, generated honest feedback, or used technology to streamline the process.

2.5 Empirical Literature on Work Environment and Academic Performance of Schools

According to Shah (2009) employee welfare is a comprehensive term including various services, benefits and facilities offered to employees by the employers. Through such generous fringe benefits the employer makes life worth living for employees. Welfare includes anything that is done for the comfort and improvement of employees and is provided over and above the wages. Welfare helps in keeping the morale and motivation of the employees high so as to retain the employees for longer duration (Yildirim, Acar, Bull and Sevinc, 2008). These welfare measures need not be in monetary terms only but in any kind/forms and they include monitoring of working conditions, creation of industrial harmony through infrastructure for health, industrial relations and insurance against disease, accident and unemployment for the workers and their families.

Studies show that the work environment is an important determining factor in teacher motivation. The teacher's work environment in Nigeria has been described as the most impoverished of all sectors of the labour force (NPEC, 1998). Facilities in most schools are dilapidated and inadequate, (Adelabu, 2003). Kazeem (1999) has recommended that greater attention should be given to improving work-related conditions of teachers to improve the quality of education. In particular, there should be improvements in the supply of teaching and learning materials and general classroom environment to improve student learning. In the teaching profession in Kenya, the teachers' welfare is considered poor with housing schemes and medical benefits not being enough to make their work life better and also to raise their standard of living. This could explain why their commitment and dedication to preparation of candidates for KCPE and KCSE is very low. Moreover, there is a worrying trend of teachers

leaving the profession in search of greener pastures because of these deplorable working conditions (MOE, 2004 and Sifuna, 2003).

Employee welfare entails all those activities of the employer which are directed towards providing the employees with certain facilities and services in addition to wages or salaries. The very logic behind providing welfare schemes is to create efficient, healthy, loyal and satisfied labor force for the organization. The purpose of providing such facilities is to make their work life better and also to raise their standard of living (Shah, 2009). The important benefits of welfare measures can be summarized as follows by Huselid (1995): they provide better physical and mental health to workers and thus promote a healthy work environment; facilities like housing schemes, medical benefits, and education and recreation facilities for workers' families help in raising their standards of living. This makes workers to pay more attention towards work and thus increases their productivity. Employers get stable labor force by providing welfare facilities. Workers take active interest in their jobs and work with a feeling of involvement and participation. Employee welfare measures increase the productivity of organization and promote healthy industrial relations thereby maintaining industrial peace. The social evils prevalent among the labors such as substance abuse are reduced to a greater extent by such welfare policies.

A research carried out by Pan, Rudo and Smith-Hansen (2003) in the four states of the USA education (Louisiana, New Mexico, and Texas) comparing high-performing and low-performing districts showed a general pattern in which higher performance was associated with higher spending for instruction, core expenditures, and number of teachers and with

lower spending for general administration and number of administrative staff. In all four states, high-performing districts spent significantly more than low-performing districts on instruction as a share of current expenditures. In three of the four states (Louisiana, New Mexico, and Texas), high-performing districts spent more per pupil on instruction and also employed more teachers per 1,000 students when compared to low-performing districts. The results showed that the improvement districts increased the number of teachers per 1,000 students over time more than the comparison districts.

The importance of the above results to a successful academic achievement cannot be overemphasized. A school's location determines to a very large extent the patronage such a school will enjoy. Similarly, the entire unattractive physical structure of the school building could de-motivate learners to achieve academically. This is what Isangedighi (1998) refers to as learner's environment mismatch. According to him, this promotes poor academic performance. The unconducive atmosphere of our secondary schools' learning environment also contributes to the poor academic performance of students. Secondary schools are experiencing astronomical increase in population to the extent that some classes use 3-5 registers for a class having up to 250 students. In such situations, Teacher-Student Ratio is 1:250. The recommended 1:50 ratio has gone into oblivion. Knowing students by name is no longer in vogue in Nigerian secondary schools. The problems of too large population of students in classroom do not create a good condition for learning which can lead to poor academic performance of students (Asikhia, 2010). This scenario is a replica of the Kenyan Education system (Sifuna, 2003). This details the purpose of this study, which was to determine how the work environment impacts on the academic performance in Bungoma

County.

2.6 Improving the Academic Performance of Public Schools

Steps that have been taken from the supply side to enhance performance of learning institutions include: regular and continuous review of curriculum in order to enhance the quality and relevance of the instruction's academic programmes to the needs/expectations of the various stakeholders. There should be commitment to teacher quality in order to ensure the quality of teachers in the teaching institutions. For example, schools should now insist on the first degrees for all teaching staff, with appropriate supportive training programmes to enable academic staff to obtain their degrees. There is also need to continuously train and re-train teachers for effective and efficient performance (Ibidapo-Obe, 2007).

There should be continuous teaching and learning improvement in schools. Steps should be taken for continuous teaching methods review/improvement to make the teaching methods current and relevant to contemporary needs. The schools should also continuously take steps to improve the teaching process, by organizing workshops and seminars on teaching and assessment methodologies. Furthermore, as a way of improving the quality of teaching, the institutions should put in place modalities for staff assessment by students across the institutions. This is in addition to standard assessment systems in teacher education such as the teaching practice, which are strongly emphasized (University of Lagos, 2004).

The institutions should place high priority on the libraries as the base for academic excellence and thus invest substantial internally generated funds in library development. The

libraries should be well-equipped and stocked dedicated library (Education Library) to cater to the needs of staff and learners. Moreover, useful linkages have been established by the schools with some top-ranking universities, both local and foreign, especially for staff exchange in order to ensure the conformity with international standards and development. The library stock should be expanded and updated on a regular and continuous basis in order to avail the students and teachers' current materials and information (National Planning Commission, 2004).

The schools strongly belief that input has an effect on output, and is taking steps to ensure the admission of high quality candidates into the schools, including the education programmes. Some of these schools have introduced screening tests for candidates seeking admission into their institutions. Compliance with Carrying Capacity Standards, schools involved in teacher education should limit admission of students to what their facilities can support. The results have shown that this has, indeed, been helpful in enhancing the quality of candidates admitted into the schools. Although substantial funding for the schools still comes from the government, the schools have realized that they cannot depend solely on the government for all its needs, and thus take steps to intensify their internally generated funds. The schools have been able to use this to support its various programmes (including education), especially to supplement subventions from the government for the provision/improvement of necessary infrastructure and facilities such as classrooms, library stock, teaching aids, attendance and support for conferences, workshops, among others. There is need for adequate funding for the provision/upgrading of necessary teaching aids, laboratory materials and other tools (Soboyejo, 2007).

The schools should further place high emphasis on Information and Communication Technology (ICT) as a major tool for advancing teaching, learning and research, and should therefore invested substantial amounts in ICT development. The learning institutions are fast moving towards e-learning. This explains why a considerable number of teachers are now embracing the e-teaching system in several courses in their schools. The school libraries should increase access to e-books and e-journals. This is gradually transforming the learning and teaching processes by leveraging large class sizes, small classroom spaces and small number of qualified, experienced teachers. The schools should receive support from the alumni, various public and private organizations, philanthropic individuals, and international bodies (National Planning Commission, 2004).

Schools should put in place various provisions to attract and retain top quality staff. It is desirable to have special scholarships and awards for teacher education in order to provide additional incentives for people who want to go into the teaching profession. There is also need for general improvement in the remuneration and conditions of service for teachers, especially at the primary and secondary school levels. This will provide enough incentives in order to get the best from them (Ibidapo-Obe, 2007 and Soboyejo, 2007).

2.7 Models of HR Practices and Theoretical Framework

Previous research in HRM has used one of the following three ways to examine the effectiveness of HRM practices on firm performance: universalistic, contingency or configurational approach (Delery and Doty, 1996). Universalistic perspective seeks for “best

practices". Researches in the universalistic perspective are micro analytical in nature and posit that some HRM practices are always better than others are and that all organizations should adopt these practices. The best practices approach asserts that some HR practices are better than others. Scholars further argue bundling sets of appropriate HR practices, rather than single, isolated practices, is necessary for sustained performance. As pointed out by Lepak and Snell (1999), it may be inappropriate to simplify the nature of human capital investments and suggest that there exists a single optimal HR architecture for managing all employees. Instead of focusing on particular human resource practice independently or in isolation, we need to look more broadly at HR bundles that are implemented in combination.

Huselid (1995) work reflected the universalistic approach to HRM. This perspective assumes that there are certain "best" HRM practices that contribute to increased organisational performance regardless of the strategic goals of organizations. Further, a universalistic approach to HRM research assumes that HRM practices contribute to worker motivation (and thereby increased productivity) as well as increased efficiency (Ichniowski, Kochan, Levine, Olson and Strauss, 1996). While other authors concurred with these assumptions (Osterman, 1995; Pfeffer, 1994), different studies have utilized various assortments of these HRM practices, and there has been little work that provides a definitive description as to which HRM practices should be included in a "best practice" system. This is what this study sought to find out; which HR bundles (motivation, performance management and work environment) were effective in promoting academic performance in public schools.

Huselid (1995), for instance, utilized thirteen HRM practices. Pfeffer (1994) however, advocated the use of sixteen management practices to achieve higher productivity and profits. In another work, Delery and Doty (1996) identified seven practices that are consistently considered to be strategic in nature. Practices identified were internal career opportunities, formal training system, appraisal measures, profit sharing, employment security, voice mechanism and job definition.

According to Pfeffer (1998) employees work both harder and smarter today because of the effective HR practices that are emerging as organizations seek to attract, motivate and retain employees that increase performance. According to the universalistic view proposed by Pfeffer, employees work harder because of greater job involvement, greater peer pressure for results, and the economic gains based on high performance. Employees work smarter because they can use their knowledge and skills, acquired through training and development in the job themselves, in getting the work done.

Proponents of the contingency perspective argue that a firm can be effective if its HR practices and strategy are aligned with other aspects and strategies of the firm. Contingency theorists posit that an organization needs to adapt specific HRM practices for different firm strategies. Contingency perspective is also called 'fit-alignment' perspective. There are two forms of fit alignment – vertical and horizontal. The vertical alignment (external alignment) is the level of alignment between the components of the organization's human resource strategy and core features of its business strategy. Horizontal fit (internal alignment) measures the level of alignment among components of the organization's HR strategies such

as recruitment, selection, training and compensation. According to the configurational perspective, in order to be effective, an organization must develop its HRM system that achieves both horizontal and vertical fit (Delery and Doty, 1996). The contingency theorists argue that, in order to be effective, an organization's HRM practices must be consistent with other aspects of the organization.

The Contingency Approach differs from the Universalistic Perspective in that these studies have attempted to link variations of HRM practices to specific organizational strategies (Khatri, 2000). The contingency perspective assumes that organisation performance will be improved when there is consistency or fit between the organisation strategy and HR policies. It has been argued that HRM practices that are not aligned and consistent with organizational strategy and which conflict with other HRM practices can restrain both individual and organizational performance (Kazmi and Ahmad, 2002).

The configuration approach identifies unique patterns of HR practices and business strategy that are posited to be maximally effective. A closely related body of work calls for a configurational approach to HRM, and argues that it is the pattern of HRM practices that contribute to the attainment of organizational goals (Gardner & Moyniham, 2003). Configuration approaches focus on the realized pattern of multiple variables, and how these variables interact over time and how the pattern is related to various organizational outcomes (Delery and Doty 1996). The basic premise of configuration perspective is a firm will perform better through a set of 'high performance' or best HRM practices through internal appropriate fit among HRM practices (the configuration fit) and through external appropriate

fit between a firm's business strategy and HRM practices (Wright and Snell, 1991). The concept of "fit" refers mainly to the close linkage of HRM strategies and business strategies for organizational success. Firm performance can be enhanced to the degree that the internal consistency among HR practices and compatibility of HR practices with firm's strategy (Huselid 1995; Youndt, Snell, Dean, and Lepak, 1996). Therefore integrating HR configuration with business strategy is conducive to the enhancement of organizational effectiveness, particularly for high commitment.

Current literature on HR practices is configured on the basis of two main approaches: resource-based and control-based approach (Bamberger and Mesoulan, 2000). The resource-based view is geared toward the internal development of employee competencies as opposed to the market-based acquisition of such competencies (Wernerfelt, 1984). The internal development HR system (make) is characterized by extensive training, promotion from within, developmental performance appraisal, skill-based pay and job security whereas the market-based HR system (buy) is characterized by little formal training, little security, and market-based compensation.

The Control-Based Approach focuses on monitoring employee behaviours, employee's compliance with process–based standards (Snell, 1992). It further divides into two alternatives process-oriented control or outcome-oriented control. Outcome-oriented control is characterized by extensive long-term rewards, employee participation and involvement. In contrast, process-oriented control is characterized as fixed and explicit job design, formalization evaluation through carefully prescribed job requirement and efficiency based

reward (Dyer & Reeves, 1995). It is necessary to integrate these two approaches to form a comprehensive HR configuration.

Proponents of the Universalistic view of SHRM propose a best practice approach to SHRM. According to the researchers, some HR practices are always better than other it is therefore necessary that organizations adopt these practices (Pfeffer, 1994). Pfeffer is one of the supporters of the universalistic view of SHRM. He argued that there is a set of interrelated HR practices that characterize achieving competitive success through HR management. Under the universalistic approach, SHRM practices are those that contribute to the achievement of higher organizational performance, regardless of the organization's strategy. The universalistic approach is also called the 'best practice' approach. Proponents of the best practice approach argue that a single high performance human resource strategy enhances effectiveness regardless of organizational goals, work systems, or context (Pfeffer, 1998).

Within the area of SHRM, there are significant researches that support the notion that certain HR practices are linked to organizational performance. In a research conducted by Arthur (1994), he found that HR practices that put emphasis on the enhancement of employee commitment such as employee empowerment, comprehensive training, and strategic compensation were connected to higher performance. The best practice approach to SHRM according to Pfeffer and Veiga (1999) are employment security; selective hiring; self-managed teams and decentralization; comparatively high compensation contingent on organizational performance, extensive training, reduction of status differences and information sharing. Considered as the simplest SHRM theory, the universalistic approach

implies that the relationship between a given independent variable (HR practice) and a dependent variable (performance improvement) is universal across different organizations. The universalistic view of SHRM stresses that there is one best way to manage human resources. Therefore, understanding of these three perspectives to HR practices is profound to identify unique patterns of HR practices, best HR bundles, human resources policies and business strategy to lead to enhanced academic performance of public schools in Bungoma County.

This study was guided by motivational (in particular Need Theory) and performance management theories. There are a number of different views as to what motivates workers. According to Taylor (1856–1917), workers are motivated mainly by pay. Mayo (1984) believed that workers are not just concerned with money but could be better motivated by having their social needs met whilst at work (something that Taylor overlooked). He introduced the Human Relation School of thought, which focused on managers taking more of an interest in the workers, treating them as people who have worthwhile opinions and realising that workers enjoy interacting together. Maslow (1943) put forward a theory that there are five levels of human needs structured into a hierarchy which employees need to have fulfilled at work, that is, physiological needs, safety needs, social needs, esteem/self-esteem needs and self-actualization. Once a lower level of need has been fully met, would a worker be motivated by the opportunity of having the next need up in the hierarchy satisfied?

A business should therefore; offer different incentives to workers in order to help them fulfill each need in turn and progress up the hierarchy. Managers should also recognise that workers

are not all motivated in the same way and do not all move up the hierarchy at the same pace. They may therefore have to offer a slightly different set of incentives from worker to worker. However, according to Herzberg (1923) there were certain factors that a business could introduce that would directly motivate employees to work harder (Motivators). There were also factors that would de-motivate an employee if not present but would not in themselves actually motivate employees to work harder (Hygiene factors). Therefore, all these theories of motivation were summed up in the needs theory as explained below.

2.8 Motivational Theories

Many theories have been developed in the field of human motivation. Some of these theories are widely used by in today's organizations like learning institutions and these theories were Taylor (productivity Theory), Alders (ERG Theory), Maslow (Need Theory), Vrooms (Expectancy Theory), Adams (Social Equity Theory), Herzberg (Two Factor Theory), McGregor (Theory X and Y) and Skinner (Reward Theory) (Ajang, 2007).

Taylor (1856-1915) took the view that there is a right (meaning best) way to perform any task. It is management's job to determine the right way. Workers gain from this approach because the 'right way' is easier and pay is enhanced as a result of increased productivity. Taylor observed the soldering by employees, which is a situation whereby workers work less than full capacity. He argued that soldering occurs due to the fact employee's fear that performing high will lead to increasing productivity, which might cause them to lose their jobs. This slow paces of work where promoted by faulty systems however this situation is not

what prevails with contemporary employees who organisations evaluate them through their performance.

According to the Human Relation View - in the work of Mayo (1880-1949), also known as the Hawthorne Studies, the strongest motivational force behind most employees' behaviour at work was the preservation and nurturing of social relationships with their colleagues. Mayo's work leads to an approach towards people which encourages contribution and self-direction, advocating full participation on matters of significance in order to improve the quality of decisions made and the nature of supervision.

Douglas McGregor proposed a Theory X and Theory Y model to explain basic human traits. Douglas McGregor, an American social psychologist, proposed his famous X-Y theory in his 1960 book 'The Human Side of Enterprise'. Theory X and theory Y are still referred to commonly in the field of management and motivation, and whilst more recent studies have questioned the rigidity of the model, McGregor's X-Y Theory remains a valid basic principle from which to develop positive management style and techniques. McGregor's XY Theory remains central to organizational development, and to improving organizational culture.

Content Theories focus on the question of what arouses, sustains and regulates goal directed behaviour, that is, the particular things that motivate people. They offer ways to profile or analyse individuals to identify their needs. These theories are often criticised as being static and descriptive as they appear to be linked more to job satisfaction than to work effort. Maslow, Herzberg and McGregor take a universal approach whereas McClelland and Argyris

list forces and drives that will vary in relation to different individuals. Process Theories attempt to explain and describe how people start, sustain and direct behaviour aimed at the satisfaction of needs or the reduction of inner tension. The major variables in process models are incentive, drive, reinforcement and expectancy. The best-known work in this area has been concerned with Vroom's Expectancy Theory, Handy's Motivation Calculus and Adam's Equity Theory.

Maslow (1943) suggests that human needs can be classified into five categories and that these categories can be arranged in a hierarchy according to their importance. These include physiological, security, belonging, esteem and self-actualization needs. The urgency of these needs vary. Maslow's basic theory needs qualification to include the individual as a determining factor in motivation and behaviour. These include levels in the hierarchy are not rigidly fixed; boundaries between them are indistinct and overlap; there are individual exceptions to the general ranking of the hierarchy. Some people never progress beyond the first or second level (for example, many inhabitants of the third world); others are so obsessed with the higher needs that lower ones may go largely unnoticed. Variables apart from individual needs may motivate, for example social standards and a sense of duty. An act is seldom motivated by a single need; any act is more likely to be caused by several needs. The same need will not give rise to the same response in all individuals. Substitute goals may take the place of a need that is blocked.

Maslow took a deprivation-gratification approach to need satisfaction. That is, he contended that an unfulfilled or deprived need would activate a person to engage in behaviour that

would satisfy or gratify that need. Once one level of need is gratified, the next level of needs will emerge as the deprived needs seeking to be gratified. Maslow's theory is built on the framework that unsatisfied needs serve as factors arouse people to behaviour. When a need has been minimally fulfilled, it then ceases to be a motivator of behaviour. For example, as assembly line worker may have a desire or need to become a supervisor. Through training programs or part-time studies, this employee can be promoted to a supervisory role in the factory in due course of time. The need to become a supervisor no longer exists, and therefore, the behaviour of the individual is altered to a new situating.

The implications of Maslow's model help the managers to understand and deal with issues of employee motivation at the workplace. This model can be applied to motivate people at all levels in the organization. Managers who understand the need patterns of their staff can help the employees to engage in the kinds of work activities and provide the types of work environment that will satisfy their needs at work. For instance, the employees love and belonging needs can be fully satisfied by organizing yearly dinner and dance program, office week end parties, creating recreation clubs or social clubs etc. Fortunately, the workplace has the potential to offer need gratification for several different types of needs, and mangers can motivate employees by giving appropriate organizational support which will gratify individual's needs.

This theory was criticised based on the following points: not all employees are governed by same set of needs. Different individuals may be driven by different needs at same point of time. It is always the most powerful unsatisfied need that motivates an individual; the theory

is not empirically supported; the theory is not applicable in case of starving artist as even if the artist's basic needs are not satisfied, he will still strive for recognition and achievement. Thus, despite its drawbacks, Maslow's Theory offers managers a good technique on understanding the motives or needs of individuals and how to motivate organizational members. In this study, it was hypothesised that the school principals, teachers and support staff have varied needs which determine their behaviour towards academic performance. Therefore, it should be noted that highly deficient needs, or needs that have gone unsatisfied for long period of time, serve to cause such behavioural responses as frustration, conflict, strikes and stress negatively affecting academic performance of schools.

In 1959, Frederick Herzberg, a behavioural scientist proposed a Two-Factor Theory or the Motivator-Hygiene Theory. According to Herzberg, there are some job factors that result in satisfaction while there are other job factors that prevent dissatisfaction. According to Herzberg, the opposite of "Satisfaction" is "No satisfaction" and the opposite of "Dissatisfaction" is "No Dissatisfaction". The major finding of the Herzberg's Theory of Motivation was that the events that led to satisfaction were, not surprisingly, of a quite different kind from those that led to dissatisfaction. One set of factors are those which, if absent, cause dissatisfaction. These factors are related to job context. They are concerned with job environment and are extrinsic to the job itself. They are called 'hygiene' factors and include such elements as company policies and administration; supervision; working conditions; interpersonal relations; money, status and security. The other set of factors are those which, if present, serve to motivate the individual to superior effort and performance. These factors are related to the job content of work. They are 'motivators' or growth factors.

Motivation factors include achievement; increased responsibility; challenging work; recognition for achievements; growth and development (Herzberg, Mausner, Peterson and Capwell, 1957).

Alder asserts in his Existence Relatedness and Growth Theory commonly known as the ERG Theory asserts that there are three basic human needs: Existence, relatedness and growth, which must be met by an employee to enable him, increase performance (Ajang, 2007). Alderfer has proposed two sets of views on individual's aspirations and fulfillment. One is satisfaction-progression and other frustration-regression. Satisfaction-progression is similar to Maslow's model in which once an individual's basic needs are satisfied, he/she will progress to the next level to satisfy the succeeding higher level to have them satisfied. Alderfer proposed yet another view of individual's aspirations and fulfillment. If people eventually become frustrated in trying to satisfy their needs at one level, their next lower level needs will re-emerge and they will regress to the lower level to satisfy more basic needs. This is called as frustration-regression. For manages, ERG Theory provides a more workable approach to motivation in organization. Because of the frustration-regression approach component, it provides the manager with the opportunity of directing employee behaviour in a constructive manner even though higher order needs are temporarily frustrated (Alderfer, 1972).

David McClelland (Studies in Motivation, 1955) identified three basic types of motivating needs present in people. He shows that all three needs can be present in a person but the weight attached to each can vary. The three needs are (a) need for achievement - where this is

high then people have an intense desire to succeed and an equally intense fear of failure. (b) Need for affiliation - where this is high people tend to seek acceptance by others, need to feel loved and are concerned with maintaining pleasant social relationships. (c) Need for power - people with a high need for power seek opportunities to influence and control others, seek leadership positions and are often articulate, outspoken and stubborn.

Another theory by Argyris (1964) centers on what he refers to as the mature worker. In his book 'Personality and Organization', Argyris contrasts the management practices found in traditional organizations with the needs and capabilities of the mature adult personality. For example, the concept of work specialization is supposed to make people work more efficiently because the tasks are very much defined. Argyris believes that this concept may actually be counterproductive because it will limit an employee from reaching self-actualization. Like McGregor, Argyris is concerned about how managers treat people. He believes that if managers treat their employees in a positive manner—as responsible adults—their employees will be more productive. However, Argyris takes this concept one step further. He believes that mature workers want additional responsibilities, a variety of tasks, and the ability to participate in decisions. If not, he believes that the result will be employee absenteeism, apathy, and even alienation.

The Expectancy Theory was proposed by Victor Vroom of Yale School of Management in 1964. Vroom stresses and focuses on outcomes, and not on needs unlike Maslow and Herzberg. The theory states that the intensity of a tendency to perform in a particular manner is dependent on the intensity of an expectation that the performance will be followed by a

definite outcome and on the appeal of the outcome to the individual. The Expectancy Theory states that employee's motivation is an outcome of how much an individual wants a reward (Valence), the assessment that the likelihood that the effort will lead to expected performance (Expectancy) and the belief that the performance will lead to reward (Instrumentality). Expectancy Theory suffers from the following limitations: the Expectancy Theory seems to be idealistic because quite a few individuals perceive high degree correlation between performance and rewards and the application of this theory is limited as reward is not directly correlated with performance in many organizations. It is related to other parameters also such as position, effort, responsibility and education (Vroom, 1964).

Porter and Lawler's Model-Vroom's theory has been extended by the findings of Porter and Lawler (Porter & Lawler, 1968) in devising a more complete model of motivation for management. Basically, Porter and Lawler's model shows that the amount of effort generated depends upon the value of the reward, the amount of effort seen to be necessary and the probability of receiving the reward. The amount of effort deemed necessary and the probability of receiving the reward are in turn influenced by the individual's record of performance to date, and range of skills, personality, perception of his role, and any number of other environment factors.

According to Handy's Motivational Calculus (1970s), each person has a specific 'motivation calculus' in respect of every decision taken – and this can be on a conscious or a subconscious basis. This assesses three factors: (a) Needs which may be defined in accordance with the ideas of Maslow or any other researchers, and they are the person's

needs at that time. (b) Desired results - these are what a person is expected to accomplish in the work. (c) Expenditure (E) factors - these relate to the expenditure of effort, energy, and excitement in attaining the desired results. Handy suggests that motivational theories have been too preoccupied with 'effort'. He notes that there seems to be a set of words (coincidentally beginning with 'e') that might be more helpful. As a result of this assessment we have a 'motivation decision'. This is the strength of the motivation to achieve the desired results. Handy therefore suggests that each individual must know exactly what is expected; he or she should participate in the setting of the targets in accordance with personal objectives and feedback, on a regular basis, is necessary to inform individuals of their performance in relation to the targets.

Equity Theory is a theory that attempts to explain relational satisfaction in terms of perceptions of fair/unfair distributions of resources within interpersonal relationships. Considered one of the justice theories, equity theory was first developed in 1963 by John Stacey Adams, a workplace and behavioural psychologist, who asserted that employees seek to maintain equity between the inputs that they bring to a job and the outcomes that they receive from it against the perceived inputs and outcomes of others (Adams, 1965). The belief is that people value fair treatment which causes them to be motivated to keep the fairness maintained within the relationships of their co-workers and the organization. The structure of equity in the workplace is based on the ratio of inputs to outcomes. Inputs are the contributions made by the employee for the organization. When people sense inequities in their work they will be aroused to remove the discomfort and restore a state of felt equity to the situation by changing work inputs, changing rewards received, leaving the situation,

changing the comparison points and psychologically distorting the comparisons. People who feel overpaid (feel positive inequity) have been found to increase the quantity or quality of their work, whilst those who are underpaid (feel negative inequity) do the opposite. Feelings of inequity are determined solely by the individual's interpretation of the situation - the fact that a manager feels that the annual pay review is fair is immaterial.

2.8.1 Need Theory

The motivational theories discussed above have been summed in the Need theory that guided this study. According to the Need, needs represent an internal energy force that directs behaviour toward actions that permit the satisfaction and release of the need itself (that is, satiation), suggested by Murray's (1938) system of needs. Of these secondary needs, Murray initially guessed that around twenty might exist, although Winter (1996) suggests that only three are fundamental: the need for achievement, the need for affiliation, and the need for power. The need for achievement is deriving pleasure from overcoming obstacles, the need for affiliation intimacy is deriving pleasure from socializing and sharing with people and the need for power is deriving pleasure from gaining strength or prestige, particularly by affecting another's well-being. These needs are not stable but tend to fluctuate in intensity, ranging from a slumbering satisfaction to an absolute craving. The school management under HR bundle on performance management is hypothesised to be driven by the need for exemplary performance in national examinations. Therefore, incorporation of efficient communication systems, participative approach in decision making, accountability and performance evaluation are means and ways that can lead to improved performance in the national examinations.

Our behaviours are ruled partly by need intensity. At any time, the need that is the most intense is the one we attempt to satisfy or to reduce through our thoughts and behaviour. Thus, our actions represent our needs. Of most importance, need intensity can be influenced by external cues, described as press. Press occurs when we encounter situations that we expect have a good chance of soon satisfying a need, and, consequently, the salience and intensity of that need become acute. Press has strong commonalities with many modern and well-established psychological constructs. In a comprehensive review, Tellegen (1991) connects press to several other theories (for example, stimulus-response) and theorists (Akerlof, 1991). In this context, external cues include school resource base, staff attitude and commitment, proper performance management structures and syllabus coverage which can satisfy the need for excellent academic performance. Need Theory can be further integrated through the works of McClelland (1985). McClelland reviews the theories of Atkinson (1964), who provides a classic formulation of expectancy theory, as well as Hull (1943), who provides some of the most influential formulations of behaviour theory by far (Schwartz, 1989). Of note, behaviourism is the basis of the original matching law of Chung and Herrnstein (1967). Core aspects of Atkinson's and Hull's theories are virtually identical, both ultimately using expectancy by value frameworks that differ fundamentally only in nomenclature. For example, in place of utility, Hull indicates excitatory potential (sEr), while Atkinson uses tendency to achieve success (Ts). In place of expectancy, Hull refers to habit strength (sHr), while Atkinson uses probability of success (Ps). Finally, in place of value; Hull refers to a combination of drive (D) and incentive (K), while Atkinson uses motive strength (Ms) and incentive value (INs). In McClelland's terms, Ms for success is equivalent to need for achievement. In addition, Atkinson proposes that the utility of any achievement-

oriented situation is determined by two individual-difference factors: the need for achievement and the need to avoid failure. The effect each need has on overall utility is calculated separately, as with losses and gains in Cumulative Prospect Theory (CPT), with the resulting value indicating the tendency to pursue achievement. Therefore, in the study the HR bundles on motivation, performance management and work environment are viewed to be the driving force whose impact is expected to improve academic performance in public secondary schools in Bungoma County.

2.9 Performance Management Theory

Performance management has been defined as management's systematic application of processes aimed at optimizing performance in an organization (Warren, 1982). It is a process for establishing a shared understanding about what is to be achieved, and how it is to be achieved, and an approach to managing people that increases the probability of achieving success. For the purpose of this study, three theories that explore the application of performance management were used, namely, Goal-Setting Theory, Control Theory and Social Cognitive Theory.

The first empirical studies on Goal-Setting Theory were performed by Cecil Alec Mace in 1935. In particular, Buchner (2007) argues that goal setting theory is relevant to PM systems because goals are essential to most PM systems. According to the theory, goals affect performance through four mechanisms (that is, goal difficulty and specificity, direction and attention, effort and persistence, and strategy development) (Locke & Latham, 2002). Goal-Setting Theory is found to be exceptionally reliable, valid, and useful across diverse work

situations (Locke, Karyll, Lise and Latham, 1981). It makes a solid case for the use of difficult and specific goals to create the strong situations necessary for substantial achievement (Locke and Latham, 2002). They pointed out that performer's participation heightens the importance of the goal, thereby strengthening goal commitment. Goal setting involves establishing specific, measurable, achievable, realistic and time-targeted (SMART) goals. Work on the Theory of Goal-Setting suggests that an effective tool for making progress is to ensure that participants in a group with a common goal are clearly aware of what is expected from them. On a personal level, setting goals helps people work towards their own objectives. Goal setting features as a major component of personal development literature.

Goal-Setting Theory is considered an "open" theory, so as new discoveries are made it is modified. Studies have shown that specific and ambitious goals lead to a higher level of performance than easy or general goals. As long as the individual accepts the goal, has the ability to attain it, and does not have conflicting goals, there is a positive linear relationship between goal difficulty and task performance (Locke and Latham, 2006). Similarly, in this study public schools have goals to achieve and therefore setting SMART goals would enable these institutions to achieve high academic performance.

Control Theory, as developed by Walter Reckless in 1973, states that behaviour is caused not by outside stimuli, but by what a person wants most at any given time. Control Theory is described as an ongoing comparative process aimed at reducing the discrepancy between standards for behavior and the observed effects of actual behavior (Carver & Scheier, 1981,

1998). According to this theory, behavior is shaped through feedback, and this theory provides a foundation for assessing feedback elements of PM systems (Buchner, 2007). However, feedback in the workplace is generally insufficient (Fletcher, 2001), and employees often have to wait for performance feedback from supervisors during the traditional year-end formal appraisal, which by then is too late to provide proper feedback (Buchner, 2007). Control Theory provides a solid foundation for critically assessing the feedback elements of performance management approaches. Most performance management does not emphasize feedback (Coen and Jenkins, 2000). Performers taking charge of their own feedback loops helps them obtain the timely feedback they need to make the negative discrepancy adjustments indicated by this theory.

Social Cognitive Theory as advanced by Bandura (1977) provides a framework for understanding, predicting, and changing human behaviour. The theory identifies human behaviour as an interaction of personal factors, behaviour, and the environment (Bandura 1986). The interaction between the person and behaviour involves the influences of a person's thoughts and actions. The interaction between the person and the environment involves human beliefs and cognitive competencies that are developed and modified by social influences and structures within the environment. The third interaction, between the environment and behaviour, involves a person's behaviour determining the aspects of their environment and in turn their behaviour is modified by that environment.

According to Jones (1989) "the fact that behaviour varies from situation to situation may not necessarily mean that behaviour is controlled by situations but rather that the person is

construing the situations differently and thus the same set of stimuli may provoke different responses from different people or from the same person at different times." People who see themselves as highly capable of performers tend to embrace difficult goals with above average (Bandura, 1994). Specifically, strong self-efficacy translates to higher level of goal challenge, effort expended in pursuit of established goals, perseverance and resilience. Social Cognitive Theory provides explanations in support of performance management. This means that if performance management was clearly set out, then human behaviour will be influenced positively resulting in enhanced academic performance.

2.10 Systems Theory

This study was guided by the Systems Theory of organizations developed by Ludwig Von Bertalanffy in the early 1950s (von Bertalanffy, 1974). This theory was adopted to explain how the work environment variables like staffing levels, employee welfare, instructional and physical facilities and housing affect academic performance of public schools in Bungoma County. Systems Theory emerged as part of the intellectual ferment following World War II. It is an alternative to the Classical and Neo-Classical Organizations Theories which put emphasis on schools as fragmented and closed social units independent of external forces (Dostal, 2005). The only meaningful way to study an organization like a school is to regard it as a system. Schools should be managed more like systems where educational programmes are innovated and re-innovated to realize the importance each part makes to the whole, and the necessity to eliminate the parts that make negative contributions. With the development of the various educational disciplines and department, considerable overlap is inevitable among the different fields. The interactions within and around the schools are better studied

as wholes rather than parts (Dostal). Systems Theory postulates that schools are like other systems which of necessity engage in various modes of exchanges with the environment (Rudolf, 2011). This theory emphasizes the consideration of the relationships between the school and its environment as well as what goes on within the school. The Systems Theory is mainly concerned with the problems of relationships, of structures and of interdependence, rather than with the constant attributes of objects (Katz & Kahn, 1967).

As adapted in this study, the Systems Theory holds that the interactions of staffing levels, employee welfare, instructional and physical facilities and housing on the academic performance of public schools in Bungoma County. For instance, if one element is altered for example, inadequate physical and instructional materials, the casual link between it and academic performance of public schools are potentially affected. This modification places stress on the entire system, negatively affecting academic performance. In this study, the inputs were staffing levels, employee welfare, instructional and physical facilities and housing while the output was the academic performance. A school is an open system which benefits from the environment's perspectives and expertise. Therefore, for schools as systems to survive they must draw resources from the environment because separating a living organism from its surroundings will die shortly because of lack of oxygen, water and food.

2.11 Conceptual Framework

Figure 2.1 shows how independent variables (motivation, performance management and work environment) affect school performance variables like KCSE and KCPE results and how this relationship was moderated by school factors like school size, resource base, staff

turnover and syllabus coverage. The arrows show the interrelationships between the key variables of the study. For example, it was hypothesised that motivation, performance management and work environment had a direct and positive impact on the school academic performance variables like KCSE and KCPE results with an assumption that moderating variables had no effect on the school performance. The performance of the school can be affected by the three HR bundles: motivation, performance management and work environment, but school factors as moderating variables such as school size, resource base, staff turnover and syllabus coverage can have profound effect on these three HR bundles. For example, the impact of motivation, performance management and work environment can be affected by the school size, staff turnover, resource base and syllabus coverage, which ultimately affect the school performance. Therefore, for the relationship of motivation, performance management and work environment on the academic performance to hold, then it was assumed that school factors had no influence on this relationship.

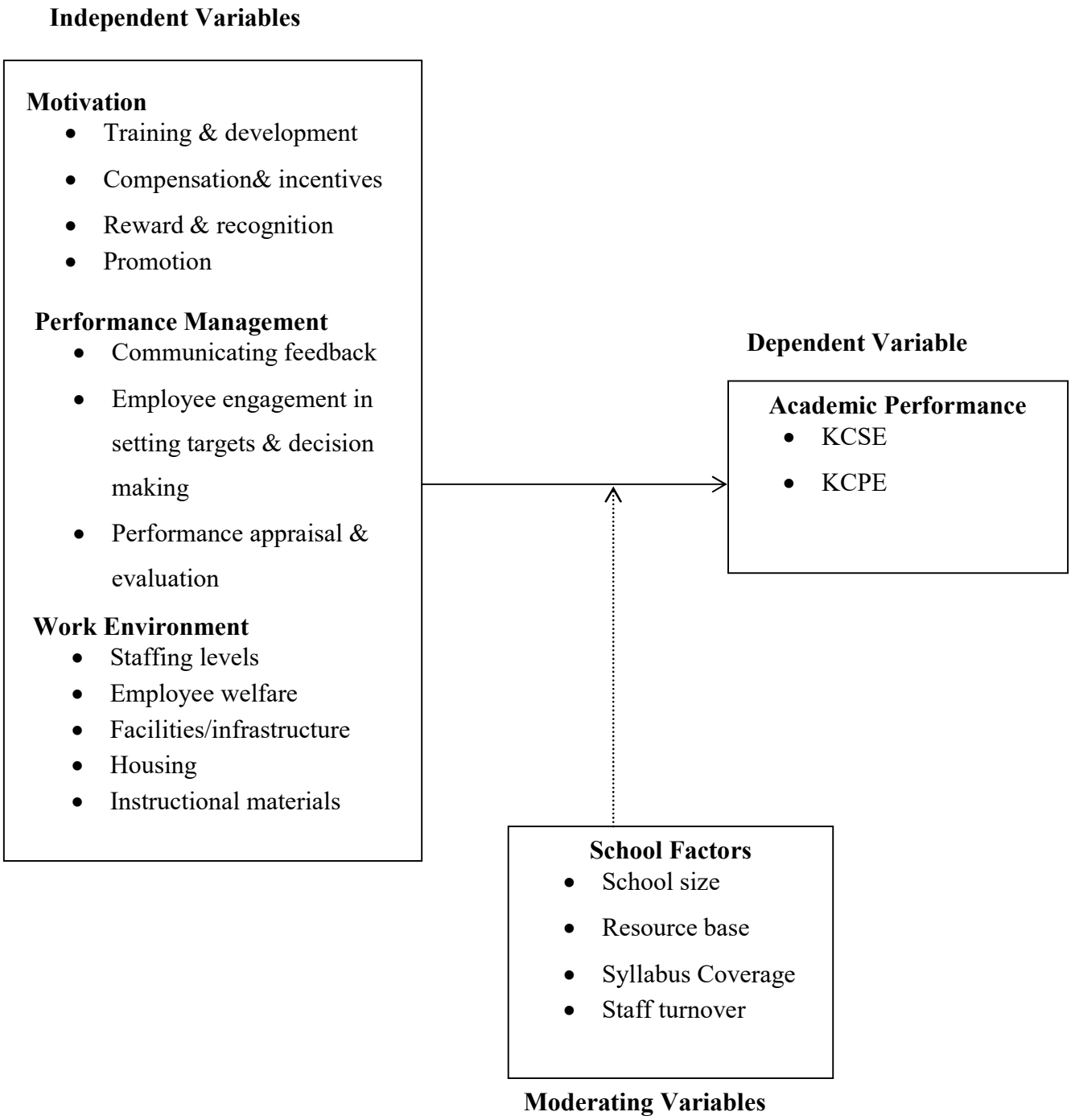

Figure 2.1: Conceptual Framework Showing Interactions of HR Practices on Performance of Public Schools.

Source: Researcher's own Conceptualization (2013)

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter will discuss study area, research design, target population, sampling procedure sample size, methods of data collections, validity and reliability of the research instruments and ethical considerations.

3.2 Study Area

Bungoma County is one of the four Counties that constituted the former Western province (see Figure 3.2). Bungoma County borders Republic of Uganda to the north-west, Trans Nzoia to the east, Busia County to the west and south-west and Kakamega to the south. The County has nine administrative districts including Mt. Elgon District. Mount Elgon is an extinct shield volcano on the border of Uganda and Kenya, north of Kisumu and west of Kitale. The mountain's highest point, named "Wagagai", is located entirely within the country of Uganda. At 4,321 metres (14,177 feet), Elgon is the 17th highest mountain of Africa. Mount Elgon and its tributaries is home to four tribes, the Bagisu, the Sabiny the (Shana) and the Ogiek, better known in the region under the derogatory umbrella term Ndorobo. The Bagisu, Sabiny and Shana are subsistence farmers and conduct circumcision ceremonies every other year to initiate young men (and in the Sabiny's case, girls) into adulthood. Traditionally, the Bagisu, also known as the Bamasaba, consider Mount Elgon to be the embodiment of their founding father Masaba, and sometimes call the mountain by this name. Local people have long depended on forest produce and have made agreements with the park to continue to harvest resources such as bamboo poles and bamboo shoots (a local delicacy). The Ogiek used to be hunters and honey gatherers, but have become more

sedentary in recent decades, and have partially been moved downward by the government.

Bungoma lies between latitude 0 degrees 253 North and 35 degrees to the East. It covers an area of 3,593 square Kilometers with a population of about 1.6 million people and population density of (people per km²) of 454, being ranked third in Kenya (Kenya National Bureau of Statistics: KNBS, 2009). The County's poverty rate, based on Kenya Integrated Household Baseline Survey (KIHBS, 2005/06) is 52.9%. The main economic activity is agriculture. The District is endowed with factories for instance Pan African Paper Mills at Webuye, Nzoia Sugar Factory, British American Tobacco at Malakisi and Mastermind. More than 50 per cent of the labour force in the district is engaged in agriculture and livestock activities, which is dominated by small scale farming. The County has good land and soil suitable for maize and sugarcane farming. The County had nine districts currently at the time of carrying out the study (see Figures 3.1 and Appendix 11).

The Bungoma County has experienced poor performance at both KCPE and KCSE for the period 2002-2012 in comparison to other three Counties in the former Western Province, namely Kakamega, Vihiga and Busia (see Appendix 9). This could be attributed to poor infrastructure, that is fewer schools, toilets, poor drainage system, lack of adequate water, fewer medical facilities; strong culture of circumcision during months of August and December which encourages early marriage. It has been observed that during these months that many schools register high dropouts, that is, many girls become pregnant and get marriage. For example, Mt. Elgon district has consistently registered very poor performance in both KCPE and KCSE examinations because of in intransigent culture that does not see

any importance attached to education. This could indicate why the district has low pupil/student enrolment and high dropouts (MOE, 2010). It is against this background that this study was embedded on.

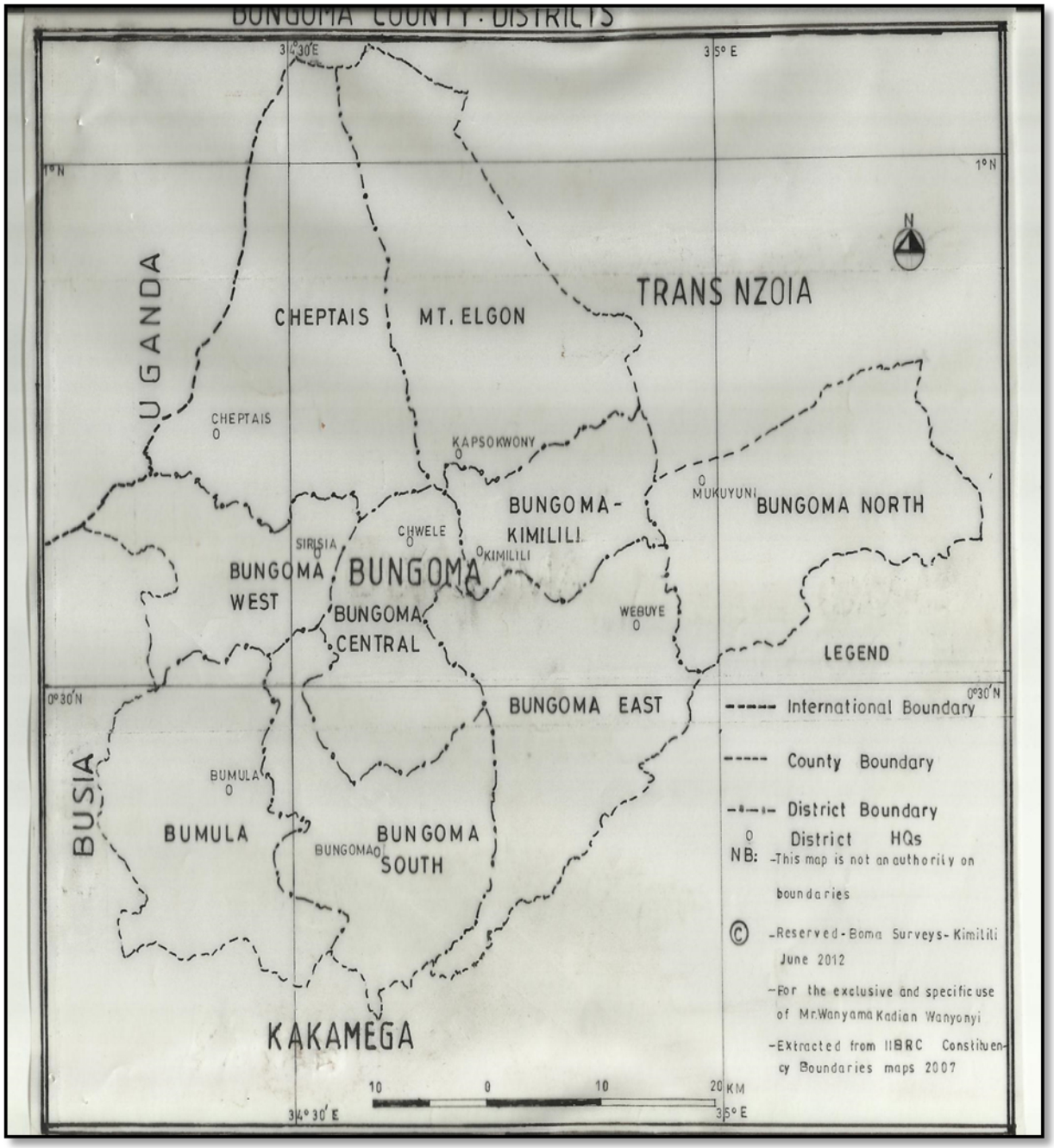

Figure 3.1: A Map of Bungoma County Showing Nine Administration Districts

Figure 3.2: A Map of the former Western Province showing its Four Counties

3.3 Research Design

The study adopted descriptive and correlational survey designs. These designs were used to determine if two or more variables were associated with each other. Descriptive design is used to describe the present behaviour or characteristics of a particular population. Descriptive research permits the explanation of phenomena as they naturally transpire and without intervention from the researcher (Kombo & Tromp, 2006). In effect, HR practices being experienced by public schools in Bungoma County were described as they naturally occurred. To enable such a description of HR practices, frequency and percentage distributions, along with means and standard deviations were used (Teddie and Tashakkori, 2008). In addition to being descriptive, the study was also said to be correlational in design because there was intent to establish the relationship between the effects of HR practices and academic performance of schools in Bungoma County. Correlational research design aims to ascertain if there are significant associations between two variables (Reid, 1987). Gay (1981) defines descriptive research as a process of collecting data in order to test hypotheses or to answer questions concerning the current status of the subjects in the study.

3.4 Target Population

The term population refers to the entire group of individuals, objects or things that share common attributes or characteristics and may or may not be found within the same geographical location while target population is the total population that the researcher specifies in his or her research, Mugenda (2002). Bungoma County has nine administrative districts, each with a District Education Officer (DEO), a total of 777 primary schools with a teaching force of 7,582 with 254 secondary schools having 2,302 teachers and support staff

consisting of 254 school bursars, 254 cateresses and 254 foremen from public secondary schools (see Appendices 8 and 9). Therefore, the target population consisted of 1,031 schools and 9,884 teachers and 762 support staff (Staffing Statistics in Bungoma County, 2012). Infallible information was also obtained from Kenya National Examination Council (KNEC) offices from the headquarters of former Western Province located in Kakamega Central District, Kenya National Union of Teachers (KNUT), Kenya Union of Post Primary Education Teachers (KUPPET) and Teachers Service Commission (TSC).

3.5 Sampling Procedure and Sample Size

Multi-stage sampling was used to group schools, teachers and head teachers, and then involved selecting a sample within each chosen cluster. Multi-stage sampling involves selecting a sample in at least two stages. In the first stage, large groups or clusters are selected. These clusters are designed to contain more population units than are required for the final sample. In the second stage, population units are chosen from selected clusters to derive a final sample. The advantages of multi-stage sampling are convenience, economy and efficiency. The main disadvantage of multi-stage sampling is the same as for cluster sampling: lower accuracy due to higher sampling error. Multi-stage sampling was chosen because its advantages superseded its disadvantages (Rahmantya, 2009). The sample size of each stratum in stratified random technique was proportionate to the population size of the stratum when viewed against the entire population. This means that each stratum (primary or secondary) has the same sampling fraction (Castillo, 2009). The simple random sampling or probability sampling was used so that each and every one in the target population had an equal chance of inclusion. The sample size of schools in each stratum and the number of

respondents were obtained using coefficient of variation. Nassiuma (2000) asserts that in most surveys or experiments, a coefficient of variation in the range of 21% to 30% and a standard error in the range 2% to 5% is usually acceptable. The Nassiuma's formula does not assume any probability distribution and is a stable measure of variability. Therefore, a coefficient variation of 21% and a standard error of 2% were used in this study. The lower limit for coefficient of variation and standard error were selected so as to ensure low variability in the sample and minimize the degree or error.

$$S = \frac{N(Cv)^2}{(Cv)^2 + (N-1)e^2}$$

where S = the sample size

N = the population size

Cv = the Coefficient of Variation

e = standard error

Therefore, the sample size of schools was:

S (primary-777 and secondary-254) = $\frac{1{,}031\ (0.21^2)}{0.21^2 + (1031\text{-}1)\ 0.02^2}$ = 99.6867 = 100 schools

S (teachers-) = $\frac{9{,}884\ (0.30^2)}{0.30^2 + (9{,}884\text{-}1)\ 0.02^2}$ = 220.0139 = adjusted to 230 teachers
Cv = 30%

Proportionate sampling was used to select 75 primary and 25 secondary schools. The 230 teachers were proportionately allocated to 75 primary (176 teachers) and 25 secondary schools (54 teachers) in the nine districts as shown in Table 3.1. The simple random sampling was used to select 75 primary head teachers from a sample of 176 teachers and 25 secondary school head teachers from a sample of 54 teachers. A sample of 75 support staff was used comprising of a bursar, a cateress and a foreman from each of the 25 sampled

secondary schools through purposive sampling technique. District Education Officer (DEO) and District Quality Assurance and Standards Officer (DQASO) were also used in the study.

Table 3.1: Sampling Frame

	Schools				Teachers				Sampling methods
District	Primary Population	Sample Size	Secondary Population	Sample Size	Primary Population	Sample Size	Secondary Population	Sample Size	
1	103	10	48	05	898	21	438	10	Multistage random
2	53	05	12	01	566	13	111	03	
3	92	09	32	03	1372	32	331	08	Stratified random
4	86	08	25	02	752	18	218	05	
5	120	12	48	05	1163	27	414	10	Proportionate
6	59	06	22	02	591	14	235	05	
7	82	07	22	02	660	15	152	03	Simple random
8	101	10	30	03	906	21	193	05	
9	81	08	15	02	674	15	210	05	
Total	**777**	**75**	**254**	**25**	**7,582**	**176**	**2,302**	**54**	

The sampled schools and teachers were selected through simple random sampling which is a probability sampling procedure that gives every element in the target population, and each possible sample of a given size, an equal chance of being selected. As such, it is an equal probability selection method (Levy and Lemeshow, 2008).

3.6 Instruments for Data Collection

The study used both primary and secondary data.

3.6.1 Primary Data

Primary data was obtained from two questionnaires (Appendix 4), key informant interview

schedules and observation checklists. The questionnaire is a convenient tool especially where there are large numbers of respondents to be handled because it facilitates easy and quick derivation of information within a short time (Kerlinger, 2004). The researcher used the questionnaires because the population was literate and large and time for collecting data was limited. The structured (closed-ended) and unstructured (open-ended) was used so as to get the responses from respondents. The closed-ended questions provide a greater uniformity and more easily processed (China and Oteng'i, 2007). The structured questionnaires were accompanied by a list of all possible alternatives from which respondents selected the suitable answer that described their situation by simply ticking (Mugenda and Mugenda, 2003). The questionnaires were administered by the researcher or research assistants to avoid misinterpretation of questions by 'drop and pick' technique.

Interview schedules are a written list of questions or topics that need to be covered by the interview. Interview guides are flexible because they consist of both open and closed-ended questions. By use of both the open and closed approach, the researcher gets complete and detailed understanding of the issue under research (Kombo and Tromp, 2006). Interview schedules basically consist of asking questions, listening to individuals and recording their responses. At times, one may find it more profitable to ask a few individuals questions instead of carrying out a large-scale questionnaire based survey. The interview can be done very informally, for example as conversations with people who meet in the fields, banking halls or block offices. In these settings, one question leads to the next based on the responses given to the previous one (see Appendices 6 and 7).

The interview schedules targeting the teachers and head teachers contained straightforward questions on effects of HR practices and their impacts on performance of public schools in Bungoma County. The interview schedules were administered in person by the researcher to get first-hand information on the key concepts of the study. Interview schedules gave in-depth information or insightful information on the subject of the study. Observation checklist was also used to obtain first-hand information on academic records, performance, instructional and physical resources and on respondents (see Appendix 9).

3.6.2 Secondary Data

Secondary data was obtained through study of available literature from relevant government agencies and other stakeholders (KNUT, TSC and KUPPET). Relevant documents from the Ministry of Education; that was, examination of KNEC annual reports, bulletins and sectoral surveys were used. The researcher used both primary and secondary data because the two complement each other. According to Lancaster (2002), if secondary data do not provide sufficient information to satisfy research objections, primary data must then be collected. Therefore primary data is necessary when a researcher cannot find the data needed in secondary sources.

3.7 Validity and Reliability of Instruments (Piloting)

This sub-section covered validity and reliability of the research instruments.

3.7.1 Validity of Instruments

Validity refers to the degree of accuracy and meaningfulness of inference based on research

results. Content validity refers to the degree to which the content of the items reflects the content domain of interest (Miller, 2003). "Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests (AERA/APA/NCME, 2000). Best and Khan (2005) suggest that the validity of the instrument is asking the right questions framed in the least ambiguous way and based on study objectives. Validity of the research instruments was based on the three overarching forms of validity: content, face and construct validity. Content validity (also known as logical validity) refers to the extent to which a measure represents all facets of a given social construct (Wilson, Pan and Schumsky, 2012). Face validity is the extent to which a test is subjectively viewed as covering the concept it purports to measure. It refers to the transparency or relevance of a test as they appear to test participants (Holden, 2010 and Gravetter, Forzano, Lori-Ann, 2012). Construct validity refers to the validity of inferences that observations or measurement tools actually represent or measure the construct being investigated (Polit and Beck, 2012). This was done by presenting the instrument to the supervisor to evaluate the applicability and appropriateness of the content, clarity and adequacy of construction of the instrument and suggestions made and modified appropriately. This measures the degree to which data collected using a particular instrument represents a specific domain of indicators or content of a particular concept (Mugenda and Mugenda, 2003). The indicators of variables were clearly defined and scrutinized and instruments developed to match them.

3.7.2 Reliability of Research Instruments

Mugenda and Mugenda (2003) define reliability as the degree to which research instruments yield consistent data or results after repeated trials. The researcher used test and retest

technique in order to test reliability of the research instruments. Research instruments were retested on a sample of 10 respondents: 5 teachers from public primary school and 5 teachers from public secondary schools in Bungoma County who were not used in the final analysis. In this case 10 respondents were retested a second time two weeks later and their consistency between the two sets of the score were computed using Cronbach's alpha method. The reliability analysis is used to test consistency of respondents' answers to all the items of independent and dependent variables in the questionnaire, whether the items are highly correlated with one another or not (Hamidun, 2009). Reliability of the research instruments was enhanced through training of the research assistants on the use of the research instruments. Analysis revealed that motivation scale was reliable by 90%, school performance in KCSE and KCPE by 91%, performance management by 88%, work environment by 92% (see Table 3.2). Cronbach's alpha measures the average of measurable items and its correlation, and if the result is generally above 0.5 (or 50%), it is considered to be reliable (Peighambari, 2007). The reliability coefficients (Alpha) of HR practices (motivation, performance management and work environment) and their impact on school performance variables yielded a value of $\alpha = 0.90$, an indication that the research instruments were adequate in content, reliable and valid to measure the opinions of the respondents. According to Cronbach (1946), reliability coefficient of above 0.80 is considered good indicator of internal consistency reliability that was used in this study. Cronbach's alpha can be written as a function of the number of test items and the average inter-correlation among the items. The formula for the standardized Cronbach's alpha is:

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}} \qquad \text{.....1}$$

Where N is equal to the number of items, c-bar is the average inter-item covariance among the items and v-bar equals the average variance. It can be seen from this formula that if the number of items is increased, Cronbach's alpha increases. Additionally, if the average inter-item correlation is low, alpha will be low. As the average inter-item correlation increases, Cronbach's alpha increases as well (holding the number of items constant).

Table 3.2: Reliability Coefficients of the Research Variables

Variables	Number of Items	Reliability, α
School performance in KCSE and KCPE	2	0.91
Motivation	15	0.90
Performance management	5	0.88
Work environment	7	0.92
Average, α	**29**	**0.9025**

Source: Researchers' Computation, 2013

3.8 Ethical Considerations

When granted the research permit from the National Council for Science and Technology (NCST), the researcher liaised with the District Education Officers and human resource departments in Bungoma County with an intention of collecting data (Appendices 1 and 2). This required clearance from school administration as well as District Education Officers for the researcher to administer data collection instruments and collect the data. Confidentiality was observed throughout the study for respondents who gave personal opinions. Data collection is a sensitive issue as it borders on invading people's private lives, ethical

consideration are therefore, of paramount importance in research (Mugenda and Mugenda (2003). The researcher ensured that the respondents were made aware of the intended use of the data and that the information obtained was confidential and was not be disclosed or discussed with any unauthorized persons. Effort was made to ensure that the respondents were protected from any psychological harm during data collection. Punctuality was observed to avoid any inconveniences to the respondents.

3.9 Data Collection Procedures

Before embarking on data collection, permission was sought from the School of Graduate Studies of Kabarak University and the District Education Officers (DEO) from the nine districts in Bungoma County. Research authorization and research permit was obtained from National Commission for Science, Technology and Innovation (NACOSTI). The researcher then booked an appointment with the school head teachers of the sampled schools to visit and administer the questionnaires. The researcher then visited each of the sampled schools and personally administered the questionnaires by 'drop and pick' technique. The respondents were guided on how to respond and were assured of confidentiality after which they were given the questionnaires to fill within three days. The researcher also booked an appointment with the DQASO and DEO to carry out the interview.

3.10 Data Analysis Techniques

Objective number one was analyzed using descriptive statistics like frequencies, percentages and means and presented in cross tabulation and frequency tables. Inferential statistics like one-way Analysis of Variance (ANOVA) and regression were to analyse objectives two, three and four to ascertain whether HR practices had an impact on the performance of public

schools in Bungoma County. A significant F value indicates that there are differences in the means, but it does not tell you where those differences are in the group. Therefore, to isolate where the differences are, the use of the multiple/Post Hoc group comparisons in ANOVA was used including Least Significant Difference (LSD), Bonferroni, Sidak and Scheffe. A post-hoc test is needed after we complete an ANOVA in order to determine which groups differ from each other. Then difference score to a critical value is computed to see if the difference is significant. The critical value in this case is the honestly significant difference (HSD) and it must be computed. It is the point when a mean difference becomes honestly significantly different. Regression was also used to predict value from another measured variable (Scheaffer, Mendenhall, and Ott, 2006). Chi Square was used to show the association between the variables under the study. The Chi square test was used to show variation and also association between the respondents. The inferential statistical tools were used to test null hypotheses at confidence interval level of 95% ($p<5\%$ or $p>5\%$). Analysed data was presented in form of frequency tables, pie charts and bar graphs. Table 2 shows a summary of data analysis consisting of study objectives, independent and dependent variables and statistical tools used. The correlation coefficient computed between variables was interpreted by comparing its magnitude with its probable error.

Spearman rank order correlation coefficient (usually referred to as Spearman rho or Spearman, r_s) is used to compute a measure of association between two variables when the variables are of ordinal levels of measurement. r_s can vary between -1 and 1 and where r_s is close to -1 - negative correlation, r_s close to 0 - no linear correlation and close to 1 - positive

correlation. The probable error of the coefficient of the correlation was obtained using a formula: $PE_r = 0.6745(\frac{1-r^2}{\sqrt{N}})$ ……3

PEr = Probable Error of the coefficient of correlation

r_s = Coefficient of correlation

N = the number of pairs or observations used in derivations of r_s.

Table 3.3: Summary of Data Analysis

Research Objectives	Independent Variables	Dependent Variables	Data Collection Instruments	Method of Analysis
To establish the HR practices in public schools in Bungoma County in relation to academic performance	HR practices		Questionnaires, Interview schedules & Observation checklists	Descriptive statistics
To determine the impact of motivation on academic performance of public schools in Bungoma County	Motivation	Academic performance of public schools	Questionnaires, Interview schedules & Observation checklists	Descriptive statistics, regression & ANOVA analysis
To examine the impact of performance management on performance of public schools in Bungoma County	Performance management	Academic performance of public schools	Questionnaires, Interview schedules & Observation checklists	Descriptive statistics regression & ANOVA analysis
To establish the impact of the work environment on academic performance of public schools in Bungoma County	Work environment	Academic performance of public schools	Questionnaires, Interview schedules & Observation checklists	Descriptive statistics regression & ANOVA analysis
To assess the overall impact and extent of HR practices on the academic performance in Bungoma County and develop a framework for mitigation	HR practices	Academic performance of public schools	Questionnaires, Interview schedules & Observation checklists	Descriptive statistics regression & ANOVA analysis

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the results and discussions of the data analysis of human resource practices and their impact on performance of public schools in Bungoma County, Kenya. The purpose of this study was to establish how HR practices affect the academic performance of public schools in Bungoma County, Kenya. Data analysis was carried out based on the following research objectives: to establish the HR practices in public schools in Bungoma County in relation to academic performance; to determine the impact of motivation on academic performance of public schools in Bungoma County; to examine the impact of performance management on academic performance of public schools in Bungoma County and to establish the impact of work environment on academic performance of public schools in Bungoma County and to assess the overall impact and extent of HR practices on the academic performance in Bungoma County and develop a framework for mitigation. A 97.8% questionnaire return rate was achieved since 230 questionnaires administered to 100 public primary and public secondary schools in nine districts in Bungoma County, 225 questionnaires were returned. A total of 225 respondents comprised of 125 teachers and 100 head teachers meeting a minimum threshold of 220 respondents were used.

4.2 Socio-Demographic Characteristics of the Respondents

The aim of this section is to describe the characteristics of the sample of the respondents, which is likely to have a bearing on their response to the research items. These characteristics

have been broken down into five main groups: age, gender, working experience and education levels of respondents.

4.2.1 Age of Respondents

The study sought to find out the age brackets of the respondents by asking them to indicate their age ranges. This was to help determine the age distribution for the respondents. Their responses are shown in Figure 4.1. Results in Figure 4.1 show that most teachers were in the age brackets of 40-49 years (48%), 30-39 years (40.8%), 20-29 years (4.8%) and those above 50 years and above constituted 6.4% of the sample. From the results, it implies that majority of the respondents (88.8%) were in the age bracket of 30-49 years. There was a highly significant ($P<0.01$) difference in the variation among age groups since the expected uniform distribution across age groups was not represented by 25% in each age group.

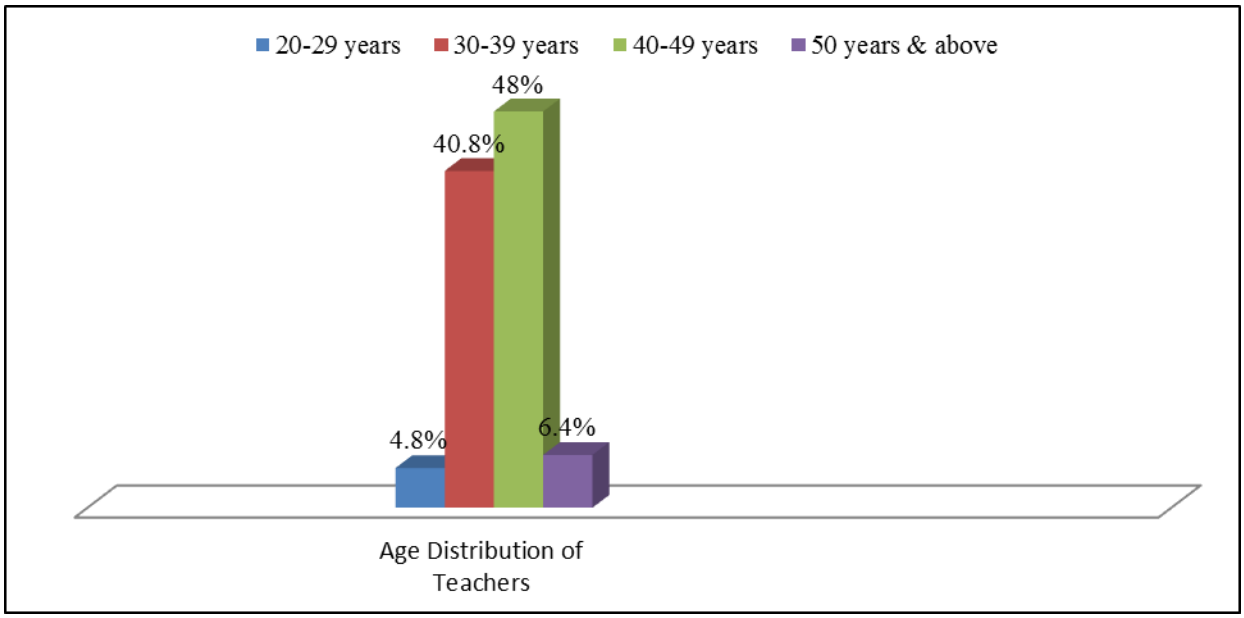

Figure 4.1: Age Distribution of Teachers in Bungoma County, Kenya
Source: Field Data, n = 225

Table 4.1, shows that the majority of head teachers were also in the 40-49 years (80%) age bracket. Those in the age bracket of 30-39 years constituted 8% while those with 50 years and above constituted 12%.

The age structure of the respondents shows a great diversity. Greater diversity in age creates challenges but also gives some important advantages and presents new opportunities such as contributing to creating organization culture, more tolerance to different behavioural styles and varied views. Another potential payoff is a greater opportunity for the organizations to develop the younger workers particularly in the age bracket of 30–40 years to take over from the older (above 50 years) when the latter retire (K'Obonyo, Kiraka and Dimba, 2008). This also means that the majority of the teachers and head teachers were mature people who understood how human resource practices like motivation, performance management and working conditions impact on performance of public schools in Bungoma County. Information from observation checklists indicated that there were more young teachers within the age brackets of 30-40 years than older teachers in the age bracket of 50 years and above.

Table 4.1: Age Distribution of Head teachers in Bungoma County

Age distribution in years	**Frequency**	**Percentage**
30-39 years	8	8.0
40-49 years	80	80.0
50 years and above	12	12.0
Total	**100**	**100.0**

Source: Field Data, n = 225

4.2.2 Gender of Respondents

The study sought to find out the gender distribution among the respondents in public learning institutions in Bungoma County. The respondents were asked to indicate their gender and the results were recorded in Figure 4.2. The results illustrated that there was a highly significant ($p<0.000$) variation in the gender distribution among the respondents since the expected 50% was attained because there were more males than females who participated in the study.

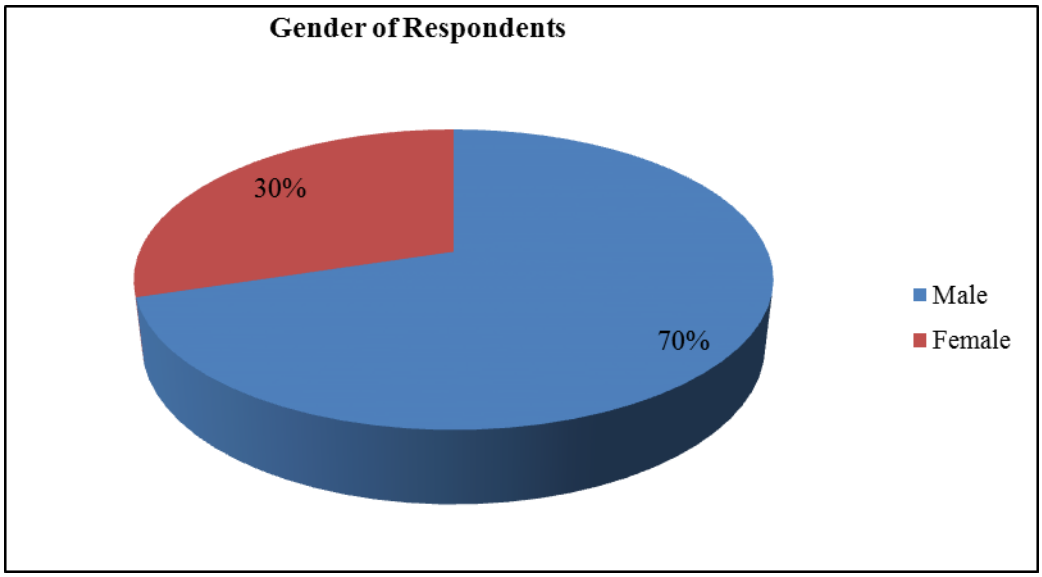

Figure 4.2: Gender of Respondents in Bungoma County
Source: Field Data, n = 225

Figure 4.2 shows that out of the 225 respondents, the male respondents had the highest representation of about 70% while the female respondents had 30%. This was because the male respondents were more cooperative then their female counterparts during data collection exercise. The findings from observation checklist and secondary data showed that there were more male teachers than female teachers in the public schools in Bungoma County.

4.2.3 Working Experience

The study sought to find out the experience of the respondents this was aimed at determining the number of working years and in turn know how much experience they had been exposed to concerning academic performance in Bungoma County in the national examinations. The results are shown in Figure 4.3. Similarly, there was a highly significant ($p<0.05$) variation in the working experience of the respondents in public schools in Bungoma County, because the expected 25% in the working experience of the respondents was not realised. The results pointed out that 96 (42.7%) of the respondents had been working in the teaching profession for less than 5 years, 88 (39.1%) had been working for a period of 5-10 years, 30 (13.3%) for a period of 11-16 years and 11(4.9%) had working for more than 20 years. This translates to the fact that the respondents are well grounded in the organization and can give accurate information on the academic performance and how human resource practices have influenced academic performance in the County. The results obtained from the observation checklist and interview guide indicated that some teachers had taught for more than 20 years in the same schools. The results seemed to indicate that experience, knowledge, competencies and skills increase better with increase in years of performing the job.

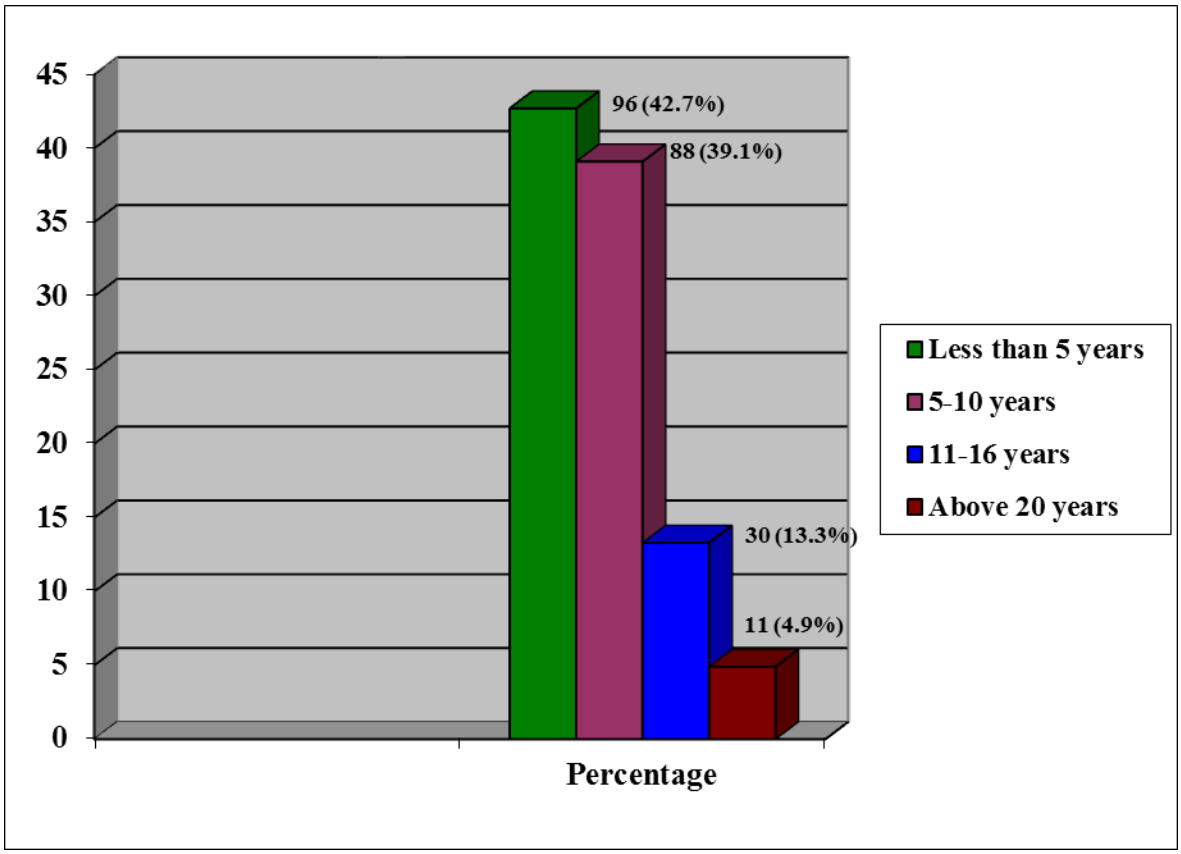

Figure 4.3: Working Experience of Respondents in Bungoma County
Source: Field Data, n = 225

4.2.4 Educational Level

The study sought to find out formal educational levels of respondents in Bungoma County. To help understand this, respondents were asked to state their formal educational level. The results are recorded in Table 4.4. A Chi Square test of independence conducted between academic performance in the national examinations and educational levels of respondents revealed a highly significant ($p<0.05$) relationship between academic performance and educational levels, an indication of a positive association between academic performance and educational level. The results given in Figure 4.4 show that 66.2% of respondents had at least a bachelor's degree, 12.4% had diploma education level and 21.4% had had masters' degrees. This indicated that the majority of the respondents in Bungoma County had attained

minimum academic and professional qualifications for the teaching profession. This therefore, provides a solid base for better understanding of the relationship between academic performance and human resource practices in Bungoma County. It can also be inferred that those holding masters' degrees with relevant work experience stand a better of articulating issues concerning HR practices and academic performance. Since the respondents had different formal educational levels, they gave different views on the research topic.

Empirical evidence from studies conducted by social scientists makes it clear that there is significant scope for education to play a role in influencing the economic and social situations of people (Krueger and Lindahl, 2001). In cross-country comparisons of education and economic growth, formal schooling plays an important role in enhancing economic growth (Krueger and Lindahl). Education has been shown to significantly raise labour market earnings and employment probabilities (Card, 1999) and to significantly impact upon health (Currie, 2001), crime (Lochner and Moretti, 2004) and a range of other social capital outcomes (Hammond and Feinstein, 2004). Findings from the interview schedules revealed that people who have a university degree used the knowledge for problem solving and group coordination. Hence in this study, members with high levels of education were likely to seek for private security with the confidence.

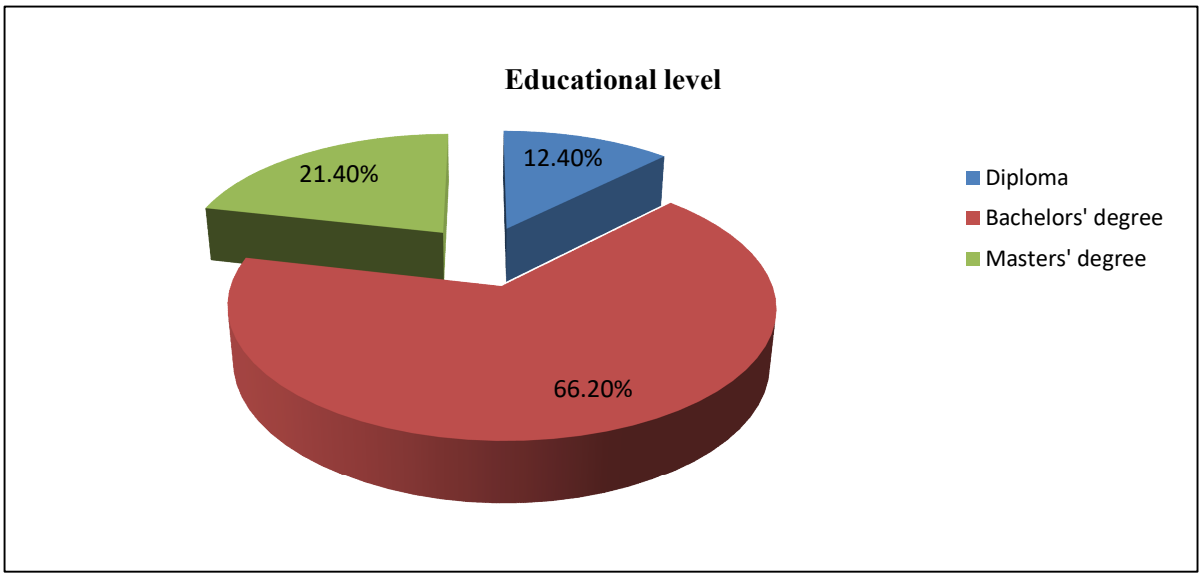

Figure 4.4: Educational level of Respondents in Bungoma County
Source: Field Data, n = 225

From the results in Table 4.2, the respondents gave varied views on why teachers left the teaching profession. The results show that 58.7% of the respondents left schools in pursuit of further studies, 17.3% were to join their spouses who lived far from school, 14.2% on promotion, 8% of respondents were unable to cope up with school management while a small number of 1.8% of respondents cited inability to cope up with workload. These resulted can be interpreted to mean that more teachers left schools in quest for further studies in line with the Need Theory that posits that needs represent an internal energy force that directs behaviour toward actions that permit the satisfaction and release of the need itself (Murray, 1938), while fewer teachers left schools on promotion. Promotion according to Jamil and Raja (2011) is the recognition of employee efforts and his commitment to work. Getting higher and higher promotion is the ultimate desire of each person working in any sort of organization.

These results mirrored a study by the Center for Teacher Quality in California which revealed that 57 percent of California teachers who left schools in 2007 cited bureaucratic impediment—excessive paperwork, frequent classroom disruptions and too many unproductive meetings. Other reasons were inadequate preparation and poor quality professional development; lack of feedback on performance of work; meager time to plan and collaborate with fellow teachers; limited access to important data about students; and no foreseeable paths for career advancement (Bornfreund, 2011).

A recent report from the Heritage Foundation and the American Enterprise Institute claimed that money is not the reason that people enter teaching, but it is a reason why some talented people avoid teaching – or quit the profession when starting a family or buying a home (Duncan, 2011). A study by Cisco (2011) showed that 33 percent of young people would prioritize social media freedom, mobile device flexibility, and work mobility over salary. These desires could steer college students away from teaching, since it is a career path that does not necessarily lend itself to those options. Findings from the interview guides illustrate that teacher turnover was high in some schools occasioned by the following reasons: further studies, dissatisfactions with school leadership and management, failure to cope with workload, promotions, to join their spouses who live far from school, and poor school working conditions.

Table 4.2: Reasons why Teachers Leave Public Schools in Bungoma County

Reasons	Frequency	Percentage
Further their studies	132	58.7
Could not cope with workload	4	1.8
Join spouses who live far from school	39	17.3
Promotion	32	14.2
Inability to get along with school management	18	8.0
Total	**225**	**100.0**

Source: Field Data, n = 225

With regard to the levels of teacher's preparation of students in national examination, the results in Table 4.3 show mixed responses which is an indication of highly significant differences ($p<0.01$) on the views given by the respondents. A one Way ANOVA conducted between the levels of teacher's preparation of students in national examination and academic performance revealed a significant difference ($p<0.05$) (for detailed results, see Appendix 12). This implies that the level of teacher's preparation of students in national examinations affected academic performance in the national examinations. For example, 36.4% of respondents were of the opinion that the preparation of students in national examinations was below average, 28.9% of respondents indicated preparation was poor, 14.7% excellent, 11.1% below average and 8.9% average.

According to MOE (2004) and Sifuna (2003), there is a worrying trend of teachers leaving the profession in search of greener pastures because of deplorable working conditions. This could explain why the commitment and dedication of teachers to preparation of candidates

for KCPE and KCSE is very low. This was also confirmed from the interview schedules that the preparation the levels of preparation of students in the national examination were poor.

Table 4.3: ANOVA Results on Level of Teacher's Preparation of Students in National Examination

F-value	p-value	df
8.0953	0.022	1,8

Source: Field Data, n = 225

4.3 Academic Performance of Bungoma County

This section looks at the academic performance of Bungoma County which was made up of the larger Bungoma and Mt. Elgon Districts (see Appendix 16 for detailed results). Table 4.4 gives a summary of comparison between Bungoma County and the four Counties in the former Western Province for the period ranging from 2002-2012. The analysis showed that Bungoma County's academic performance was below those of the three Counties and the overall mean scores of the former Western Province for the period ranging from 2002-2012. This analysis justified the study on the human resource practices and their impact on performance of public schools in Bungoma County. Bungoma County had an average mean score of 4.793 compared to mean score 5.004 for Kakamega County, mean score of 4.983 for Vihiga County and a mean score of 5.286 for Busia County.

Table 4.4: Mean Scores for Bungoma County and other Counties in the former Western Province Schools'

YEAR	BUNGOMA COUNTY MEAN SCORES	KAKAMEGA COUNTY MEAN SCORES	VIHIGA COUNTY MEAN SCORES	BUSIA COUNTY MEAN SCORES	FORMER WESTERN PROVINCIAL MEAN SCORES
2002	4.221	4.504	4.458	5.167	5.059
2003	4.628	4.838	4.612	5.228	5.278
2004	4.796	4.948	4.829	5.663	5.380
2005	5.210	5.329	5.303	5.802	5.660
2006	4.588	4.812	4.876	5.172	4.860
2007	4.772	5.213	5.261	5.604	4.922
2008	4.457	4.765	4.675	4.715	5.169
2009	4.622	4.863	4.768	4.648	5.250
2010	5.318	5.389	5.511	5.332	5.410
2011	5.316	5.383	5.534	5.525	5.439
2012	3.816	3.969	4.097	4.016	3.975
Average Scores	**4.306**	**4.487**	**4.540**	**4.651**	**4.609**

Source: Mean Scores Derived from KNEC: 2002-2012

Results in Table 4.4 show that Bungoma County had an average mean score index of 4.306 compared to mean score index of 4.49 for Kakamega County, mean score index of 4.540 for Vihiga County and mean score index of 4.651 for Busia County. This was an indication that the academic performance of Bungoma County was lower compared to the three counties in the former Western Province. Furthermore, the results of one-way Analysis of Variance, reveal that there was a significant difference ($p<0.05$) in the academic performance of the counties in the former Western Province. This analysis partly justified the need for the study on the human resource practices and their impact on academic performance of public schools in Bungoma County.

Multiple post hoc tests based on the Least Significant Differences (LSD) as given in Table 4.5 indicate a significant difference ($p<0.05$) in the mean score indices among the counties except, the academic performance between Kakamega and Vihiga Counties (for detailed results, see Appendix 9b). The poor academic performance in Bungoma could be attributed to very deep cultural heritage with extensive rites of passage like circumcisions, remembrance of the dead which have preoccupied the minds of the people demeaning the importance of education. The animosity between the Bukusu and the Sabaot of Mount Elgon has played a negative role in lowering the academic standards by hindering freely sharing the information on education. This could also explain the poor academic standards in Mount Elgon District. Poor infrastructure could be another contributing factor to poor academic performance as some schools are situated in the remote areas that are not accessible as confirmed by Churchill (1965) who found out a positive relationship between the location of a school and the student and teacher performance in the national examinations.

Table 4.5: Multiple-Post Hoc LSD test for County Academic Results in the Four Counties

County	Mean score
Busia	**4.65a**
Kakamega	**4.49b**
Vihiga	**4.54b**
Bungoma	**4.31c**

Means followed by the same letter are not significantly different from each other at 5% level.
Source: Mean Scores Derived from KNEC: 2002-2012

A significantly better academic performance of Busia and Vihiga Counties could be attributed to low student/pupil enrolment despite these counties having very high poverty

levels of 66% and 62% respectively (Kenya National Bureau of Statistics, KNBS, 2010). The results also illustrated that there is no significant difference ($p<0.05$) in the academic performance of Kakamega and Vihiga Counties. This could be due to the fact that the two counties border each other and share a lot in common in terms of socio-cultural and socio-economic activities and suffer almost the same challenges. When people share the same culture, they learn how to work, how to approach to the goals and how they want others to treat them. Culture is the pattern of taken-for-granted assumptions about how a given collection of people should think, act, and feel as they go about their daily affairs (Joynt & Warner, 1996).

The overall academic performance of the four counties in the former Western Province is low and this could be attributed to inadequate physical and instructional resources. This has been echoed by Etsey (2005) who observed that the availability and use of teaching and learning materials affect the effectiveness of a teacher's lessons. According to Broom (1973), the creative use of a variety of media increases the probability that the student would learn more, retain better what they learn and improve their performance on the skills that they are expected to develop. Ausubel (1973) also stated that young children are capable of understanding abstract ideas if they are provided with sufficient materials and concrete experiences with the phenomenon that they are to understand.

A relatively better academic performance of Busia and Vihiga Counties could be attributed to student/pupil enrolment despite these counties having very high poverty levels of 66% and 62% respectively (Kenya National Bureau of Statistics (KNBS, 2010). The results also

illustrated that there is no significant difference ($p<0.05$) in the academic performance of Kakamega and Vihiga Counties. This could be due to the fact that the two counties are border each other and share a lot in common in terms of culture, economic activities and suffer almost the same challenges. The two counties experience high growth rates to extents that the infrastructure is not able to sustain this population growth as evidenced by high Doctor to Population Ratio, Teacher to Pupil Ratio and number of households.

The results given in Table 4.6 signify that there were some fewer schools 12(5.3%) in Bungoma County whose performance was good while the performance of many schools was below average as also supported by Table 4.7. An analysis on the school mean scores of the Sub-Counties in Bungoma County for period 2002-2012 showed that there was a highly significant ($P<0.05$) variation in the school mean score for the period of 2002-2012. According to the results, 47.1% of the schools were performing below average, 29.3% of the schools had average academic performance, 18.2% had poor performance, 4% had good performance while 1.3% of the schools had very good performance based on the five point Likert Scale from very good performance (5), good performance (4), average performance (3), below average (2) and poor performance (1).

Table 4.6: School Mean Score for Period 2002-2012 in Bungoma County

Responses	Frequency	Percentage
Poor performance	41	18.2
Below average	106	47.1
Average performance	66	29.3
Good performance	9	4.0
Very good performance	3	1.3
Total	**225**	**100.0**

Source: Mean Scores Derived from KNEC: 2002-2012

The results in Table 4.7 show the academic performance of the 31 districts in the former Western Province for 2010-2011. A one Way ANOVA results revealed an insignificant difference between the two rankings for 2010 and 2011 (P> 0.05). Similarly, a Spearman rank order correlation coefficient performed on the two mean scores (2010-2011), gave correlation coefficient value, $r_s = 0.8144$, standard error (SE) of 0.06 and probable error (PE) of 0.041. Since r_s were found to be six times the PE, then r_s was significant. This indicated that the two rankings, 2010-2011 were similar.

The results demonstrate that Bungoma County had only Kimilili and Bungoma South Districts in the top ten districts' ranking. The rest of the seven districts were ranked positions 20, 21, 24, 25, 27, 28 and 29 out of the total of 31 districts. The results point out that Bungoma County's academic performance for the period ranging from 2010 to 2012 in comparison with other districts was low. A one Way ANOVA analysis conducted on the eight districts in the former Western for the period 2004-2007 showed that the performance of the eight districts varied significantly ($p<0.05$).

Table 4.7: Academic Performance of Districts in the Former Western Province for 2010-2011

District	Mean Score 2010	Mean Score 2011	Ranking			
			2010, x	**2011, y**	**d**	**d^2**
Kimilili	6.356	6.239	1	1	0	0
Matungu	6.109	6.196	2	3	-1	1
Mumias	5.992	6.206	3	2	1	1
Bungoma South	5.964	5.995	4	4	0	0
Butere	5.807	5.827	5	7	-2	4
Butula	5.745	5.892	6	5	1	1
Samia	5.613	5.639	7	10	-3	9
Sabatia	5.605	5.856	8	6	2	4
Emuhaya	5.574	5.534	9	11	-2	4
Kakamega South	5.487	5.700	10	9	1	1
Hamisi	5.468	5.350	11	19	-8	64
Bungoma East	5.419	5.345	12	20	-8	64
Vihiga	5.397	5.395	13	16	-3	9
Matete	5.376	4.104	14	31	-17	289
Kakamega East	5.362	5.384	15	17	-2	4
Lugari	5.306	5.350	16	18	-2	4
Kakamega Central	5.303	5.499	17	12	5	25
Busia	5.210	5.412	18	14	4	16
Bungoma Central	5.139	5.083	19	24	-5	25
Mt. Elgon	5.125	5.310	20	21	-1	1
Bumula	5.107	4.972	21	28	-7	49
Teso South	5.077	5.297	22	22	0	0
Khwisero	5.057	5.020	23	26	-3	9
Bunyala	5.019	5.409	24	15	9	81
Teso North	5.016	5.114	25	23	2	4
Bungoma West	4.818	4.985	26	27	-1	1
Bungoma North	4.617	4.862	27	29	-2	4
Kakamega North	4.455	4.411	28	30	-2	4
Cheptais	NEW	5.053	NEW	25		
Likuyani	NEW	5.494	NEW	13		
Nambale	NEW	5.795	NEW	8		
Total, ∑			**∑n = 28**	**∑n = 28**		**∑= 678**

Source: Mean Scores Derived from KNEC-2002-2012; *n = 31 districts*

The results in Table 4.8 indicate that Bungoma County was ranked fifth out of the total of eight districts for the period ranging from 2004 to 2007 while Mt. Elgon District was ranked last in the former Western Province. On average, the two districts which make up Bungoma County had a mean of 4.909 which was below average compared to the attainable mean score of 12.000.

Table 4.8: Mean Scores per Districts in Former Western Province for Period 2004-2007

DISTRICT	Mean Score for Period 2004-2007				Average	Position
	2004	2005	2006	2007	Mean Score	
Busia	5.427	5.845	5.122	5.799	5.548	1
Kakamega	4.720	5.181	4.457	5.010	4.842	7
Vihiga	4.829	5.303	4.876	5.261	5.067	4
Bungoma	4.951	5.427	4.645	5.235	5.065	5
Mt. Elgon	4.688	4.994	4.532	4.803	4.754	8
Teso	5.899	5.758	5.222	5.408	5.572	2
Lugari	5.042	5.132	4.929	5.116	5.055	6
Butere/Mumias	5.081	5.673	5.103	5.512	5.342	3

Source: Mean Scores Derived from KNEC: 2002-2012

The results further illustrate that there were some districts in the former Western Province whose performance was better than that of the larger Bungoma District (5.067) and Mt. Elgon District (4.754) for the period 2004-2007: Teso District (5.572), Busia (5.548), Butere/Mumias (5.342) and Vihiga (5.067).

This shows that Bungoma County's performance was lower compared to other districts in the former Western Province. The findings from interview schedules indicated poor academic performance in Bungoma County was attributed to lack of school fees, lack of adequate physical and instructional materials, shortage of staff, high workloads as evidenced by high

Student/Pupil-Teacher Ratio in most schools, poor reading culture, poor infrastructure in terms of classrooms, laboratories, roads, health facilities, water supply and sewage system, poor remuneration among teachers, indiscipline amongst students, low economic status of parents as evidenced by data in Table 4.9 below. These findings were supported by Koech Report (1999) and Nyaroga (2006). The official Curriculum Based Establishment (CBE) staffing level is 1850 teachers while the actual staffing level is 1208 giving a teacher shortfall of 1,200 teachers for public primary schools only. The officially recommended Student/Pupil-Teacher Ratio is 1:40 while the study findings showed that Student/Pupil-Teacher Ratio was >1:40.

Table 4.9: Causes of Poor Academic Performance in Bungoma County

Responses	Frequency	Percentage	Rank
Lack of adequate physical and instructional materials	70	31.1	1
poor infrastructure	36	16.0	2
Shortage of staff	33	14.6	3
Poor remuneration among teachers and support staff	23	10.2	4
Lack of school fees	22	9.8	5
Low economic status of parents	18	8.0	6
Indiscipline amongst students	15	6.7	7
Lack of community support	08	3.6	8
Total	**225**	**100.0**	

Source: Field Data, n = 225

A Chi Squared goodness of fit test conducted on the causes of poor academic performance in Bungoma County revealed that the causes of poor performance varied significantly ($p<0.05$). The results in Table 4.9 show that the major causes of poor academic performance in Bungoma County was lack of adequate physical and instructional materials (31.1%), followed by poor infrastructure (16%), shortage of teaching staff (14.6%), poor remuneration among teachers and support staff (10.2%), lack of school fees (9.8%), low economic status of the parents (8%), indiscipline among students (6.7%) and lack of community support (3.6%) in that order.

The results are consistent with the findings of NPEC (1998) and Adelabu (2003) who found out that the work environment is an important determining factor in teacher motivation. The teachers' work environment in Nigeria has been described as the most impoverished of all sectors of the labour force. Facilities in most schools are dilapidated and inadequate and these have contributed to low academic performance in schools. Kazeem (1999) further recommended improvements in the supply of teaching and learning materials and general classroom environment to improve the quality of education. In the teaching profession in Kenya, the teachers' welfare is considered poor with housing schemes and medical benefits not being enough to make their work life better and also to raise their standard of living (MOE, 2004 and Sifuna, 2003).

4.4 Human Resource Practices

This section seeks to establish the various HR practices in Bungoma County which is the first objective.

4.4.1 Training and Development

The goodness of fit of a statistical model describes how well it fits a set of observations. Measures of goodness of fit typically summarize the discrepancy between observed values and the values expected under the model in question. Chi Squared goodness of fit test performed on the variables of training and development, indicated that were all highly ($p<0.01$) significant (see Table 4.10). The results further illustrate that 29.3% of respondents strongly agreed that teachers are taken for refresher courses offered by SMASSE (Strengthening of Mathematics and Sciences in Education) and KESI (Kenya Education Staff Institute) to increase teachers' skills, 16% agreed, 28% of respondents disagreed while 26.7% strongly disagreed. The mean on this variable was rather low (M = 2.93, on scale from 1 = strongly disagree to 5 = strongly agree), an indication that most teachers do not attend refresher courses offered by SMASSE and KESI. This could be true because SMASSE In-Service Training usually targets Mathematics and Science teachers only (JICA, 2004).

Results illustrate that 63.6% of respondents agreed that teachers attended workshops/seminars in their subject areas, 16.9% strongly agreed, 16% disagreed and 3.6% strongly disagreed. This variable had a mean of 3.74 which was relatively low on scale from 1 = strongly disagree to 5 = strongly agree. This was a pointer that majority of teachers attended workshops and seminars in their subject areas. Varied responses were given on whether the Ministry of Education had made provisions for teachers' training and development through provision of scholarships and study leaves (28.4% strongly agreed, 38.7% agreed, 20.9% disagreed, 8.9% strongly agreed and 3.1% of respondents were undecided). This had a mean of 3.57. 50.7% of respondents agreed that head

teachers/principal allowed teachers to further their studies to increase their educational levels, 34.2% strongly agreed, 5.3% were undecided, 6.2% of respondents disagreed while 3.6% of respondents strongly disagreed. These responses had a mean of 4.06 which indicated that the respondents on overall agreed that head teachers/principal allowed teachers to further their studies to increase their educational levels based on scale from 1 = strongly disagree to 5 = strongly agree.

Table 4.10: Training and Development of Teachers in Bungoma County

Training	SA	A	U	D	SD	Mean	Chi Squared Goodness of Fit Test
Teachers are taken for refresher courses offered by SMASSE and KESI to increase teachers' skills	66(29.3%)	36(16%)		63(28%)	60(26.7%)	2.93	P<5%
Teachers attended workshops/seminars in their subject areas	38(16.9%)	143(63.6%)		36(16%)	8(3.6%)	3.74	P<5%
The ministry of education has made provisions for teachers' training and development through provision of scholarships and study leaves	64(28.4%)	87(38.7%)	7(3.1%)	47(20.9%)	20(8.9%)	3.57	P<5%
Head teachers/principal allow teachers to further their studies to increase their educational levels	77(34.2%)	114(50.7%)	12(5.3%)	14(6.2%)	8(3.6%)	4.06	P<5%

Source: Field Data, n = 225; SA= strongly agree, A= agree, U= undecided, D= disagree and SD = strongly disagree

The results show that training and development as a HR practice was evident in public schools in Bungoma County. Interview results show that in-service training of teachers in Kenya and particularly in Bungoma County has been inadequate with attention focused on

only heads of schools. These study findings were consistent with what ILO (2012) observed that appropriate and relevant employment terms and career development opportunities for teachers are important for attracting and retaining the most qualified, experienced and motivated teachers. As the ILO tripartite constituents have concluded: universally attainable and quality lifelong learning depends in large part on highly qualified and dedicated teaching, administrative and support staff (ILO, 2000a).

Furthermore, Sayed (2009) also noted that effective teacher training is considered increasingly important to meeting international goals relating to educational enrolments, quality, and expansion of all areas of the educational sector, particularly pre- and post-primary education. In addition to initial education and training, the evidence argues strongly for teacher professional development as a critical factor in education reform. The ILO/UNESCO Recommendation concerning the Status of Teachers, 1966, states that ―policy governing entry into preparation for teaching should rest on the need to provide society with an adequate supply of teachers who possess the necessary moral, intellectual and physical qualities and who have the required professional knowledge and skills.

As alluded by Hamidun (2009), the desire for training is supported by Human Resource Management (HRM) Theory, which states that training is one of the processes in achieving organizational goals by attracting and maintaining employees, and also to manage them effectively. HRM theory indicated that training is the field concerned with organizational activity aimed at bettering the employee's work commitment and performance in organizational settings. Moreover, recent studies mentioned that training is an essential element for sustainable competitive advantage and survival in the 21st century as it is the

process of providing employees with specific skills or helping them to correct deficiencies in their performance (Poh, 2001). It can be defined as development of skills, specifies measurable objectives, and should result in observable change in behaviour (Wagonhurst, 2002). Training is a systematic process, which helps people to learn how to be more effective at work by modifying knowledge, skills or attitudes through learning experience to achieve effective performance (Buckley and Caple, 2000). Most of managers give training to their employees for three main purposes (Belcourt, Wright and Saks, 2000), which are (1) to increase productivity or the performance of employees; (2) to achieve organizational goals; and (3) to invest in employees to succeed in the unpredictable and turbulent business environment.

4.4.2 Staff Appraisal, Compensation, Rewards and Promotion

This sub-section looks at staff appraisal, compensation, rewards and promotion as the key HR practices whether they were evident in public schools in Bungoma County.

A Chi Squared goodness of fit test conducted on compensation/incentives and rewards in Table 4.11, indicated a highly significant association ($p<0.05$) which is an indication that the responses to the variables of compensation/incentives and rewards were uniform. The results further illustrated that teachers' payment is not pegged on their job performance: (31.6% disagreed, 29.3% strongly disagreed, 23.6% agreed, 10.7% strongly agreed and 4.9% of respondents were undecided). This was also reinforced from the interview guides that irrespective of the type of school, teachers in the same job group were remunerated uniformly save for those from hardship areas who were entitled for hardship allowance. A

large proportion (63.6%) of the respondents agreed that teachers are given both monetary and non-monetary incentives after good performance in national examinations, 16.9% strongly agreed, 16% disagreed while 3.6% strongly agreed. This was a pointer that incentive systems were in place to motivate teachers, though not efficient as evidenced by 57.8% of respondents who supported that provision of an effective motivating incentive system is wanting to boost performance of teaching force against 36% of respondents who disagreed. Above average (57.8%) of respondents agreed that rewards can influence positively academic performance with a mean of 4.29 which was relatively high based on Likert scale from 1 = strongly disagree to 5 = strongly agree.

Similarly, a Chi Squared goodness of fit test conducted on promotion variables further showed that the responses to promotion variables were uniform ($P<5\%$), an indication that the variables were highly significant. The results on promotion varied responses were given by respondents. For example, 30.2% of respondents agreed that teachers' merit was the basis for promotion rather than seniority, 28% strongly disagreed, 20% strongly agreed, 16% disagreed and 5.8% of respondents were undecided. Consequently, views on the teacher's promotion being based on performance were dissimilar: 26.2% of respondents agreed, 24% strongly agreed, 20.9% disagreed while 8.9% of respondents were undecided. Twenty eight point four percent (28.4%) of respondents agreed that promotion of teachers was based on working experience, 12% strongly agreed, 24.9% strongly disagreed, 24.4% disagreed and 6.7% of respondents were undecided. This showed that schools do not have clear policies regarding teacher promotion and this explains why some teachers stagnated in some job groups and therefore, were not prepared to handle managerial positions.

Table 4.11: Staff Appraisal, Compensation, Rewards and Promotion

	SA	A	U	D	SD	Mean	Chi Squared Goodness of Fit Test
Compensation/Incentives and Rewards							
Teachers are paid based on job performance	24(10.7%)	53(23.6%)	11(4.9%)	71(31.6%)	66(29.3%)	2.72	P<5%
Teachers are given incentives after good performance in national examinations	38(16.9%)	143(63.6%)		36(16%)	8(3.6%)	2.35	P<5%
Provision of an effective motivating incentive system is wanting to boost performance of teaching force	49(21.8%)	81(36%)	7(6.2%)	32(14.2%)	49(21.8%)	3.22	P<5%
Reward can influence positively academic performance	49(21.8%)	82(36%)		3(1.3%)	24(10.7%)	4.29	P<5%
Promotion							
Teachers' merit is the basis for promotion rather than seniority	45(20%)	68(30.2%)	13(5.8%)	36(16%)	63(28%)	2.98	P<5%
Teacher's promotion is based on performance	54(24%)	59(26.2%)	20(8.9%)	47(20.9%)	45(20%)	3.13	P<5%
Promotion of teachers is based on working experience	12(12%)	64(28.4%)	15(6.7%)	55(24.4%)	56(24.9%)	2.80	P<5%
Staff Appraisal							
Teachers are appraised at least once a year	16(7.1%)	85(37.8%)	21(9.3%)	60(26.7%)	43(19.1%)	2.87	P<5%
Teachers are provided feedback after performance appraisal	44(19.6%)	92(40.9%)	14(6.2%)	44(19.6%)	31(13.8%)	3.33	P<5%
Head teachers carry out performance appraisal of their staff	40(17.8%)	87(38.7%)	10(4.4%)	51(22.7%)	37(16.4%)	3.19	P<5%

Source: Field Data, n = 225; SA= strongly agree, A= agree, U= undecided, D= disagree and SD = strongly disagree

Staff appraisal refers to the process of identifying, observing, measuring, and developing human performance in organization. A Chi Squared goodness of fit test carried out on staff appraisal also signposted a highly significant association among staff appraisal variables (P<5%). According to the results in Table 4.11, diverse views were given concerning whether teachers were appraised at least once a year (37.8% of respondents agreed, 26.7% disagreed,

19.1% strongly disagreed, 9.3% of respondents were undecided while 7.1% of respondents strongly agreed). This had a low mean of 2.87 based on the on scale from 1 = strongly disagree to 5 = strongly agree. The results on whether teachers are provided feedback after performance appraisal, 40.9% of respondents agreed, 19.6% agreed, 19.6% disagreed, 13.8% of respondents strongly disagreed and 6.2% of respondents were undecided.

Similarly, diversified views were given by the respondents on whether head teachers carry out performance appraisal in schools: (38.7% of respondents agreed, 22.7% disagreed, 17.8% strongly agreed, 16.4% strongly disagreed and 4.4% were undecided). This had a mean of 3.19. This signified that some teachers were not aware of staff appraisal, how it is done and often the feedback is not given to the appraisees (teachers) to know how they are faring on well and whether the set objectives were achieved. This could translate to lack of proper appraisal guidelines for the teachers. The results also point to the fact that teachers are passive participants in the performance appraisal process. Kedian (2006) posits that effective appraisal should be a dynamic interaction process which should result in negotiated goals that are linked to professional development. If the process does not result in the desired purpose it becomes a high stakes activity which is by being threatening and stressful.

The first objective that sought to establish HR practices in public schools in Bungoma County was achieved since the following HR practices were established: training and development, staff appraisal, compensation, rewards and promotion and were being practised to some extent.

4.5 Impact of Motivation on Academic Performance of Public Schools

The second objective of this study was to determine the impact of motivation on academic performance of public schools in Bungoma County. This was achieved by carrying out analysis of variance and regression analysis as given in Table 4.12. The results show that training and development had a fairly moderate positive and significant impact on the academic performance of public secondary schools (R^2 = 0.195, b = 0.348, t-value = 4.426, P<5%). R^2 indicates the degree of association between motivation and academic performance. This implies that for every unit increase in motivation, there is a corresponding increase in academic performance by 19.5%. Also, 19.5% increase in academic performance is attributed to motivation. The variance of academic performance significantly explained by motivation as independent variables was 19.5%. Therefore, this meant that R^2 = 19.5% motivation did not strongly impact academic performance in Bungoma County; its level of influence on academic performance was low.

The result of this study shows that training is important to employees for their development and trained employees are able to maintain high performance and commitment in their work tasks and also in organization. So, it is important to have a prescribed training program which takes into account employees existing skill levels and their goals that need to be achieve. In addition, employees are able to evaluate their performance and commitment right after they attend the training by looking at their capabilities and fully utilising the knowledge and skills that are gained in training into their work tasks (Hamidun, 2009).

Table 4.12: Simple Regression Analysis on Impact of Motivation on Academic Performance of Public Schools

Model 1	Adjusted R^2	Regression coefficient, b	t-value	p-value/ Sig.
Training & development and performance (school mean scores)	0.195	0.348	4.426	0.000 (s)
Compensation & rewards and performance (school mean scores)	0.055	0.216	3.932	0.000 (s)
Promotion and (school mean scores)	0.112	0.058	0.967	≥0.05 (ns)
Overall	**0.120**	**0.169**	**2.46**	**0.001 (s)**

Source: Field Data, n = 225; s-significant with p-value ≤0.05 and ns-not significant with p-value ≥0.05

Compensation and rewards had a weak positive association on academic performance of public schools in Bungoma County ($R^2 = 0.055$, b = 0.216, t-value = 3.932, p-value = 0.000). This indicated that compensation and rewards as HR practices significantly explained 5.5% variance in the academic performance of public schools in Bungoma County and that there is a 5.5% increase in academic performance with every additional unit in compensation and incentives. The more teachers are compensated and rewarded fairly the more they will perform better, ultimately leading to improved academic performance. On the other hand, promotion had a positive insignificant association on academic performance of public schools in Bungoma County ($R^2 = 0.112$, b = 0.058, t-value = 0.967, $p > 0.05$).

These results are in line with the work of Sohrab and Khurram (2011) who carried out a study on the impact of compensation, promotion and performance evaluation practices on the performance of university teachers of Azad Jammu and Kashmir (AJK). The authors concluded that compensation and reward have strong and positive impact on performance of university teachers of AJK. Compensation and reward are the major elements to influence

teachers. Therefore, the performance promotion practices were insignificant with the performance of university teachers. The reason for this is most promotion procedures were vague and not properly practiced. The findings from interview guides also confirmed that promotions of teachers from primary schools from job group G to K usually takes 12 years that was not guaranteed unless one passes Teachers' Proficiency Courses (TPC). For example, in Bungoma County very few teachers if any are in job group P, yet many have attained masters' degrees. The three schemes of service, that is, non-graduate, graduate and secretariat are a hindrance to teachers' promotion from one job group to another. Moreover, majority of the P1 and P2 teachers are obliged to attain undergraduate degrees before promotion to job group K. Therefore, because of this, teachers do not prepare candidates very well for the national examinations, leading to poor performance.

According to Adeyinka *et al*. (2007), to use salaries as a motivator effectively, managers must consider salary structures which should include the importance that the organization attaches to each job, payment according to performance, personal or special allowances, fringe benefits and pensions which are not factored in during job design by the Teachers Service Commission (TSC). Overall, motivation as a bundle of HR had a positive and significant association with academic performance of public secondary schools ($R^2 = 0.120$, $F = 6.67$, $b = 0.169$, t-value = 2.46, p-value = 0.001).

4.6: Impact of Performance Management on Academic Performance of Public Schools

This section looks at performance management in terms of communication and transparency, participation in decision making and performance appraisal and how these variables impact on the academic performance of public schools in Bungoma County. This refers to the third objective. Regression and ANOVA results are in Table 4.13.

From Table 4.13, there are positive significant associations between all the performance management variables: communicating feedback; employee engagement in setting targets and decision making, performance appraisal, evaluation and dependent variable (academic performance of public schools). The results show that 10.1% of the variance (academic performance of public schools) is significantly explained by communication feedback, which is significant ($p<0.05$) and 4.9% of the variance (academic performance of public schools) is also significantly explained by participation in decision making ($p<0.05$).

Table 4.13: Simple Regression Analysis on Impact of Performance Management on Academic Performance of Public Schools

Model 2	**Adjusted R^2**	**Regression coefficient, b**	**t-value**	**p-value/ Sig.**
Communicating feedback and performance (school mean scores)	0.101	0.260	5.109	0.000 (s)
Employee engagement in setting targets & decision making and performance (school mean scores)	0.049	0.246	3.297	0.001 (s)
performance appraisal & evaluation and (school mean scores)	0.115	0.441	5.755	0.000 (s)
Overall	**0.088**	**0.316**	**4.720**	**0.000 (s)**

Source: Field Data, n = 225*; s-significant with p-value ≤0.05 and ns-not significant with p-value ≥0.05*

Similarly, 11.5% of the variance in academic performance of public schools is explained by performance appraisal. The low R^2 values indicate a relatively weak association between performance management variables and academic performance of public schools. This finding is supported by Pulakos & O'Leary (2011) that PM systems have often been ineffective because they are seen as an administrative burden between managers and employees. Additionally, a survey of 1,190 workers conducted by Watson Wyatt Worldwide (2004) showed that only 30% of workers felt that their companies' PM system helped them improve performance, and less than 40% said that the system established clear goals, generated honest feedback, or used technology to streamline the process. For example, PM hinder business results due to administrative burdens, managers and employees are reluctant to communicate candidly during performance reviews and discussions, and subjective feedback as well as feedback that is not provided in a timely manner prevent accurate performance assessment (Pulakos, Mueller-Hanson & O'Leary, 2008).

Nwankwo (1984) and Ayeni (2005) found that teachers feel highly motivated when they are consulted about decisions regarding their work. Unfortunately, a high a proportion of school managers (principals and head teachers) are autocratic in their dealings with teachers to the extent that the teachers are seldom consulted on the key issues concerning the running of the schools. This situation seems to reflect what happens in the management of public schools in Bungoma County. This could be true because there is an increase of only 4.9% of variance in academic performance being attributed to teachers' participation in decision making.

Khurram *et al*. (2008) did a study on impact HRM practices on perceived performance of university teachers of Pakistan which contradicts the study findings on performance appraisal practices. It was hypothesized that performance appraisal practices are significantly and positively related to perceived performance of university teachers of Pakistan. Performance appraisal practices were found to be insignificantly correlated with the performance of university teachers of Pakistan. Therefore, on overall, performance management as a HR bundle had a positive and significant relationship on the academic performance of public secondary schools in Bungoma County ($p < 5\%$).

4.7: Impact of Work Environment on Academic Performance of Public Schools

The fourth objective involved the impact of the work environment in which teachers operate to the examination performance. The work environment is key to teachers' ability to exercise their professional roles effectively, experience job satisfaction and ensure the best possible teaching and learning outcomes are achieved. This section looks at the work environment variables such as working conditions, staffing levels, physical and instructional materials, teaching workloads and housing facilities and how these variables impact on the academic performance of public schools in Bungoma County. The results are given in Table 4.14.

The results in Table 4.14 show that working conditions ($p \geq 0.05$), staffing levels ($p \geq 0.05$), physical and instructional materials ($p \geq 0.05$), teaching workloads ($p \geq 0.05$) and housing facilities ($p \geq 0.05$), all had negative and insignificant impact on the academic performance of public schools in Bungoma County except for the teachers' workloads which had a positive but insignificant impact on the academic performance. This was a pointer that the work

environment was not good enough to motivate, improve and sustain academic performance in public schools in Bungoma County.

Table 4.14: Simple Regression Analysis on Impact of Work environment on Academic Performance of Public Schools

Model 3	Adjusted R^2	Regression coefficient, b	t-value	p-value/ Sig.
Working conditions and performance (school mean scores)	0.02	-0.040	-0.756	≥0.05 (ns)
Staffing levels and performance (school mean scores)	0.08	-0.087	-1.649	≥0.05 (ns)
Physical facilities & Instructional materials and performance (school mean scores)	0.20	-0.044	-0.787	≥0.05 (ns)
Workload and performance (school mean scores)	0.04	0.028	0.429	≥0.05 (ns)
Housing Facilities and performance (school mean scores)	0.27	-0.132	-2.667	≥0.05 (ns)
Overall	**0.122**	**-0.055**	**1.086**	≥0.05 (ns)

Source: Field Data, n = 225*; s-significant with p-value ≤0.05 and ns-not significant with p-value ≥0.05*

The learning environment in most public primary schools in Bungoma County is deplorable. The teachers are few relative to the student/pupil population and there are no desks or chairs for the newly enrolled pupils in some schools situated in the remote areas. Some classes still have over 100 pupils to date yet the average number expected in a class is 40 (Sifuna, 2003 and Nyaroga, 2006). The Pupil-Teacher Ratio is so big to an extent that teacher-pupil contact is never felt. This is bound to affect the teachers' capacity to cope and the quality of teaching and learning could be easily compromised (Too, 2004). The problems of too large population of students in classroom overwhelms fewer teachers and therefore, do not create a good

condition for learning which can lead to poor academic performance of students (Asikhia, 2010).

In some of the public schools, pupils still learn under trees. In other schools the teachers cannot master all the pupils' names due to their great numbers. May be the situation will improve when the government expands the facilities and employs more teachers, though as to when this will happen is highly debatable (Aduda, 2005). The findings from the interview guides show that some public primary schools have 1-3 TSC teachers while the rest are form four leavers who are not trained and newly trained teachers who lack enough experience to prepare the candidates very well for the national examinations. Therefore, for primary schools to produce all-round pupils, increased enrolment requires increased resources like adequate and experienced staff and instructional materials among others. Moreover, there is a worrying trend of teachers leaving the profession in search of green pastures because these deplorable working conditions (MOE, 2004 and Sifuna, 2003).

The findings were supported by a research carried out by Pan, Rudo and Smith-Hansen (2003) in the four states of the USA education (Louisiana, New Mexico, and Texas) comparing high-performing and low-performing districts which showed a general pattern in which higher performance was associated with higher spending for instruction, core expenditures, and number of teachers and with lower spending for general administration and number of administrative staff. Moreover, according to Asikhia (2010) and Isangedighi (1998), learner's environment mismatch promotes poor academic performance. The unconducive atmosphere of most secondary schools' learning environment also contributes

to the poor academic performance of students. From the foregoing discussions the following conclusion may be drawn from the objective of the study: that the work environment negatively impacts on the academic performance of public schools in Bungoma County.

4.8: Overall Impact and Extent of HR Practices on the Academic Performance

This section gives overall results of HR bundles on academic performance of public schools in Bungoma County in addressing the fifth objective in assessing the overall impact and extent of HR practices on the academic performance. The results as given in Table 4.15 show that motivation as a HR bundle is most highly associated with academic performance of public schools in Bungoma County. This implies that for every unit increase in motivation, there is a corresponding increase in academic performance by 53.2%. This shows that motivation is perceived as a dominant bundle of HR practices in Bungoma County. It should be noted that, although motivation was rated higher than other bundles of HR practices, its regression and t-values were still lower than the expected values.

Table 4.15: Results of Multiple Regression Analysis

Model 4 (Bundle of HR Practices)	**Adjusted R^2**	**Regression coefficient, b**	**t-value**	**p-value/ Sig.**
Constant		3.519	11.573	0.000
Motivation	0.532	0.506	3.943	0.000
Performance management	0.265	0.427	3.108	0.001
Work environment	0.027	-0.275	-1.086	≤0.005
Overall	**0.275**	**0.219**	**1.99**	**0.000 (s)**

Source: Field Data, n = 225

Shadare *et al*. (2009) observed that employee performance fundamentally depends on many factors like performance appraisals, employee motivation, employee satisfaction, compensation, training and development, job security, organizational structure and others. Employee motivation is one of the policies of managers to increase effectual job management amongst employees in organizations. A motivated employee is responsive of the definite goals and objectives he/she must achieve, therefore he/she directs its efforts in that direction. Furthermore, Khan *et al*. (2010) said that, getting employees to do their best work even in strenuous circumstances, is one of the employer's most stable and greasy challenges which can be made possible through motivating them.

On the other hand, the work environment had a negative and insignificant impact on the academic performance of public schools in Bungoma County. The work environment had a profound negative impact on the academic performance than any other HR bundle. Sifuna (2003) noted that the teachers' welfare in the teaching profession in Kenya is considered poor with housing schemes and medical benefits not being enough to make their work life better and also to raise their standards of living. Facilities in most public schools in Kenya are dilapidated and inadequate and that entire unattractive physical structure of the school building could de-motivate learners to achieve academically according to Asikhia (2010).

In summary, the order of impact of the HR bundle on the academic performance of public schools in Bungoma County from the most positive HR bundle to the worst is: Motivation, performance management and work environment. Just as noted by Jamil and Raja (2011), different HR practices have different dimensions and vary in importance but the ultimate

goal of all practices should be improvement in performance of both employees and organization.

4.9 Testing of Hypotheses

Simple regression analysis, multiple regression analysis and analysis of variance were used in order to test hypotheses 1 to 5. Hypothesis one states that there is no significant impact of HR practices on performance of public schools in Bungoma County. Since a correlation was established among motivation, performance management and the work environment, the hypothesis, $H_0 1$ was rejected at ($p<0.05$).

$H_0 2$: There is no significant impact of motivation on performance of public schools in Bungoma County was the second hypothesis. Therefore, hypothesis, was rejected because a positive and significant ($p<0.05$) association was found between motivation and academic performance of public secondary schools.

The third hypothesis ($H_0 3$) that stated that there is no significant impact of performance management on performance of public schools in Bungoma County was also rejected since a positive and significant ($p<0.05$) relationship on the academic performance of public secondary schools in Bungoma County.

Hypothesis four ($H_0 4$) stated that there is no significant impact of the work environment on performance of public schools in Bungoma County was rejected on the ground that it had a

negative and significant ($p<0.05$) impact on the academic performance of public schools in Bungoma County.

The fifth hypothesis which states there is no significant difference in the way motivation, work environment and performance management affect performance of public schools in Bungoma County was rejected since there was a significant ($p<0.05$) association among motivation, work environment and performance management and academic performance in public schools in Bungoma County. Table 4.16 gives a summary of research results on hypotheses testing.

Table 4.16: Summary of Research Results on Hypotheses Testing

Hypothesis	Findings
$H_0$1: There is no significant impact of HR practices on academic performance of public schools in Bungoma County	Rejected
$H_0$2: There is no significant impact of motivation on academic performance of public schools in Bungoma County.	Rejected
$H_0$3: There is no significant impact of performance management on academic performance of public schools in Bungoma County.	Rejected
$H_0$4: There is no significant impact of the work environment on academic performance of public schools in Bungoma County.	Rejected
$H_0$5: There is no significant difference in the way motivation, work environment and performance management affect academic performance of public schools in Bungoma County	Rejected

Source: Field Data, n = 225

4.10 Improving the Academic Performance of Public Schools in Bungoma County

The following were the suggestions on how to improve academic performance of public secondary schools in Bungoma County. These suggestions were ranked from the best to the least as shown in Table 4.17.

Table 4.17: Framework for Improving the Academic Performance of Public Schools in Bungoma County

Improving the Academic Performance	Percentage	Rank
Adequate provision of physical and instructional materials	28.0	1
Improvement of infrastructure in terms of adequate classrooms, road network, water, drainage systems and medical centres	24.5	2
Attracting, retaining well trained and adequate teachers	19.3	3
Improvement in remuneration and conditions of service for teachers and support staff	9.6	4
Adequate funding for provision/upgrading of necessary teaching aids and laboratory materials	5.5	5
Training and retraining teachers and support staff through workshops and seminars	4.3	6
Provision of scholarships and grants to aid students with fee problems	3.7	7
Both parents and teachers to closely monitor performance of students/pupils	2.8	8
Creation of educational awareness in addressing cultural issues negatively influencing education	2.3	9
Total	**100.0**	

Source: Field Data, n = 225

The results show that for enhancing academic performance of public schools in Bungoma County, there is need to adequately provide physical and instructional materials. As it has been observed by Sifuna (2003), the quality of education offered in a school is determined by the level of material inputs allocated to the school and the efficiency with which these materials are organized and managed to raise student achievement. Lack of physical facilities in public schools remains the major impeding factor to the achievement of overall academic performance in public schools. Improvement of infrastructure in terms of adequate classrooms, road network, water, drainage systems and medical centres was the second best ranked point. Soboyejo, (2007) noted that provision/improvement of necessary infrastructure and facilities such as classrooms, library stock, teaching aids, attendance and support for conferences, workshops, among others was important to ensure schools perform better in academics. There was need for adequate funding for the provision/upgrading of necessary teaching aids, laboratory materials and other tools.

It was observed that most public primary schools and some public secondary schools were seriously understaffed and therefore, School Management Committees (SMCs) and Board of Governors (BOG) were forced to hire Parent Teachers Association (PTA) and BOG teachers. Some of the PTA teachers were standard eight and form four leavers. This has contributed to poor academic performance in Bungoma County due to lack of professionalism in the teaching fraternity. Therefore, attracting, retaining well trained and adequate teachers was seen as a strategy to curb unprofessionalism in the teaching profession. This was also supported by Ibidapo-Obe (2007 and Soboyejo (2007) who recommended that schools should put in place various provisions to attract and retain top quality staff. It is desirable to

have special scholarships and awards for teachers to further their education, thus increasing their skills and knowledge. There is also need for general improvement in the remuneration and conditions of service for teachers, especially at the primary and secondary school levels. This will provide enough incentives in order to get the best from them.

In the same breath, training and retraining teachers and support staff through workshops and seminars was also voiced. Sayed (2009) observed that effective teacher training is considered increasingly important to meeting international goals relating to educational enrolments, quality, and expansion of all areas of the educational sector, particularly pre- and post-primary education. In addition to initial education and training, the evidence argues strongly for teacher professional development as a critical factor in education reform (Sayed and Mohamed, 2009). The ILO/UNESCO (1966) recommendation concerning the Status of Teachers states that policy governing entry into preparation for teaching should rest on the need to provide society with an adequate supply of teachers who possess the necessary moral, intellectual and physical qualities and who have the required professional knowledge and skills.

Improvement in remuneration and conditions of service for teachers and support staff was the fourth point in this ranking. The way teachers are rewarded for their work sends vital messages to teachers, students, parents and the rest of society about the value of that work and the status and esteem in which they are held. Rewarding teachers adequately and appropriately is a key to recruiting and retaining a skilled, motivated and committed teaching

force able to concentrate fully on their role as educators, and thereby to improving education quality (Odden, 2008a).

Other suggestions were that both parents and teachers to closely monitor performance of students/pupils and there was further need to create educational awareness in addressing cultural issues that negatively influence education like circumcision, early marriage, illicit brew brewing and selling, hunting and taking care of cattle at the expense of education.

The study findings indicated that the levels of motivation, performance management and work environment were not fully satisfactory in public schools in Bungoma County, hence the need to develop a framework for mitigation.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of study findings, conclusions drawn, recommendations done based on the conclusions and suggestions for further research.

5.2 Summary

The results show that the majority of teachers were in the age bracket of 30-49 years and that there was a highly significant difference in the variation among age groups since the expected uniform distribution across age groups was not represented by 25% in each age group. The majority of head teachers were in the age bracket of 40-49 years and a look at the age structure of these respondents showed a great diversity. Information from observation checklists indicated that there were more young teachers within the age brackets of 30-40 years than older teachers in the age bracket of 50 years and above. There was a highly significant variation in the gender distribution among the respondents. The findings from observation checklist and secondary data showed that there were more male teachers than female teachers in the public schools in Bungoma County.

The results showed that 96(42.7%) of the respondents had been working in the teaching profession for less than 5 years, 88(39.1%) had been working for a period of 5-10 years, 30(13.3%) for a period of 11-16 years and 11(4.9%) had working for more than 20 years. Results indicated that there was a highly significant variation in the working experience

among the respondents in public schools in Bungoma County. Results show that 66.2% of respondents had at least a bachelor's degree, 12.4% had diploma education level and 21.4% had had masters' degrees. This indicated that the majority of the respondents of in Bungoma County had attained minimum academic and professional qualifications in the teaching profession. There was a further highly significant variation in the distribution of formal education levels among the respondents. The results showed a highly significant relationship between academic performance and educational levels, an indication of positive association between academic performance and educational level

According to the results on why teachers left public schools in Bungoma County, the results showed that there was insignificant difference between the reasons why the teachers leave schools and academic performance in Bungoma County. With regard to the levels of teacher's preparation of students in national examination, the results illustrate mixed responses from the respondents, an indication of highly significant differences on the views given by the respondents. The results showed that the level of teacher's preparation of students in national examination affected the results in these national examinations.

The results showed that Bungoma County's academic performance was below that of the three Counties in the former Western Provincial schools' mean score for the period ranging from 2002-2012. Multiple post hoc tests based on the Least Significant Differences (LSD) indicate a significant difference ($p<0.05$) in the mean score indices among the counties except, the academic performance between Kakamega and Vihiga Counties. The results showed that fewer schools in Bungoma County had good academic performance in the

national examinations while the performance of many schools in the County was below average.

The findings from interview schedules indicated poor academic performance in Bungoma County was attributed to lack of school fees, lack of adequate physical and instructional materials, shortage of staff, high workloads as evidenced by high Student/Pupil-Teacher Ratio in most schools, poor reading culture, poor infrastructure in terms of classrooms, laboratories, roads, health facilities, water supply and sewage system, poor remuneration among teachers, indiscipline amongst students, low economic status of parents.

i) The HR practices in public institutions in Bungoma District established included motivation (training & development, compensation, reward & recognition and promotion), performance management (communicating feedback, employee engagement in setting targets & decision making, performance appraisal & evaluation) and working environment (employee welfare, housing, instructional materials).
ii) The results showed that motivation had a positive and significant association with academic performance of public secondary schools in Bungoma County.
iii) The results also showed positive significant associations between all the performance management variables: communicating feedback, employee engagement in setting targets & decision making, performance appraisal & evaluation and dependent variable (academic performance of public schools) in Bungoma County. Therefore, overall, performance management as a HR bundle had a positive and significant relationship on the academic performance of public schools in Bungoma County.

iv) The results also showed that working conditions, staffing levels, physical and instructional materials, teaching workloads and housing facilities, all had negative and insignificant impact on the academic performance of public schools in Bungoma County except for the teachers' workloads which had a positive but insignificant impact on the academic performance. This was a pointer that the work environment was not conducive enough to motivate, improve and sustain positive academic performance in public schools in Bungoma County. Therefore, the work environment negatively impacts on the academic performance of public schools in Bungoma County.

v) The fifth objective sought to assess the overall impact and extent of HR practices on the academic performance in Bungoma County. The results show that motivation as a HR bundle is most highly associated with academic performance of public schools in Bungoma County. Therefore, it had a higher impact on academic performance in Bungoma County. This was followed by performance management which had a positive and significant relationship on the academic performance of public schools in Bungoma County. On the other hand, work environment had a negative and insignificant impact on the academic performance of public schools in Bungoma County. This meant that work environment had a profound negative impact on the academic performance than any other bundles of HR practices.

5.3 Conclusions

The following were the conclusions derived from the study:

i) The HR practices identified in public schools in Bungoma County included training and development, staff appraisal, compensation, rewards and promotion and were being practised to some extent. Therefore, strengthening the HR practices in public schools will result in improved academic performance in these schools.

ii) Motivation as a HR bundle had a positive and significant association with academic performance of public schools in Bungoma County. This was an indication that deficiency of appropriate HR bundles of motivation like recognition and rewarding, promotion, training and development, compensation and incentives reduce employees' work motivation and job satisfaction leading to poor academic performance.

iii) Performance management as a HR bundle had a positive and significant relationship on the academic performance of public secondary schools in Bungoma County. Therefore, if the school management employs communicating feedback and transparency, employee engagement in setting targets and decision making, performance appraisal and evaluation, then, academic performance of their institutions will be enhanced. Therefore conducting of a cautious study regarding the existing performance management system and the identification of a relevant and strong theoretical support should be done to ensure that that the employees understand how they can contribute to the organizational strategic goals.

iv) The work environment negatively affects the academic performance of public schools in Bungoma County. This was a pointer that the work environment was not good

enough to motivate, improve and sustain academic performance in public schools in Kakamega County. This means that improving and closely monitoring the working conditions, staffing levels, physical and instructional materials, teaching workloads and housing facilities could led to improved academic performance in public schools in Bungoma.

v) The results also showed that motivation as a HR bundle is most highly associated with academic performance of public schools in Bungoma County. This was followed by performance management as another a HR bundle which had a positive and significant relationship on the academic performance of public schools in Bungoma County. The work environment had a negative and insignificant impact on the academic performance of public schools in Bungoma County. This meant that work environment had a profound negative impact on the academic performance than any other bundles of HR practices. Therefore, striking equilibrium among the HR bundles like motivation, performance management and work environment will have positive and significant impact on academic performance in public schools in Bungoma County. This is based on the premise that these HR bundles are interrelated and if one is removed from the equation, a reduction in academic performance is noted (according to Systems Theory).

5.4 Recommendations

The following recommendations were made based on the findings and the conclusions of the study:

i) The school management and the Ministry of Education should ensure that HR practices such as training and development, staff appraisal, compensation, rewards and promotion are fully implemented in schools since they lead to positive academic performance.

ii) The management of schools should also make sure that performance appraisals is clearly communicated in a transparent manner and teachers/support staff are involvement in decision making and policy standards rigorously adhered to because this study has established that there is a clear and strong relationship between performance management and academic performance in schools. Therefore, performance appraisals should be conducted regularly, fairly and in a transparent manner to enhance teacher professional competencies. Communicating feedback must not be done once or twice a year. It must be a continuous process of performance review unlike the prevailing organizational norm of doing at the beginning and end of the rating cycle. It must be frequent and regular. It is important for the employees to have regular and frequent communication to deal with different problems of the organization.

iii) The study proposes that Government of Kenya and the Ministry of Education should ensure that teachers‘ remunerations compare favorably with salaries paid in other occupations requiring similar or equivalent qualifications, skills and responsibilities; provide a reasonable living standard for teachers and their families; provide teachers with the means to enhance their professional qualification by investing in further education and the pursuit of cultural activities

and take account of the higher level qualifications and experience required by certain posts within teaching/education.

iv) Teaching and learning environment policies and practices should consider the followings key issues: size of school (numbers of students); level of education; school location–urban, rural and disadvantaged areas of each; availability of qualified and specialized teachers and assistants; special needs of individual students and numbers of students with special needs.

5.5 Suggestions for Further Research

The following suggestions were made after research findings and discussions for they were not adequately underscored:

i) A study should be carried out on the impact of HR practices on the performance of private schools in Bungoma County.

ii) A study should be conducted on the moderating effect of school factors on the relationship between HR practices and academic performance in Bungoma County.

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APPENDICES

APPENDIX 1: RESEARCH AUTHORIZATION

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471,2241349
254-020-310571,2213123, 2219420
Fax: 254-020-318245,318249
when replying please quote
secretary@ncst.go.ke

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: **NCST/RCD/14/012/1437**

Date: **19th October 2012**

Kadian Wanyonyi Wanyama
Kabarak University
Private Bag – 20157
Kabarak.

RE: RESEARCH AUTHORIZATION

Following your application for authority dated ***5th October, 2012*** to carry out research on "***Human Resource practices and their impact on performance of public schools in Bungoma County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for a period ending **30th October, *2013*.**

You are advised to report to **the District Commissioners and the District Education Officers, Bungoma County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR M.K. RUGUTT, PhD, HSC.
DEPUTY COUNCIL SECRETARY

Copy to:

The District Commissioners
The District Education Officers
Bungoma County.

APPENDIX 2: RESEARCH PERMIT

CONDITIONS

1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed with-out prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

GPK6055t3mt10/2011

REPUBLIC OF KENYA

RESEARCH CLEARANCE PERMIT

(CONDITIONS–see back page)

PAGE 2

THIS IS TO CERTIFY THAT:
Prof./Dr./Mr./Mrs./Miss/Institution
Kadian Wanyonyi Wanyama
of (Address) Kabarak University
Private Bag – 20157, Kabarak.
has been permitted to conduct research in

Location
District ***Bungoma***
County

on the topic: Human resource practices and their impact on performance of public schools in Bungoma County, Kenya.

for a period ending: 30th October, 2013.

PAGE 3

Research Permit No. ***NCST/RCD/14/012/1437***
Date of issue ***19th October, 2012***
Fee received ***KSH. 2,000***

Applicant's Signature

Secretary
National Council for Science &Technology

APPENDIX 3: LETTER OF INTRODUCTION

June, 2012.

Dear Respondent:

I am a postgraduate student undertaking Doctor of Philosophy in Human Resource Management in the Faculty of Education and Social Sciences at Kabarak University. I am carrying out a study on the **HR practices and their Impact on the Performance of Public Schools in Bungoma County, Kenya**. I am using the attached questionnaire and interview schedule to collect information for the study. It is my kind request that you fill the questionnaire and respond appropriately to questions providing the relevant information to facilitate the study. Please use the space provided to fill in the information required as objectively and honestly as possible. The information provided will be treated with strict confidentiality for the purpose of this study only.

Thank you.

Yours faithfully,

Wanyama Kadian Wanyonyi
GDB/M/1015/10

APPENDIX 4: QUESTIONNAIRES FOR PRINCIPALS

SECTION A: BACKGROUND INFORMATION

1. Please indicate your age bracket
   - 20-29 years [ ]
   - 30-39 years [ ]
   - 40-49 years [ ]
   - Above 50 years [ ]
2. Please state your gender
   - Male [ ]
   - Female [ ]
3. Please state the number of years you have worked as a principal
   - Less than 5 years [ ]
   - 5-10 years [ ]
   - 11-16 years [ ]
   - Above 20 years [ ]
4. Please indicate the number of schools you have served in as a principal
   - 1-5 [ ]
   - 6-10 [ ]
   - 11-15 [ ]
   - Above 15 [ ]
5. Please indicate the level of your education
   - PhD [ ]
   - Masters [ ]
   - Bachelor's degree [ ]
   - Diploma [ ]
   - Others (specify)……

6. What is the **total** number of teachers in your school? BOG teachers …….

TSC teachers……Others (specify)…….

7. Kindly indicate the number of learners in yours school.....

8. How many teachers have left your school in the past three years?.....

What could have been the reasons for their leaving of the school? **Please tick (√) as many options as possible.**

Further their studies **( )**, Could not cope up with workload **( )** Join spouses who leave far from school **( )**, Health related issues **( )**, Promotion **( )**, Unsatisfied with school working conditions like lack of physical and instructional facilities **( )**, Inability to get along with school management ( ). Please arrange these reasons in descending order

9. What are the major setbacks facing academic performance of your school?

……

……

……

……

10. With reference to question 8, what can be done to improve academic standards of the school?

……

……

……

……

11. How would you rate the level of teachers' preparation of students in national examination?

1-Poor **( )**, 2-Below Average **( )**, 3-Average **( )**, 4-Above Average **( )**, 5-Excellent **( )**

Based on this question, what can be done to improve teachers' preparation of students in national examination?

……

……

……

SECTION B: HR PRACTICES AND ACADEMIC PERFORMANCE

In this section please tick (√) the most appropriate response for each of the questions in the table below with the following scores in mind. **Strongly Agreed (SA = 5), Agree (A = 4), Undecided (UD = 3), Disagree (D = 2), strongly disagree (SD = 1)**

	QUESTIONS	**SA**	**A**	**UD**	**D**	**SD**
1.	Teachers attend refresher courses offered By SMASSE and KESI to increases teachers' skills					
2.	Teachers attended workshops/seminars in their subject areas					
3.	Personal growth (i.e. skills acquired through training and development) on the current job is satisfactory					
4.	Head teachers/principals allow teachers to further their studies to increase their educational levels					

5.	The Ministry of Education has made provisions for teachers' training and development through provision of scholarships and study leaves					
6.	Teachers are paid based on job performance					
7.	Teachers are given incentives after good performance in national examinations					
8.	Teachers efforts and work are recognised and rewarded by school management					
9.	I am given due recognition at work					
10.	The work itself is interesting and challenging					
11.	I am given due responsibilities at work to execute.					
12.	My advancement (i.e. promotion) on the current job is satisfactory					
13.	Teachers merit is the basis for promotion rather than seniority					
14.	Teachers' promotion is based on performance					
15.	Promotion of teachers is based on working experience					
16.	Teachers are appraised at least once a year					
17.	Teachers are provided feedback after performance appraisal					
18.	Head teachers carry out performance appraisal of their staff					
19.	The performance appraisal is fair					
20.	There is a formal and written performance appraisal system					
21.	Teachers are informed of their performance					
22.	Teachers are involved in formal participation processes such as problem-solving groups and decision making					
23.	Teachers play key roles in strategic planning and implementation					
24.	Teachers' attitudes towards the school management is good					

25.	Teachers' workloads are manageable					
26.	The number of teachers in the school is adequate					
27.	Flow of information within the school is efficient					
28.	Teachers' working conditions encourage optimal performance of duties					
29.	The institution has adequate instructional materials and physical facilities					
30.	Housing facilities are adequate for teachers					
31.	My school has adequate finances and physical facilities to effectively implement school programmes					
32.	There is over enrolment of learners					
33.	Teachers' unions have been actively agitating for teachers' better pay and good working conditions					
34.	There is enhanced teamwork among the teaching force promoting morale and academic performance of learners					
35.	KCPE performance has been declining over years					
36.	The school has posted good results since 2007 to date					
37.	Compensation, promotion and performance evaluation practices influence academic performance					
38.	Reward can influence academic performance positively					

39. PLEASE INDICATE THE KCPE/KCSE SCHOOL MEANS SCORE FOR THE PERIOD 2002-2012

YEAR	MEAN SCORE
2002	
2003	
2004	
2005	
2006	
2007	
2008	
2009	
2010	
2011	

APPENDIX 5: QUESTIONNAIRE FOR TEACHERS

SECTION A: BACKGROUND INFORMATION

1. Please indicate your age bracket?
   20-29 years [ ]
   30-39 years [ ]
   40-49 years [ ]
   50 years and above [ ]
2. Please state your gender
   Male [ ]

   Female [ ]
3. Please state the number of years you have worked in your current station
   Less than 5 years [ ]
   5-10 years [ ]
   11-16 years [ ]
   Above 20 years [ ]
4. Please indicate the number of schools you have served in as a teacher
   1-5 [ ]
   6-10 [ ]
   11-15 [ ]
   Above 15 [ ]
5. Please indicate the level of your education
   PhD [ ]
   Masters [ ]
   Bachelor's degree [ ]
   Diploma [ ]
   Others (specify)……..
6. Please indicate the nature of employment
   TSC [ ]
   Contract [ ]
   BOG [ ]
   Others (specify)……

7. If you're given a choice would you continue teaching under TSC? Yes **( )**, No **( )**

8. Given a chance, would you remain teaching in the same school? Yes **( )**, No **( )**

If your answer is No, please give some reasons why

……

……

……

9. What do you think are the major factors affecting academic performance of the school?

……

…….....

10. With reference to question 8, what do you think can be done to improve academic standards of the school particularly in the national examinations?

……

……

……

…….

SECTION B: HR PRACTICES AND ACADEMIC PERFORMANCE

In this section please tick (√) the most appropriate response for each of the questions in the table below with the following scores in mind. **Strongly Agreed (SA = 5), Agree (A = 4), Undecided (UD = 3), Disagree (D = 2), strongly disagree (SD = 1)**

	QUESTIONS	**SA**	**A**	**UD**	**D**	**SD**
1.	Teachers attend refresher courses offered By SMASSE and KESI to increases teachers' skills					
2.	Teachers attended workshops/seminars in their subject areas					
3.	Personal growth (i.e. skills acquired through training and development) on the current job is satisfactory					
4.	Head teachers/principals allow teachers to further their studies to better their educational levels					
5.	The Ministry of Education has made provisions for teachers' training and development through provision of scholarships and study leaves					
6.	Teachers are paid based on job performance					
7.	Teachers are given incentives after good performance in national examinations					
8.	Teachers efforts and work are recognised and rewarded by school management					
9.	I am given due recognition at work					
10.	The work itself is interesting and challenging					

11.	I am given due responsibilities at work to execute.					
12.	My advancement (i.e. promotion) on the current job is satisfactory					
13.	Teachers merit is the basis for promotion rather than seniority					
14.	Teachers' promotion is based on performance					
15.	Promotion of teachers is based on working experience					
16.	Teachers are appraised at least once a year					
17.	Teachers are provided feedback after performance appraisal					
18.	Head teachers carry out performance appraisal of their staff					
19.	The performance appraisal is fair					
20.	There is a formal and written performance appraisal system					
21.	Teachers are informed of their performance					
22.	Teachers are involved in formal participation processes such as problem-solving groups and decision making					
23.	Teachers play key roles in strategic planning and implementation					
24.	Teachers' attitudes towards the school management is good					
25.	Teachers' workloads are manageable					
26.	Teacher- learner ratio is appropriate					
27.	Flow of information within the school is efficient					
28.	Teachers' working conditions encourage optimal performance of duties					
29.	Institution that has adequate instructional materials and physical facilities					
30.	Housing facilities are adequate for teachers					

31.	My school has adequate finances and physical facilities to effectively implement school programmes					
32.	There is over enrolment of learners in schools					
33.	Teachers' unions have been actively agitating for teachers' better pay and good working conditions					
34.	There is enhanced teamwork among teaching force promoting morale and academic performance of learners					
35.	KCPE performance has been declining over years					
36.	The school has posted good results since 2007 to date					
37.	Compensation, promotion and performance evaluation practices influence academic performance					
38.	Reward can influence academic performance positively					

APPENDIX 6: INTERVIEW SCHEDULE FOR THE DEOs and DQASOs

Introduction: Good morning or afternoon sir/madam. Thank you for allowing me to interview you in regard to **HR practices and their Impact on the Performance of Public Schools in Bungoma County, Kenya**. I would like to assure you that I will stick to all ethical codes of conduct with regard to conducting research as stated in my introduction letter will be adhered to.

The Interview Questions:

1. What are some of the factors affecting academic performance in the County?
2. With reference to the factors in question 1, how have these factors affected morale, motivation, satisfaction and academic performance in the County?
3. In your opinion which factors affect the teaching force most in the performance of their duties? Kindly arrange them in order of merit from the worst to the least.
4. Which strategic options will help in improving the performance of public schools in Bungoma County?

Conclusion: Thank you for your time, your responses to the questions will indeed contribute a lot to my research work.

APPENDIX 7: INTERVIEW SCHEDULE FOR THE SUPPORT STAFF

Introduction: Good morning or afternoon sir/madam. Thank you for allowing me to interview you in regard to **HR practices and their Impact on the Performance of Public Schools in Bungoma County, Kenya**. I would like to assure you that I will stick to all ethical codes of conduct with regard to conducting research as stated in my introduction letter.

The Interview Questions:

1. What are some of the factors affecting the performance of your duties in their school?
2. Which factors affect you most in the performance of your duties in school?
3. What do you think should be the solutions to these challenges so as to improve the academic performance of the school?

Conclusion: Thank you for your time, your responses to the questions will indeed contribute a lot to my research work.

APPENDIX 8: OBSERVATION CHECKLIST

Things to look out for

1. Availability of academic records on the performance of students and schools in both KCPE and KCSE.
2. How many male and female teachers are in a particular school
3. What are their age brackets
4. Availability of instructional and physical facilities, for example

i) Does the library have sufficient and relevant books?

ii) Does the institution have somebody to assist the students on relevant literature in the library

iii) Are there internet services for their use in the library?

iv) Playing fields

v) Laboratories with well-equipped facilities

vi) Botanical gardens and fish ponds

5. Are the classrooms enough for the students?
6. Do classrooms have enough desks and chairs for effective learning of students?
7. Are there enough dormitories to offer enough accommodation for students?
8. In which way is the community supportive and friendly to the school?
9. Staffing of teachers:

i) Are teachers/support staff trained?

ii) How do you rate their experience?

iii) Are they enough in number?

APPENDIX 9: COMPARISON OF ACADEMIC PERFORMANCE AND ONE-WAY ANOVA MULTIPLE-POST HOC TESTS

PART A: COMPARISON OF ACADEMIC PERFORMANCE OF BUNGOMA COUNTY WITH OTHER COUNTIES IN THE FORMER WESTERN PROVINCE

YEAR	BUNGOMA COUNTY MEAN SCORES	KAKAMEGA COUNTY MEAN SCORES	VIHIGA COUNTY MEAN SCORES	BUSIA COUNTY MEAN SCORES
2002	4.221	4.504	4.458	5.167
2003	4.628	4.838	4.612	5.228
2004	4.796	4.948	4.829	5.663
2005	5.210	5.329	5.303	5.802
2006	4.588	4.812	4.876	5.172
2007	4.772	5.213	5.261	5.604
2008	4.457	4.765	4.675	4.715
2009	4.622	4.863	4.768	4.648
2010	5.318	5.389	5.511	5.332
2011	5.316	5.383	5.534	5.525
Mean Average	**4.793**	**5.004**	**4.983**	**5.286**

Source: Mean Scores Derived from KNEC-2002-2012

PART B: ONE-WAY ANOVA MULTIPLE-POST HOC COUNTY ACADEMIC COMPARISON RESULTS IN THE FOUR COUNTIES IN THE FORMER WESTERN PROVINCE

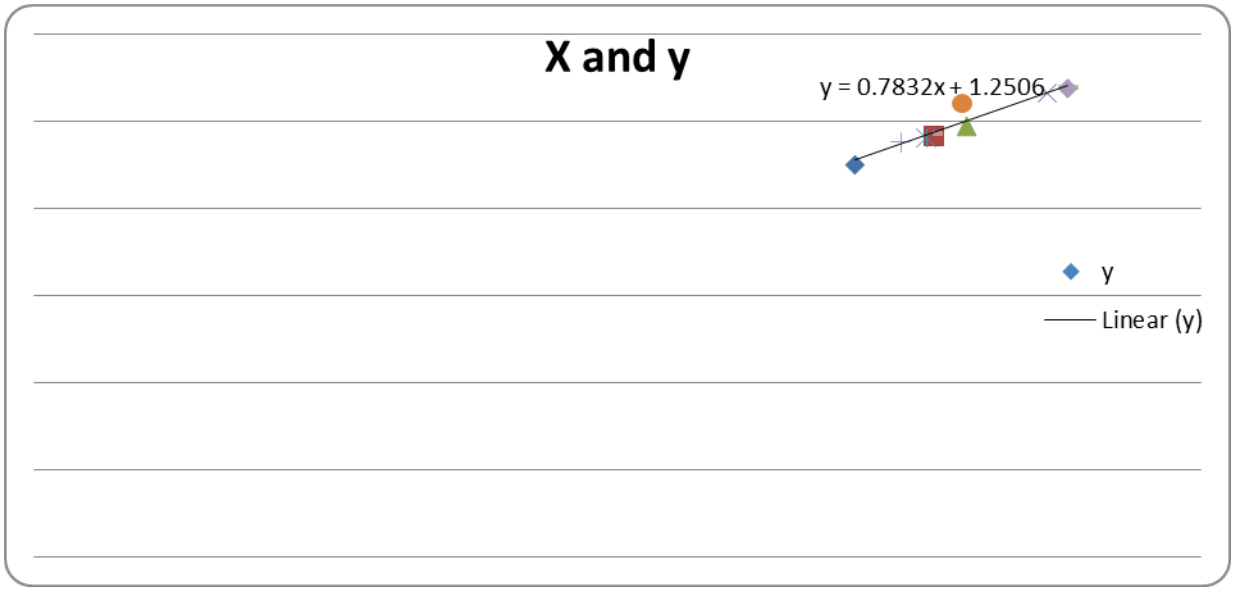
County	Mean	Honestly Significant Difference (HSD)	Tukey	LSD	Bonferroni	Sidak
M1	4.793	M1, M2 = -1.290	>HSD value (s)	p = 0.058 (s)	p = 0.038 (s)	p = 0.095 (s)
M2	5.004	M1, M3 = -1.162	>HSD value (s)	p = 0.025 (s)	p = 0.025 (s)	p = 0.064 (s)
M3	4.983	M1, M4 = -3.014	>HSD value (s)	p = 0.034 (s)	p = 0.017 (s)	p = 0.042 (s)
M4	5.286	M2, M3 = 0.128	>HSD value (nS)	p = 0.560 (ns)	p = 0.570 (ns)	p = 0.574 (ns)
		M2, M4 = -1.724	>HSD value (s)	p = 0.048 (s)	p = 0.0160 (s)	p = 0.01 (s)
		M3, M4 = -1.853	>HSD value (s)	p = 0.024 (s)	p = 0.0230 (s)	p = 0.017 (s)

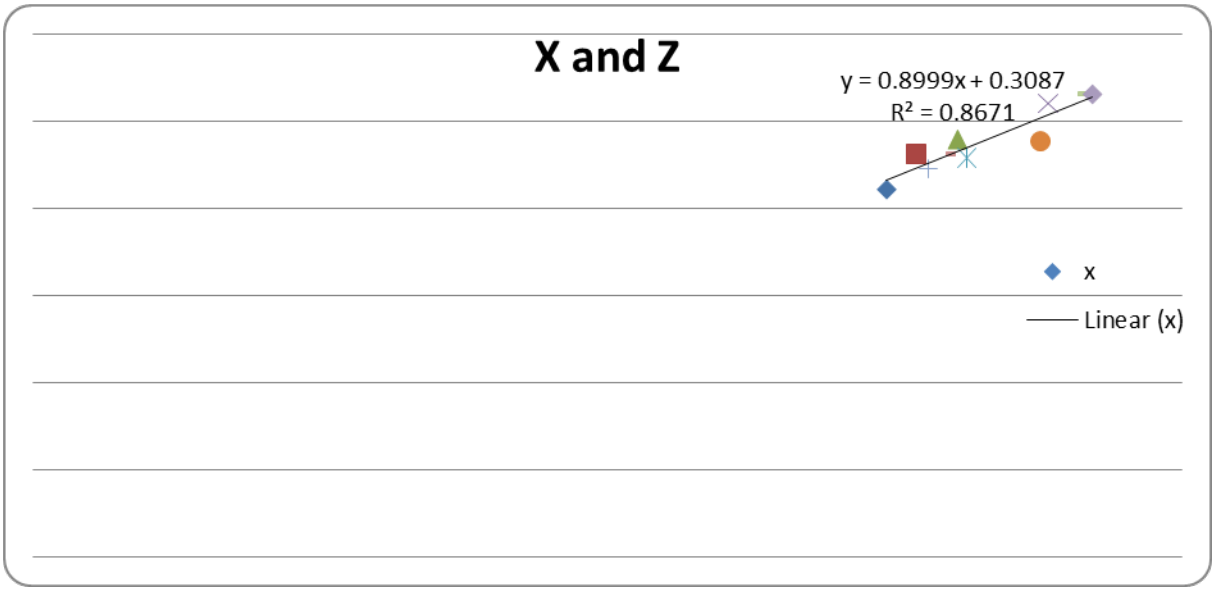
M1= Bungoma, M2 = Kakamega, M3 =Vihiga and M4 = Busia
s= significant (p<0.05), two groups differ; ns = not significant (p>0.05), two groups do not differ

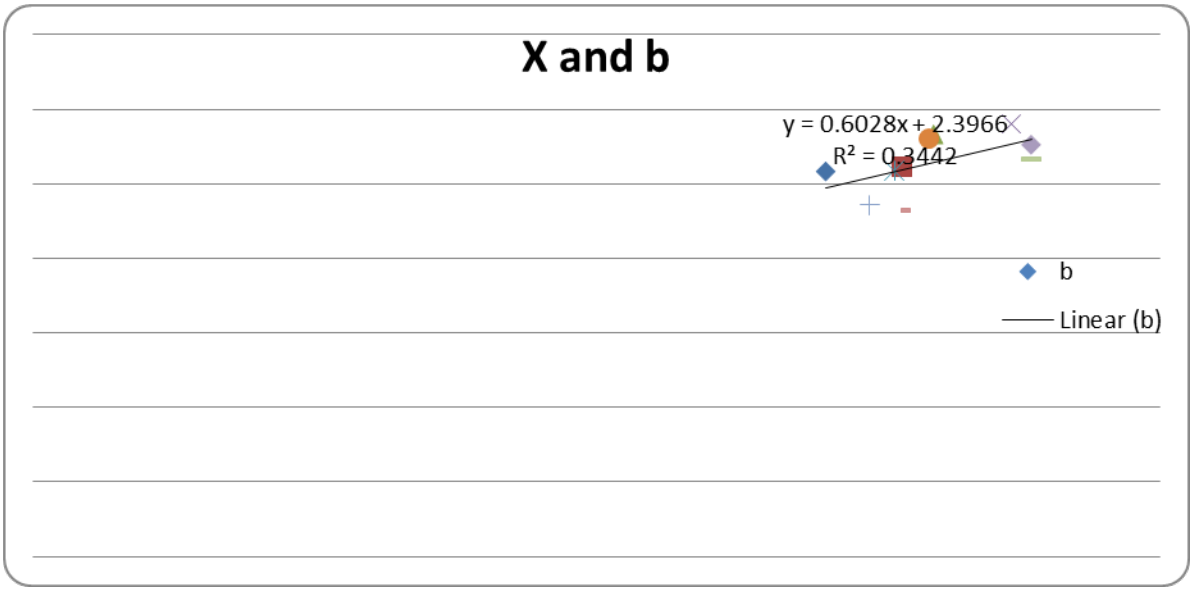
For Turkey, if the difference is larger than the HSD value (0.01284), then the difference is significant

APPENDIX 10: REGRESSION MODELS FOR BUNGOMA COUNTY VERSUS OTHER COUNTIES IN FORMER WESTERN PROVINCE

Year	Bungoma	Kakamega	Vihiga	Bungoma	Busia
	x	y	z	x	b
2002	4.221	4.504	4.4583	4.221	5.167
2003	4.628	4.838	4.612	4.628	5.228
2004	4.796	4.948	4.829	4.796	5.663
2005	5.21	5.329	5.303	5.21	5.802
2006	4.588	4.812	4.876	4.588	5.172
2007	4.772	5.213	5.261	4.772	5.604
2008	4.457	4.765	4.675	4.457	4.715
2009	4.622	4.863	4.768	4.622	4.648
2010	5.318	5.389	5.511	5.318	5.332
2011	5.316	5.383	5.534	5.316	5.525




X and Z
y = 0.8999x + 0.3087
R² = 0.8671
x
Linear (x)


X and b
y = 0.6028x + 2.3966
R² = 0.3442
b
Linear (b)

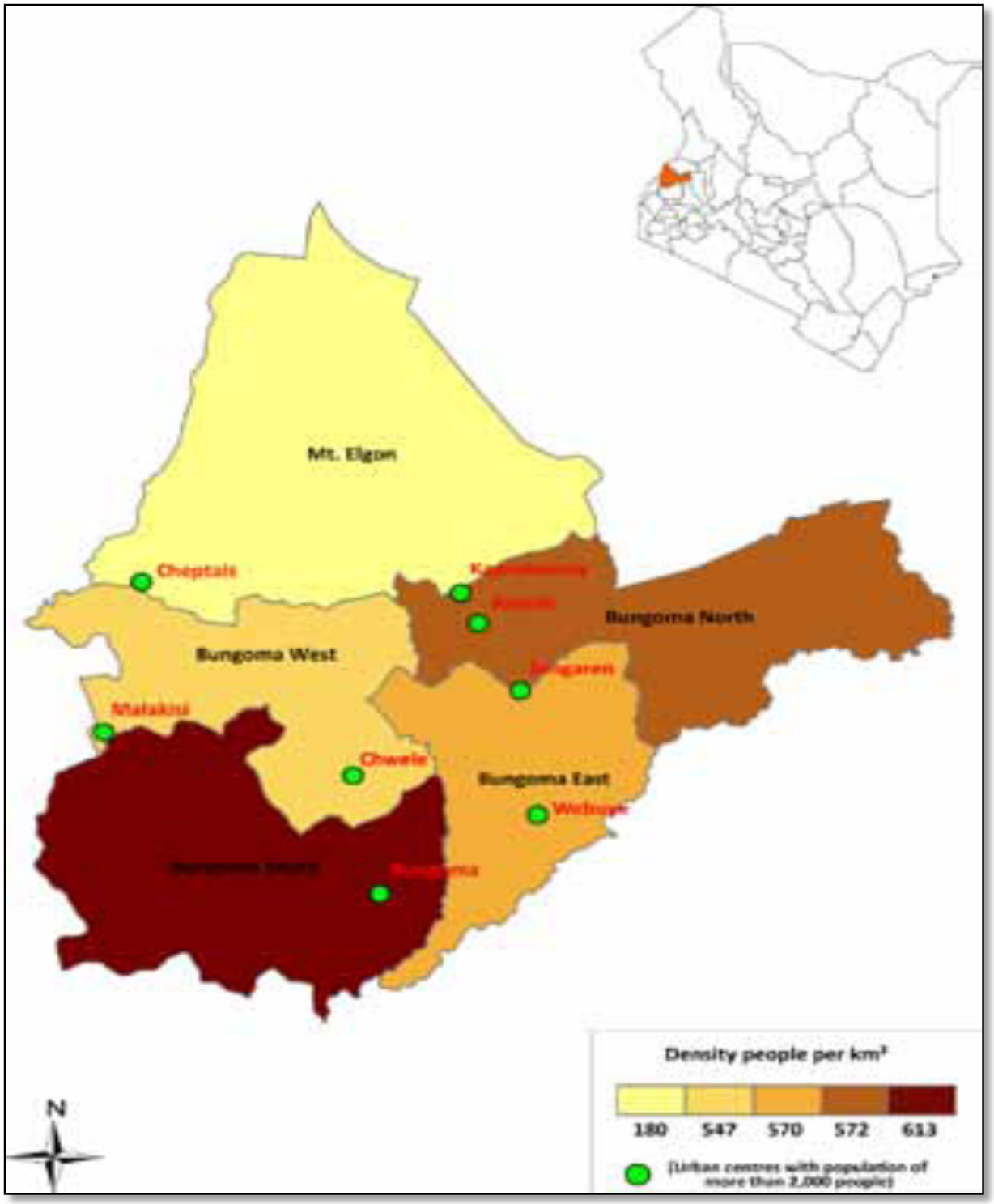
APPENDIX 11: LEVEL OF TEACHER'S PREPARATION OF STUDENTS IN NATIONAL EXAMINATION

Reasons	Frequency	Percentage
Poor	65	28.9
Below average	82	36.4
Average	25	11.1
Above average	20	8.9
Excellent	33	14.7
Total	**225**	**100.0**

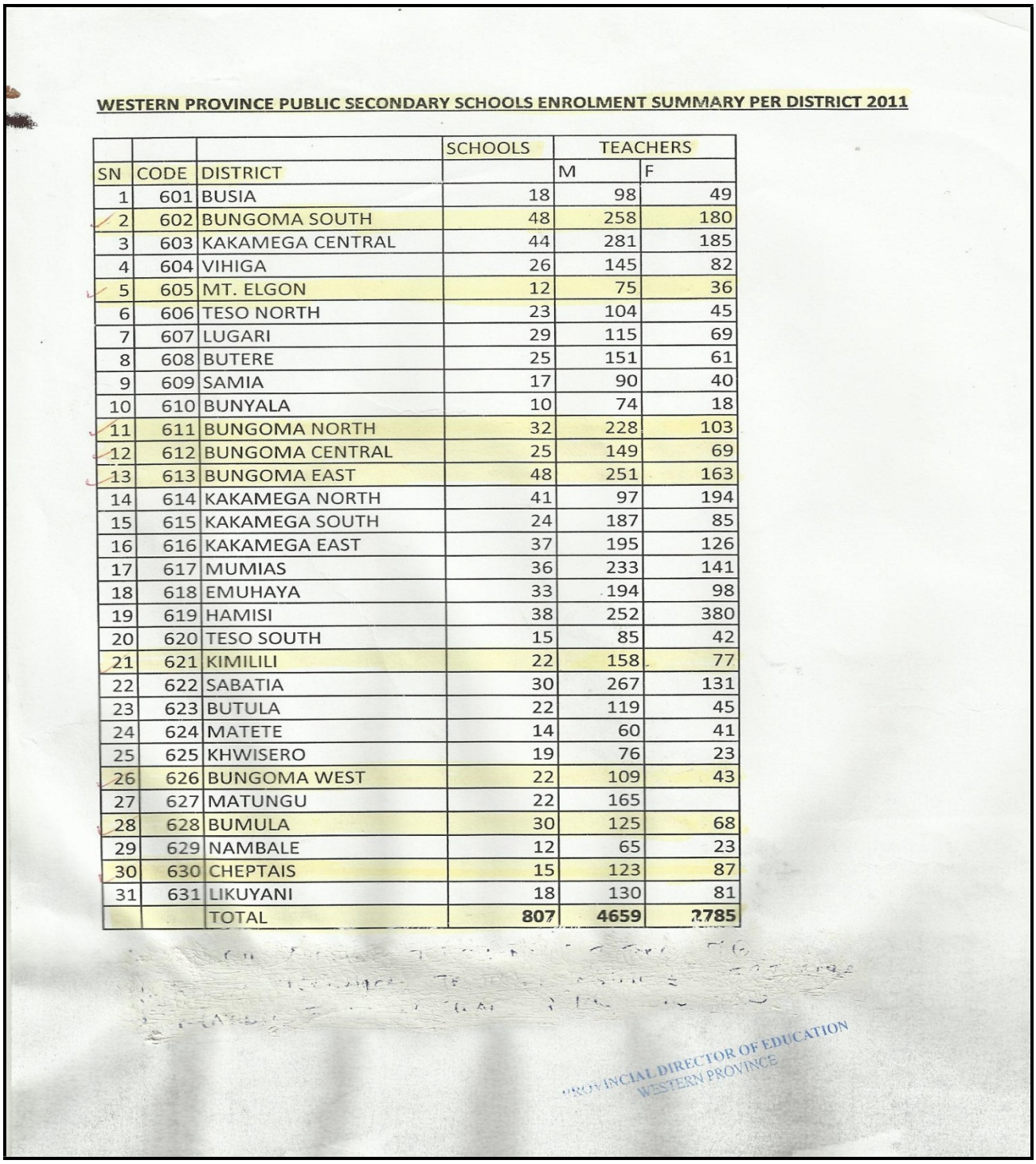
ANOVA Results

	Sum of squares, SS	Mean of squares, MS	df	F
Between	586.0976	586.0976	1	**8.0953**
Within	579.19583	72.3995	8	
Total	**1165.2934**		**9**	

APPENDIX 12: MAP OF BUNGOMA COUNTY



APPENDIX 13: WESTERN PROVINCE PUBLIC SECONDARY SCHOOLS ENROLMENT SUMMARY PER DISTRICT, 2011



WESTERN PROVINCE PUBLIC SECONDARY SCHOOLS ENROLMENT SUMMARY PER DISTRICT 2011

			SCHOOLS	TEACHERS	
SN	CODE	DISTRICT		M	F
1	601	BUSIA	18	98	49
2	602	BUNGOMA SOUTH	48	258	180
3	603	KAKAMEGA CENTRAL	44	281	185
4	604	VIHIGA	26	145	82
5	605	MT. ELGON	12	75	36
6	606	TESO NORTH	23	104	45
7	607	LUGARI	29	115	69
8	608	BUTERE	25	151	61
9	609	SAMIA	17	90	40
10	610	BUNYALA	10	74	18
11	611	BUNGOMA NORTH	32	228	103
12	612	BUNGOMA CENTRAL	25	149	69
13	613	BUNGOMA EAST	48	251	163
14	614	KAKAMEGA NORTH	41	97	194
15	615	KAKAMEGA SOUTH	24	187	85
16	616	KAKAMEGA EAST	37	195	126
17	617	MUMIAS	36	233	141
18	618	EMUHAYA	33	194	98
19	619	HAMISI	38	252	380
20	620	TESO SOUTH	15	85	42
21	621	KIMILILI	22	158	77
22	622	SABATIA	30	267	131
23	623	BUTULA	22	119	45
24	624	MATETE	14	60	41
25	625	KHWISERO	19	76	23
26	626	BUNGOMA WEST	22	109	43
27	627	MATUNGU	22	165	
28	628	BUMULA	30	125	68
29	629	NAMBALE	12	65	23
30	630	CHEPTAIS	15	123	87
31	631	LIKUYANI	18	130	81
		TOTAL	**807**	**4659**	**2785**

PROVINCIAL DIRECTOR OF EDUCATION
WESTERN PROVINCE

APPENDIX 14: FORMER WESTERN PROVINCE PUBLIC PRIMARY SCHOOLS ENROLMENT PER DISTRICT SUMMARY, 2011

WESTERN PROVINCE PUBLIC PRIMARY SCHOOLS ENROLMENT PER DISTRICT SUMMARY 2011

			SCHOOLS	TEACHERS	
SN	CODE	DISTRICT		M	F
1	601	BUSIA	57	292	319
2	602	BUNGOMA S.	103	381	517
3	603	KAKAMEGA C.	137	177	675
4	604	VIHIGA	76	322	350
5	605	MT. ELGON	53	315	251
6	606	TESO NORTH	103	349	347
7	607	LUGARI	47	305	333
8	608	BUTERE	80	509	467
9	609	SAMIA	65	359	279
10	610	BUNYALA	38	270	136
11	611	BUNGOMA N.	92	679	693
12	612	BUNGOMA C.	86	422	330
13	613	BUNGOMA E.	120	572	591
14	614	KAKAMEGA N.	118	580	594
15	615	KAKAMEGA S.	77	384	339
16	616	KAKAMEGA E.	84	464	496
17	617	MUMIAS	93	572	601
18	618	EMUHAYA	101	549	538
19	619	HAMISI	105	497	452
20	620	TESO SOUTH	84	335	268
21	621	KIMILILI	59	323	268
22	622	SABATIA	95	448	495
23	623	BUTULA	65	395	343
24	624	MATETE	40	222	172
25	625	KHWISERO	72	348	303
26	626	BUNGOMA W.	82	390	270
27	627	MATUNGU	60	384	363
28	628	BUMULA	101	482	424
29	629	NAMBALE	41	224	249
30	630	CHEPTAIS	81	411	263
31	631	LIKUYANI	48	312	364
		TOTAL	**2463**	**12272**	**12090**

PROVINCIAL DIRECTOR OF EDUCATION
WESTERN PROVINCE

APPENDIX 15: 2012 KCSE COUNTIES ORDER OF MERIT

APPENDIX I

ATIONAL EXAMINATIONS COUNCIL

2012 KCSE EXAMINATION ORDER OF MERIT

COUNTIES ORDER OF MERIT

RANK	COUNTYCODE	COUNTY	PERF. INDEX
1	22	SAMBURU	38.184800
2	24	WEST POKOT	37.374447
3	34	ELGEYO MARAKWET	36.837690
4	42	SIAYA	36.703950
5	14	EMBU	36.137666
6	23	TRANS NZOIA	35.682500
7	25	BOMET	35.587150
8	29	NANDI	35.133578
9	26	UASIN GISHU	35.031198
10	39	KISUMU	34.934866
11	28	KERICHO	34.688605
12	38	VIHIGA	34.138834
13	44	MIGORI	33.924209
14	41	HOMA BAY	33.798653
15	35	BUSIA	33.463113
16	20	NAIROBI	33.204383
17	33	BARINGO	33.084801
18	37	KAKAMEGA	33.078444
19	19	THARAKA NITHI	33.074430
20	27	NAKURU	32.723246
21	30	LAIKIPIA	32.108637
22	43	NYAMIRA	32.014567
23	07	NYANDARUA	31.852768
24	36	BUNGOMA	31.800865
25	21	TURKANA	31.580600

Release of the year 2012 KCSE Examination Results by the Hon. Mutula Kilonzo, E.G.H., E.B.S., MCIArb., S.C., M.P., Minister for Education, on Friday 1st March 2013

APPENDIX 16: 2012 KCPE COUNTIES ORDER OF MERIT

APPENDIX G

THE KENYA NATIONAL EXAMINATIONS COUNCIL

2012 KCPE EXAMINATION
COUNTY ORDER OF RANKING

POSITION	COUNTY NAME	MEAN SCORE
1	KIRINYAGA	273
2	ELGEYO MARAKWET	272
3	NANDI	271
4	UASIN GISHU	270
4	BARINGO	270
6	MAKUENI	268
7	BUSIA	267
8	KISUMU	264
9	THARAKA NITHI	263
9	WEST POKOT	263
11	VIHIGA	262
11	SIAYA	262
13	KAJIADO	261
13	KAKAMEGA	261
15	NAIROBI	259
16	NYERI	258
17	BOMET	255
18	HOMA BAY	253
19	MACHAKOS	252
19	KERICHO	252
21	EMBU	251
22	TRANS NZOIA	250

APPENDIX 17: DETAILED RESULTS OF FORMER WESTERN PROVINCE FROM 2002-2012

PART A

DISTRICT MEAN SCORES – K.C.S.E 2007

	CODE	DISTRICT	MEAN SCORE
1.	601	BUSIA	5.799
2.	608	BUTERE/MUMIAS	5.512
3.	606	TESO	5.408
4.	604	VIHIGA	5.261
5.	602	BUNGOMA	5.235
6.	607	LUGARI	5.116
7.	603	KAKAMEGA	5,010
8.	605	MT. ELGON	4.803

POSSIBLE PUBLIC UNIVERSITY ENTRY BY DISTRICTS – B+ AND ABOVE

2007						2006				
CODE	DISTRICT	A	A-	B+	TOTAL	A	A-	B+	TOTAL	DEV.
602	BUNGOMA	31	153	280	464	67	164	269	500	-36
604	VIHIGA	9	54	160	223	15	58	165	165	58
603	KAKAMEGA	11	61	134	206	8	48	114	170	36
608	BUTERE/MUMIAS	5	36	95	136	6	36	110	152	-16
601	BUSIA	1	29	49	79	3	15	35	53	26
607	LUGARI	1	9	38	48	1	12	39	52	-4
606	TESO	0	5	11	16	0	5	16	21	-5
605	MT. ELGON	0	0	11	11	0	1	9	10	1
	TOTALS	58	347	778	1183	100	339	757	1123	

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PART B

DISTRICT PERFORMANCE BY MERIT

	2007					2006				
CODE	DISTRICT	A	A-	B+	TOTAL	A	A-	B+	TOTAL	DEV.
604	VIHIGA	9	54	160	**223**	15	58	165	165	58
603	KAKAMEGA	11	61	134	**206**	8	48	114	170	36
601	BUSIA	1	29	49	**79**	3	15	35	53	26
605	MT. ELGON	0	0	11	**11**	0	1	9	10	1
607	LUGARI	1	9	38	**48**	1	12	39	52	-4
606	TESO	0	5	11	**16**	0	5	16	21	-5
608	BUTERE/MUMIAS	5	36	95	**136**	6	36	110	152	-16
602	BUNGOMA	31	153	280	**464**	67	164	269	500	-36
	TOTALS	**58**	**347**	**778**	**1183**	**100**	**339**	**757**	1123	

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PART C

BUNGOMA DISTRICT

SNO.	CODE	NAME OF SCHOOL	ENT.	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	Z	U	MS 07	MS 06	MS 05	DEV.
1	602606	F. S. KAMUSINGA	204	12	52	43	58	20	15	3	1	0	0	0	0	0	0	0	0	9.5882	10.1845	9.8506	-0.5962
2	602102	KIBABII	205	1	11	31	57	66	21	8	2	0	0	0	0	7	1	0	0	8.5303	8.4251	8.7067	0.1052
3	602401	LUGULU GIRLS	293	5	32	47	57	65	44	28	7	3	3	2	0	0	0	0	0	8.3652	9.1787	9.2720	-0.8135
4	602601	CHESAMISI BOYS	121	0	8	22	24	31	21	10	3	0	0	0	0	2	0	0	0	8.3529	6.1730	7.5946	2.1800
5	602101	BUNGOMA HIGH	195	0	9	29	39	57	43	12	5	1	0	0	0	0	0	0	0	8.1949	7.3761	6.9645	0.8187
6	602201	KHASOKO	62	0	5	1	10	18	9	14	3	1	0	0	0	0	0	1	0	7.6230	6.6795	7.4576	0.9435
7	602304	TEREMI	232	1	12	15	30	45	55	56	17	1	0	0	0	0	0	1	0	7.5065	7.1067	7.5802	0.3998
8	602610	KIMILILI BOYS	139	0	0	5	9	28	64	28	5	0	0	0	0	0	0	0	0	7.1655	7.0929	7.3725	0.0726
9	602103	CARDINAL OTUNGA GIRLS	128	0	0	4	6	17	34	40	17	10	0	0	0	0	0	0	0	6.5078	7.3765	6.7404	-0.8687
10	602119	NAMACHANJA	140	0	1	4	7	23	33	31	27	10	4	0	0	0	0	0	0	6.4429	6.0000	6.2520	0.4429
11	602402	BOKOLI BOYS	88	0	1	5	3	8	14	28	22	7	0	0	0	0	0	0	0	6.3182	6.6842	5.8182	-0.3660
12	602215	ST. KIZITO MAYANJA	32	0	2	0	1	4	4	7	8	5	1	0	0	0	0	0	0	6.1250	5.3448	5.5333	0.7802
13	602409	ST.CECILIA GIRLS MISIKHU	218	0	0	3	9	21	44	66	47	23	3	0	0	2	0	0	0	6.1065	6.9254	6.3146	-0.8189
14	602422	ST. MARY'S WEBUYE	57	0	0	0	1	6	9	23	12	6	0	0	0	0	0	0	0	6.0000	6.2679	6.4359	-0.2679
15	602419	MUJI	51	0	0	1	4	6	4	13	15	6	2	0	0	0	0	0	0	5.9804	6.5652	4.7955	-0.5848
16	602608	MOI GIRLS KAMUSINGA	126	0	0	3	1	11	26	32	41	11	0	0	0	0	0	0	0	5.9524	6.6957	7.0976	-0.7433
17	602501	CHWELE GIRLS	131	0	0	1	8	6	19	44	36	11	4	1	0	1	0	0	0	5.8846	5.5495	6.1089	0.3351
18	602127	ST. PETER'S MUSIKOMA	23	0	0	0	1	2	5	2	9	4	0	0	0	0	0	0	0	5.7826	NEW	NEW	
19	602512	A. C. BUTONGE	39	0	0	0	1	4	6	12	10	5	0	0	0	0	1	0	0	5.7692	6.2121	7.6552	-0.4429
20	602418	MILO	91	0	0	0	7	9	11	19	21	19	3	1	0	1	0	0	0	5.7556	6.3333	6.4675	-0.5778
21	602428	ST. MATHEWS ACK WEB.	127	0	1	5	6	12	20	25	18	20	17	1	0	1	1	0	0	5.7460	5.7174	5.6463	0.0286
22	602513	NAMANG'OFULO	40	0	0	0	2	2	3	10	17	5	0	0	0	1	0	0	0	5.6410	5.2162	6.5500	0.4248
23	602504	NAMWELA	103	0	0	3	2	11	15	13	17	29	13	0	0	0	0	0	0	5.4272	5.7313	5.8737	-0.3042
24	602709	BIS. ANYOLO KAKAMWE	137	0	0	4	7	9	14	27	27	29	12	7	0	1	0	0	0	5.4118	5.4661	5.5615	-0.0543
25	602107	FRIENDS BUKEMBE	89	0	1	0	2	4	10	17	23	29	2	1	0	0	0	0	0	5.3034	4.6989	4.8889	0.6044
26	602706	MBAKALO	60	0	0	2	0	4	3	15	13	20	2	1	0	0	0	0	0	5.2667	4.9811	5.1014	0.2855
27	602309	LUKHOME	25	0	1	0	1	0	3	0	12	6	2	0	0	0	0	0	0	5.2400	4.0000	5.2000	1.2400
28	602420	MATULO FRIENDS	69	0	1	1	1	1	10	5	28	12	9	1	0	0	0	0	0	5.1449	5.3810	5.5875	-0.2360

PART D

29	602605	ST. MARY'S SOSIO	74	0	1	1	1	6	6	11	15	13	19	1	0	1	0	0	0	5.0959	4.3590	4.8069	0.7369
30	602414	NDIVISI	54	0	0	2	2	3	5	10	7	13	7	4	1	0	0	0	0	5.0741	4.8148	4.6575	0.2593
31	602209	NANG'ENI GIRLS	33	0	0	0	1	1	0	9	10	8	4	0	0	0	0	0	0	5.0000	4.6538	4.7241	0.3462
32	602602	KAMUSINDE	115	0	1	0	1	8	15	8	34	26	17	4	0	1	0	0	0	5.0000	5.2692	5.6636	-0.2692
33	602705	MALIKI	61	0	0	1	1	4	3	9	16	18	9	0	0	0	0	0	0	5.0000	4.5067	3.9565	0.4933
34	602204	CHILIBA	28	0	0	0	1	0	2	8	5	7	5	0	0	0	0	0	0	4.9643	4.4615	4.9667	0.5027
35	602308	KUYWA GIRLS	21	0	0	1	0	0	0	3	10	5	2	0	0	0	0	0	0	4.9524	5.2105	5.2857	-0.2581
36	602116	ST. MARTINS' MWIBALE	32	0	0	0	3	0	4	3	9	5	4	4	0	0	0	0	0	4.9375	5.1538	5.8929	-0.2163
37	602108	KIMUGUI	98	0	0	2	3	10	8	13	15	22	12	10	3	0	0	0	0	4.9286	4.8750	5.1340	0.0536
38	602612	NAMAWANGA BAHAI	66	0	0	1	1	5	3	11	13	18	13	1	0	0	0	0	0	4.9091	4.9836	4.7500	-0.0745
39	602311	LUUYA GIRLS	43	0	0	0	0	2	2	7	13	16	3	0	0	0	0	0	0	4.8837	4.8654	4.6406	0.0183
40	602416	SIPALA	70	0	0	0	5	1	6	11	14	16	11	6	0	0	0	0	0	4.8571	4.8133	4.5800	0.0438
41	602202	KABULA	155	0	0	1	4	8	12	22	33	37	32	6	0	0	0	0	0	4.8194	5.6618	5.5985	-0.8424
42	602110	FR. SCHOOL LWANDA	69	0	0	1	2	4	8	7	8	19	17	3	0	0	0	0	0	4.7971	5.5200	5.2727	-0.7229
43	602710	LUKHUNA	107	0	1	2	3	6	5	14	22	24	19	10	0	0	0	1	0	4.7925	4.8652	5.5679	-0.0727
44	602207	KIMAETI	37	0	0	0	1	4	1	4	6	13	6	2	0	0	0	0	0	4.7568	5.1455	5.0492	-0.3887
45	602123	BUNGOMA BAPTIST GIRLS	71	0	0	2	1	3	4	7	18	19	14	3	0	0	0	0	0	4.7465	4.2174	NEW	0.5291
46	602315	NALONDO	101	1	1	1	0	2	8	7	29	31	21	0	0	0	0	0	0	4.7426	3.8625	4.2111	0.8801
47	602122	LUPINDA HIGH	45	0	0	0	2	1	2	7	10	12	8	2	0	0	0	1	0	4.7273	4.0000	NEW	0.7273
48	602511	BUKOKHOLO	19	0	0	1	0	0	0	1	8	5	3	0	0	1	0	0	0	4.7222	4.7647	3.7917	-0.0425
49	602213	MWIRUTI GIRLS	58	0	0	3	1	6	1	8	14	10	6	1	0	0	8	0	0	4.6897	3.9400	5.2813	0.7497
50	602125	WAMALWA KIJANA	25	0	0	0	0	2	1	4	7	4	6	0	0	0	1	0	0	4.6400	NEW	NEW	
51	602507	KABKARA	58	0	0	0	1	2	4	8	9	23	9	2	0	0	0	0	0	4.6379	4.2698	4.5179	0.3681
52	602115	BULONDO	22	0	0	0	0	1	2	4	2	8	4	1	0	0	0	0	0	4.6364	4.3333	3.7692	0.3030
53	602702	NAITIRI BOYS	86	0	0	0	2	4	6	8	20	23	15	7	0	1	0	0	0	4.6000	5.3750	5.5517	-0.7750
54	602406	NAMAWANGA GIRLS	82	0	0	0	2	1	2	13	22	24	16	2	0	0	0	0	0	4.5854	5.1034	5.6279	-0.5181
55	602203	BUMULA FRIENDS	43	0	0	0	1	1	3	7	9	9	10	3	0	0	0	0	0	4.5814	5.8636	4.8947	-1.2822
56	602713	ST. PAULS NARATI	26	0	0	0	0	0	2	6	4	6	8	0	0	0	0	0	0	4.5385	4.6190	5.3696	-0.0806
57	602211	ST. PATRICK'S NETIMA	71	0	0	0	1	3	8	7	8	19	21	3	0	0	0	1	0	4.5143	4.6712	4.4722	-0.1569
58	602718	BISHOP ATUNDO MABUSI	27	0	0	0	0	0	2	6	5	8	2	4	0	0	0	0	0	4.4815	3.1304	3.9722	1.3510
59	602425	MAHANGA	82	0	0	0	2	4	7	8	11	25	18	3	4	0	0	0	0	4.4634	4.7368	4.2807	-0.2734
60	602421	PAN PAPER	43	0	0	1	2	0	2	4	7	14	9	3	1	0	0	0	0	4.4419	4.5085	4.5467	-0.0666
61	602212	MYANGA	41	0	0	0	0	0	3	9	6	11	9	3	0	0	0	0	0	4.4390	4.5500	5.1111	-1.0110
62	602306	CHEBUKAKA GIRLS	97	0	0	0	1	1	2	11	25	37	17	3	0	0	0	0	0	4.4021	4.6932	4.6436	-0.2911
63	602609	KIBINGEI FRIENDS	39	0	0	0	0	0	4	4	10	10	7	4	0	0	0	0	0	4.3846	4.2778	4.3333	0.1068
64	602104	ST. TADEOS NDENGELWA	21	0	0	0	2	1	1	2	1	6	2	6	0	0	0	0	0	4.3810	4.5357	4.1429	-0.1548

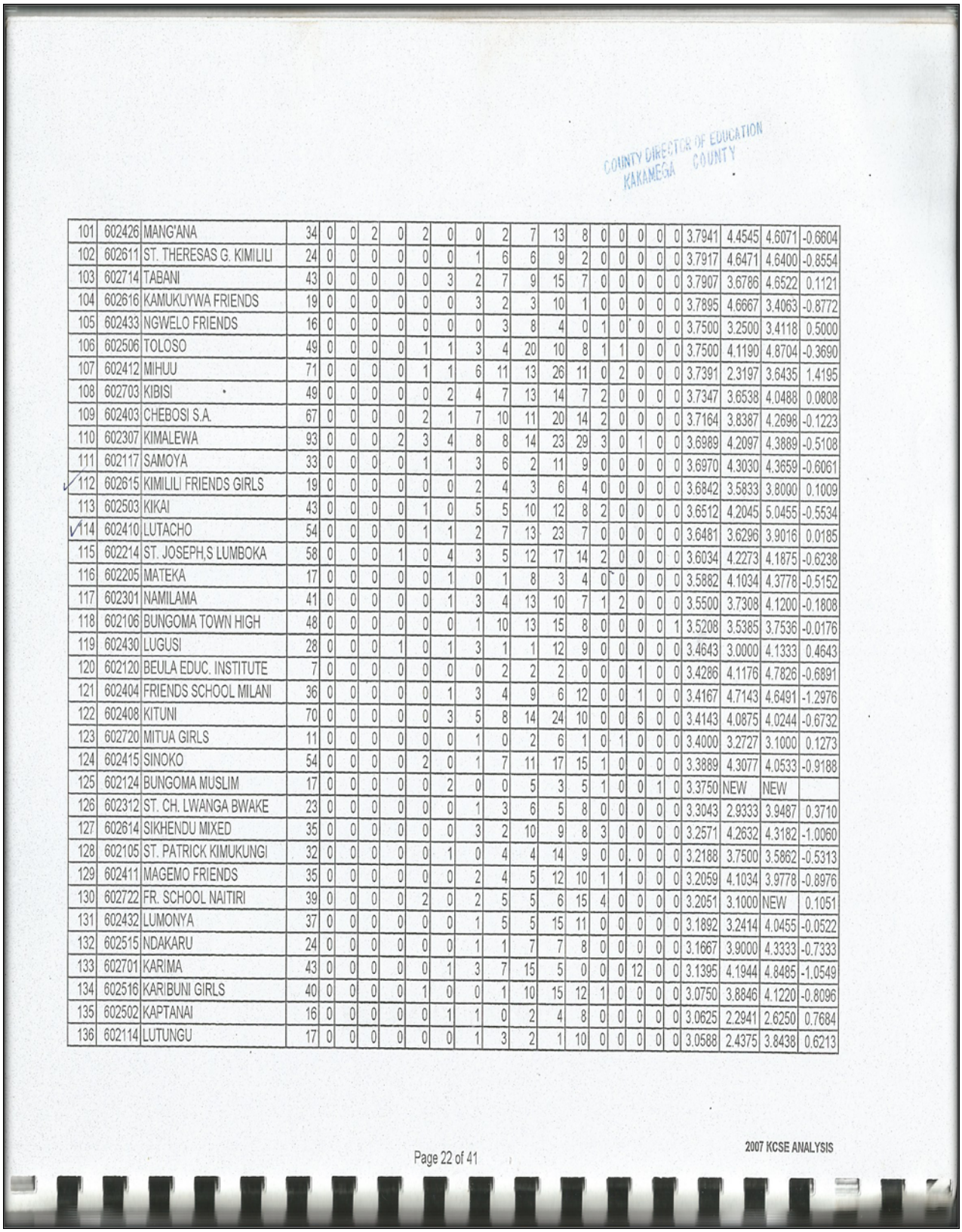
PART E

65	602413	MISEMWA	30	0	0	0	1	2	1	1	7	6	8	3	0	1	0	0	0	4.3793	4.0000	3.2813	0.3793
66	602210	NAPARA	41	0	0	0	0	1	2	7	10	5	13	3	0	0	0	0	0	4.3659	4.1136	4.2553	0.2522
67	602603	MAENI GIRLS	29	0	0	0	0	0	2	2	6	12	6	0	0	1	0	1	0	4.3571	5.4211	3.8158	-1.0639
68	602208	ST. PAULS MILUKI	62	0	0	0	3	2	4	5	9	15	16	8	0	0	0	0	0	4.3548	4.4884	4.3846	-0.1335
69	602509	MACHAKHA	22	0	0	0	0	1	1	2	5	7	5	0	0	0	1	0	0	4.3182	3.2857	3.8947	1.0325
70	602711	MULIRO	34	0	0	0	0	0	3	3	5	13	8	1	0	1	0	1	0	4.3030	5.1724	4.6889	-0.8694
71	602302	SIKUSI	107	0	0	0	1	6	5	10	20	27	26	11	0	0	1	0	0	4.2991	5.0750	5.5309	-0.7759
72	602424	MAKEMO R. C.	43	0	0	0	0	3	1	4	6	12	15	1	0	1	0	0	0	4.2857	5.4286	4.8571	-1.1429
73	602429	MIENDO FRIENDS	53	0	0	0	2	2	2	4	9	10	19	4	0	1	0	0	0	4.2692	4.3636	4.5556	-0.0944
74	602405	MISIKHU FRIENDS	117	0	0	0	3	3	6	5	23	36	35	6	0	0	0	0	0	4.2650	4.7987	5.5276	-0.5337
75	602112	SIKALAME	27	0	0	0	0	1	2	2	6	7	5	4	0	0	0	0	0	4.2593	4.6500	6.1765	-0.3907
76	602407	SIRENDE GIRLS	53	0	0	0	0	2	4	6	10	10	12	9	0	0	0	0	0	4.2264	4.3103	3.5000	-0.0839
77	602206	MUNG'ORE GIRLS	30	0	0	0	0	0	1	3	9	6	8	2	0	0	0	1	0	4.2069	5.2813	5.6786	-1.0744
78	602505	ST. ANTONY SIRISIA	73	0	0	0	1	2	4	8	5	23	19	5	1	5	0	0	0	4.2059	3.8571	5.1667	0.3487
79	602510	BISUNU FRIENDS	21	0	0	0	1	0	1	2	2	8	4	3	0	0	0	0	0	4.1905	4.3684	4.4565	-0.1779
80	602314	MAROBO	34	0	0	0	2	1	2	4	2	6	10	7	0	0	0	0	0	4.1765	4.2121	4.3600	-0.0357
81	602310	MADISI	47	0	0	0	0	0	7	4	9	10	9	5	1	0	2	0	0	4.1702	4.2258	5.2162	-0.0556
82	602717	MILIMA	48	0	0	0	0	1	4	5	9	8	13	7	0	1	0	0	0	4.1702	4.3500	4.3947	-0.1798
83	602109	FRIENDS SCHOOL KITALE	44	0	0	1	0	0	0	7	8	10	15	3	0	0	0	0	0	4.1591	4.8077	5.4242	-0.6486
84	602316	MABANGA GIRLS	19	0	0	0	0	0	0	1	6	8	3	1	0	0	0	0	0	4.1579	3.7368	4.8182	0.4211
85	602305	BUSAKALA	82	0	0	0	2	2	4	7	15	18	21	10	1	2	0	0	0	4.1358	4.3913	4.4118	-0.2555
86	602707	MUKUYUNI	36	0	0	1	0	0	1	4	7	7	13	2	1	0	0	0	0	4.1111	4.0000	4.2400	0.1111
87	602113	KONGOLI	29	0	0	0	0	1	0	4	7	7	4	5	1	0	0	0	0	4.0690	4.5000	4.8857	-0.4310
88	602508	LWANDANYI	29	0	0	0	0	0	1	3	6	7	11	1	0	0	0	0	0	4.0690	3.6500	3.8621	0.4190
89	602604	ST. PETER'S NAKALIRA	108	0	0	1	2	4	5	6	15	23	34	18	0	0	0	0	0	4.0370	4.0078	5.0435	0.0293
90	602417	SITIKHO FRIENDS	37	0	0	0	0	1	1	3	9	7	13	1	2	0	0	0	0	4.0270	4.8095	5.1471	-0.7825
91	602708	SIRAKARU	87	0	0	1	1	1	2	6	14	22	28	8	1	3	0	1	1	4.0000	4.2857	4.1642	-0.2857
92	602715	ELUUYA FRIENDS	134	0	0	0	1	3	7	14	28	20	31	27	1	0	0	0	0	3.9851	4.2075	4.8214	-0.2225
93	602716	JAMES MWEI	25	0	0	0	1	0	0	3	4	7	4	6	0	0	0	0	0	3.9600	3.9600	5.1200	0.0000
94	602704	LUNGAI	69	0	0	1	1	0	7	4	5	18	13	19	0	1	0	0	0	3.9118	4.1667	5.2857	-0.2549
95	602719	ST. PETER'S NDALU	56	0	0	0	0	4	3	2	7	14	12	12	2	0	0	0	0	3.8929	3.6522	4.0351	0.2407
96	602514	TAMULEGA	17	0	0	0	0	1	0	1	2	5	6	2	0	0	0	0	0	3.8824	3.3750	3.8182	0.5074
97	602111	SANG'ALO	42	0	0	0	0	0	2	3	6	13	13	5	0	0	0	0	0	3.8810	4.8919	4.6667	-1.0109
98	602613	CHESAMISI GIRLS	30	0	0	0	1	0	1	1	3	9	13	2	0	0	0	0	0	3.8667	4.0000	4.5909	-0.1333
99	602303	CHEBUKWA	40	0	0	0	0	0	0	4	4	16	12	5	0	0	0	0	0	3.8500	4.0000	4.9167	-0.1500
100	602712	NAMUNYIRI GIRLS	45	0	0	0	0	0	3	3	9	6	16	8	0	0	0	0	0	3.8222	4.4390	5.0508	-0.6168

PART F

65	602413	MISEMWA	30	0	0	0	1	2	1	1	7	6	8	3	0	1	0	0	0	4.3793	4.0000	3.2813	0.3793
66	602210	NAPARA	41	0	0	0	0	1	2	7	10	5	13	3	0	0	0	0	0	4.3659	4.1136	4.2553	0.2522
67	602603	MAENI GIRLS	29	0	0	0	0	0	2	2	6	12	6	0	0	1	0	1	0	4.3571	5.4211	3.8158	-1.0639
68	602208	ST. PAULS MILUKI	62	0	0	0	3	2	4	5	9	15	16	8	0	0	0	0	0	4.3548	4.4884	4.3846	-0.1335
69	602509	MACHAKHA	22	0	0	0	0	1	1	2	5	7	5	0	0	0	1	0	0	4.3182	3.2857	3.8947	1.0325
70	602711	MULIRO	34	0	0	0	0	0	3	3	5	13	8	1	0	1	0	1	0	4.3030	5.1724	4.6889	-0.8694
71	602302	SIKUSI	107	0	0	0	1	6	5	10	20	27	26	11	0	0	1	0	0	4.2991	5.0750	5.5309	-0.7759
72	602424	MAKEMO R. C.	43	0	0	0	0	3	1	4	6	12	15	1	0	1	0	0	0	4.2857	5.4286	4.8571	-1.1429
73	602429	MIENDO FRIENDS	53	0	0	0	2	2	2	4	9	10	19	4	0	1	0	0	0	4.2692	4.3636	4.5556	-0.0944
74	602405	MISIKHU FRIENDS	117	0	0	0	3	3	6	5	23	36	35	6	0	0	0	0	0	4.2650	4.7987	5.5276	-0.5337
75	602112	SIKALAME	27	0	0	0	0	1	2	2	6	7	5	4	0	0	0	0	0	4.2593	4.6500	6.1765	-0.3907
76	602407	SIRENDE GIRLS	53	0	0	0	0	2	4	6	10	10	12	9	0	0	0	0	0	4.2264	4.3103	3.5000	-0.0839
77	602206	MUNG'ORE GIRLS	30	0	0	0	0	0	1	3	9	6	8	2	0	0	0	1	0	4.2069	5.2813	5.6786	-1.0744
78	602505	ST. ANTONY SIRISIA	73	0	0	0	1	2	4	8	5	23	19	5	1	5	0	0	0	4.2059	3.8571	5.1667	0.3487
79	602510	BISUNU FRIENDS	21	0	0	0	1	0	1	2	2	8	4	3	0	0	0	0	0	4.1905	4.3684	4.4565	-0.1779
80	602314	MAROBO	34	0	0	0	2	1	2	4	2	6	10	7	0	0	0	0	0	4.1765	4.2121	4.3600	-0.0357
81	602310	MADISI	47	0	0	0	0	0	7	4	9	10	9	5	1	0	2	0	0	4.1702	4.2258	5.2162	-0.0556
82	602717	MILIMA	48	0	0	0	0	1	4	5	9	8	13	7	0	1	0	0	0	4.1702	4.3500	4.3947	-0.1798
83	602109	FRIENDS SCHOOL KITALE	44	0	0	1	0	0	0	7	8	10	15	3	0	0	0	0	0	4.1591	4.8077	5.4242	-0.6486
84	602316	MABANGA GIRLS	19	0	0	0	0	0	0	1	6	8	3	1	0	0	0	0	0	4.1579	3.7368	4.8182	0.4211
85	602305	BUSAKALA	82	0	0	0	2	2	4	7	15	18	21	10	1	2	0	0	0	4.1358	4.3913	4.4118	-0.2555
86	602707	MUKUYUNI	36	0	0	1	0	0	1	4	7	7	13	2	1	0	0	0	0	4.1111	4.0000	4.2400	0.1111
87	602113	KONGOLI	29	0	0	0	0	1	0	4	7	7	4	5	1	0	0	0	0	4.0690	4.5000	4.8857	-0.4310
88	602508	LWANDANYI	29	0	0	0	0	0	1	3	6	7	11	1	0	0	0	0	0	4.0690	3.6500	3.8621	0.4190
89	602604	ST. PETER'S NAKALIRA	108	0	0	1	2	4	5	6	15	23	34	18	0	0	0	0	0	4.0370	4.0078	5.0435	0.0293
90	602417	SITIKHO FRIENDS	37	0	0	0	0	1	1	3	9	7	13	1	2	0	0	0	0	4.0270	4.8095	5.1471	-0.7825
91	602708	SIRAKARU	87	0	0	1	1	1	2	6	14	22	28	8	1	3	0	1	1	4.0000	4.2857	4.1642	-0.2857
92	602715	ELUUYA FRIENDS	134	0	0	0	1	3	7	14	28	20	31	27	1	0	0	0	0	3.9851	4.2075	4.8214	-0.2225
93	602716	JAMES MWEI	25	0	0	0	1	0	0	3	4	7	4	6	0	0	0	0	0	3.9600	3.9600	5.1200	0.0000
94	602704	LUNGAI	69	0	0	1	1	0	7	4	5	18	13	19	0	1	0	0	0	3.9118	4.1667	5.2857	-0.2549
95	602719	ST. PETER'S NDALU	56	0	0	0	0	4	3	2	7	14	12	12	2	0	0	0	0	3.8929	3.6522	4.0351	0.2407
96	602514	TAMULEGA	17	0	0	0	0	1	0	1	2	5	6	2	0	0	0	0	0	3.8824	3.3750	3.8182	0.5074
97	602111	SANG'ALO	42	0	0	0	0	0	2	3	6	13	13	5	0	0	0	0	0	3.8810	4.8919	4.6667	-1.0109
98	602613	CHESAMISI GIRLS	30	0	0	0	1	0	1	1	3	9	13	2	0	0	0	0	0	3.8667	4.0000	4.5909	-0.1333
99	602303	CHEBUKWA	40	0	0	0	0	0	0	4	4	16	12	5	0	0	0	0	0	3.8500	4.0000	4.9167	-0.1500
100	602712	NAMUNYIRI GIRLS	45	0	0	0	0	0	3	3	9	6	16	8	0	0	0	0	0	3.8222	4.4390	5.0508	-0.6168

PART G



COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

101	602426	MANG'ANA	34	0	0	2	0	2	0	0	2	7	13	8	0	0	0	0	3.7941	4.4545	4.6071	-0.6604
102	602611	ST. THERESAS G. KIMILILI	24	0	0	0	0	0	0	1	6	6	9	2	0	0	0	0	3.7917	4.6471	4.6400	-0.8554
103	602714	TABANI	43	0	0	0	0	0	3	2	7	9	15	7	0	0	0	0	3.7907	3.6786	4.6522	0.1121
104	602616	KAMUKUYWA FRIENDS	19	0	0	0	0	0	0	3	2	3	10	1	0	0	0	0	3.7895	4.6667	3.4063	-0.8772
105	602433	NGWELO FRIENDS	16	0	0	0	0	0	0	0	3	8	4	0	1	0	0	0	3.7500	3.2500	3.4118	0.5000
106	602506	TOLOSO	49	0	0	0	0	1	1	3	4	20	10	8	1	1	0	0	3.7500	4.1190	4.8704	-0.3690
107	602412	MIHUU	71	0	0	0	0	1	1	6	11	13	26	11	0	2	0	0	3.7391	2.3197	3.6435	1.4195
108	602703	KIBISI	49	0	0	0	0	0	2	4	7	13	14	7	2	0	0	0	3.7347	3.6538	4.0488	0.0808
109	602403	CHEBOSI S.A.	67	0	0	0	0	2	1	7	10	11	20	14	2	0	0	0	3.7164	3.8387	4.2698	-0.1223
110	602307	KIMALEWA	93	0	0	0	2	3	4	8	8	14	23	29	3	0	1	0	3.6989	4.2097	4.3889	-0.5108
111	602117	SAMOYA	33	0	0	0	0	1	1	3	6	2	11	9	0	0	0	0	3.6970	4.3030	4.3659	-0.6061
112	602615	KIMILILI FRIENDS GIRLS	19	0	0	0	0	0	0	2	4	3	6	4	0	0	0	0	3.6842	3.5833	3.8000	0.1009
113	602503	KIKAI	43	0	0	0	0	1	0	5	5	10	12	8	2	0	0	0	3.6512	4.2045	5.0455	-0.5534
114	602410	LUTACHO	54	0	0	0	0	1	1	2	7	13	23	7	0	0	0	0	3.6481	3.6296	3.9016	0.0185
115	602214	ST. JOSEPH,S LUMBOKA	58	0	0	0	1	0	4	3	5	12	17	14	2	0	0	0	3.6034	4.2273	4.1875	-0.6238
116	602205	MATEKA	17	0	0	0	0	0	1	0	1	8	3	4	0	0	0	0	3.5882	4.1034	4.3778	-0.5152
117	602301	NAMILAMA	41	0	0	0	0	0	1	3	4	13	10	7	1	2	0	0	3.5500	3.7308	4.1200	-0.1808
118	602106	BUNGOMA TOWN HIGH	48	0	0	0	0	0	0	1	10	13	15	8	0	0	0	1	3.5208	3.5385	3.7536	-0.0176
119	602430	LUGUSI	28	0	0	0	1	0	1	3	1	1	12	9	0	0	0	0	3.4643	3.0000	4.1333	0.4643
120	602120	BEULA EDUC. INSTITUTE	7	0	0	0	0	0	0	0	2	2	2	0	0	0	1	0	3.4286	4.1176	4.7826	-0.6891
121	602404	FRIENDS SCHOOL MILANI	36	0	0	0	0	0	1	3	4	9	6	12	0	0	1	0	3.4167	4.7143	4.6491	-1.2976
122	602408	KITUNI	70	0	0	0	0	0	3	5	8	14	24	10	0	0	6	0	3.4143	4.0875	4.0244	-0.6732
123	602720	MITUA GIRLS	11	0	0	0	0	0	0	1	0	2	6	1	0	1	0	0	3.4000	3.2727	3.1000	0.1273
124	602415	SINOKO	54	0	0	0	0	2	0	1	7	11	17	15	1	0	0	0	3.3889	4.3077	4.0533	-0.9188
125	602124	BUNGOMA MUSLIM	17	0	0	0	0	0	2	0	0	5	3	5	1	0	0	1	0	3.3750	NEW	NEW	
126	602312	ST. CH. LWANGA BWAKE	23	0	0	0	0	0	0	1	3	6	5	8	0	0	0	0	0	3.3043	2.9333	3.9487	0.3710
127	602614	SIKHENDU MIXED	35	0	0	0	0	0	0	3	2	10	9	8	3	0	0	0	0	3.2571	4.2632	4.3182	-1.0060
128	602105	ST. PATRICK KIMUKUNGI	32	0	0	0	0	0	1	0	4	4	14	9	0	0	0	0	0	3.2188	3.7500	3.5862	-0.5313
129	602411	MAGEMO FRIENDS	35	0	0	0	0	0	0	2	4	5	12	10	1	1	0	0	0	3.2059	4.1034	3.9778	-0.8976
130	602722	FR. SCHOOL NAITIRI	39	0	0	0	0	2	0	2	5	5	6	15	4	0	0	0	0	3.2051	3.1000	NEW	0.1051
131	602432	LUMONYA	37	0	0	0	0	0	0	1	5	5	15	11	0	0	0	0	0	3.1892	3.2414	4.0455	-0.0522
132	602515	NDAKARU	24	0	0	0	0	0	0	1	1	7	7	8	0	0	0	0	0	3.1667	3.9000	4.3333	-0.7333
133	602701	KARIMA	43	0	0	0	0	0	1	3	7	15	5	0	0	0	12	0	0	3.1395	4.1944	4.8485	-1.0549
134	602516	KARIBUNI GIRLS	40	0	0	0	0	1	0	0	1	10	15	12	1	0	0	0	0	3.0750	3.8846	4.1220	-0.8096
135	602502	KAPTANAI	16	0	0	0	0	0	1	1	0	2	4	8	0	0	0	0	0	3.0625	2.2941	2.6250	0.7684
136	602114	LUTUNGU	17	0	0	0	0	0	0	1	3	2	1	10	0	0	0	0	0	3.0588	2.4375	3.8438	0.6213

PART H

74	604507	EBUSYUBI	27	0	0	0	0	0	0	3	2	8	9	5	0	0	0	0	0	3.5926	4.2105	4.0000	-0.6179
75	604108	IBUBI GIRLS	38	0	0	0	0	0	0	4	4	10	13	6	1	0	0	0	0	3.5789	3.6316	4.0938	-0.0526
76	604324	IKOBERO GIRLS	20	0	0	0	0	0	1	1	1	5	9	3	0	0	0	0	0	3.5500	4.2353	3.4839	-0.6853
77	604208	MBIHI	59	0	0	0	1	0	2	1	7	16	17	15	0	0	0	0	0	3.5424	3.7111	4.5102	-0.1687
78	604513	ESIANDUMBA	11	0	0	0	0	0	0	0	2	4	2	3	0	0	0	0	0	3.4545	NEW	NEW	
79	604512	ESIBEYE	19	0	0	0	0	0	0	1	3	3	7	4	0	1	0	0	0	3.4444	NEW	NEW	
80	604609	ISHIRU	42	0	0	0	0	0	0	0	6	14	14	8	0	0	0	0	0	3.4286	4.1026	3.3333	-0.6740
81	604611	GEORGE KHANIRI	32	0	0	0	0	0	1	2	1	7	13	8	0	0	0	0	0	3.3438	NEW	NEW	
82	604102	EBUNANGWE	51	0	0	0	2	4	0	3	4	10	10	6	0	0	12	0	0	3.3333	4.9149	4.9259	-1.5816
83	604310	DEMESI	19	0	0	0	0	0	0	1	2	4	5	7	0	0	0	0	0	3.2105	3.9412	3.3667	-0.7307
84	604216	CHAMBITI	18	0	0	0	0	0	1	1	1	2	5	8	0	0	0	0	0	3.1667	NEW	NEW	
85	604213	VIHIGA ACADEMY	50	0	0	0	0	0	1	0	5	11	13	18	0	2	0	0	0	3.1458	2.8772	3.2571	0.2686
86	604509	MUMBOHA	24	0	0	0	0	0	0	1	2	4	8	8	0	1	0	0	0	3.1304	3.5000	3.3906	-0.3696
87	604415	KAPCHEMUGUNG	31	0	0	0	0	0	1	1	1	8	6	13	1	0	0	0	0	3.0645	3.9697	3.5625	-0.9052
88	604110	EBUKHAYA	29	0	0	0	0	0	0	1	2	3	10	12	1	0	0	0	0	2.8621	3.4167	4.0638	-0.5546
89	604610	SHAMAKHOKHO	36	0	0	1	0	0	0	0	0	6	12	15	2	0	0	0	0	2.8333	2.9778	3.1778	-0.1444
90	604326	RIVERSIDE HIGH SCHOOL	42	0	0	0	0	0	0	0	4	7	16	8	4	1	1	0	1	2.8293	3.0000	NEW	-0.1707
91	604410	MUSEYWA	27	0	0	0	0	1	0	0	0	3	8	14	0	1	0	0	0	2.7692	3.6087	3.1786	-0.8395
92	604608	MAKUCHI	25	0	0	0	0	0	0	0	1	8	3	10	0	3	0	0	0	2.6400	3.8400	3.4474	-1.2000
93	604327	TSIMBALO	7	0	0	0	0	0	0	0	1	0	1	4	0	1	0	0	0	2.2857	NEW	NEW	
		TOTALS	**6419**	**7**	**39**	**152**	**260**	**454**	**658**	**917**	**1171**	**1163**	**974**	**516**	**22**	**41**	**32**	**0**	**5**				
		DISTRICT MEAN	**5.097**																				

MT. ELGON DISTRICT

COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

12.250

SNO.	CODE	NAME OF SCHOOL	ENT.	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	Z	U	MS 07	MS 06	MS 05	DEV.
1	605101	KAPSOKWONY HIGH	60	0	0	4	4	9	14	11	9	8	0	1	0	0	0	0	0	6.5167	5.5797	5.8980	0.9370
2	605204	CHEPTAIS	66	0	0	1	4	12	8	16	14	7	4	0	0	0	0	0	0	6.1212	6.3654	5.4944	-0.2442
3	605103	KIBUK GIRLS	73	0	0	1	5	4	15	15	26	5	2	0	0	0	0	0	0	6.0000	5.7101	5.6111	0.2899
4	605208	KIPSIS GIRLS	18	0	0	1	0	1	3	4	4	4	1	0	0	0	0	0	0	5.6667	4.6471	4.4706	1.0196

PART I

5	605108	SENDERA S.A.	20	0	0	0	0	3	4	2	2	5	2	0	0	2	0	0	5.5556	5.1111	3.8947	0.4444
6	605203	TOROSO	58	0	0	1	1	1	5	23	12	12	3	0	0	0	0	0	5.4655	4.7500	5.1190	0.7155
✓7	605102	KAPTOLA	67	0	0	0	2	2	5	6	21	16	12	2	0	0	1	0	4.6866	4.8936	6.1154	-0.2070
8	605105	MOI KAPTAMA	65	0	0	2	0	2	5	7	15	15	16	3	0	0	0	0	4.6462	4.6909	4.8727	-0.0448
9	605302	KAPKATENY	66	0	0	0	0	5	5	5	9	26	11	2	0	2	0	1	4.6190	5.9024	6.3415	-1.2834
10	605104	KIMOBO FRIENDS	24	0	0	0	0	0	2	4	5	7	5	1	0	0	0	0	4.5000	3.8182	3.5333	0.6818
11	605201	KIMABOLE	72	0	0	0	1	1	6	7	13	23	13	5	0	3	0	0	4.4493	4.5692	5.3371	-0.1200
12	605106	BISHOP O. KAMUNERU	47	0	0	0	0	0	3	5	6	21	9	3	0	0	0	0	4.2128	4.1964	5.5574	0.0163
13	605307	ST. JOHN'S CHEPYUK	7	0	0	0	0	0	0	0	1	4	1	0	0	1	0	0	4.0000	NEW	NEW	
14	605205	CHEPKUBE S.A	17	0	0	0	0	0	1	2	2	5	4	3	0	0	0	0	3.9412	4.2800	3.8000	-0.3388
15	605207	KIM GIRLS KAPKOTA	18	0	0	0	0	0	0	0	3	7	6	1	0	1	0	0	3.7059	3.4000	3.7143	0.3059
16	605304	TEREM S.A	23	0	0	0	0	1	0	0	4	6	7	5	0	0	0	0	3.6087	4.1000	3.7333	-0.4913
17	605306	KAPKIRWOK HIGH	17	0	0	0	0	0	0	1	1	4	5	0	1	5	0	0	3.5833	4.8500	5.2143	-1.2667
18	605206	CHEPKUBE A.C.K	7	0	0	0	0	0	0	1	1	0	3	2	0	0	0	0	3.4286	3.8571	3.5333	-0.4286
19	605301	CHELEBEI	28	0	0	0	0	0	0	2	3	6	10	7	0	0	0	0	3.3929	4.2571	4.8605	-0.8643
20	605107	CHEMOGE	19	0	0	0	0	0	0	1	4	3	4	7	0	0	0	0	3.3684	3.6250	4.0345	-0.2566
21	605202	CHESIKAKI	46	0	0	0	0	0	1	3	5	6	14	17	0	0	0	0	3.2609	3.7250	4.6481	-0.4641
22	605110	KONGIT	30	0	0	0	0	0	1	1	3	3	8	14	0	0	0	0	3.0667	NEW	NEW	
23	605109	ST. MARKS KIPCHIRIA	25	0	0	0	0	0	0	1	2	3	8	11	0	0	0	0	2.9600	NEW	NEW	
24	605209	MULATIWA	22	0	0	0	0	0	0	0	0	0	9	12	1	0	0	0	2.3636	2.9444	2.9259	-0.5808
		TOTALS	**895**	**0**	**0**	**10**	**17**	**41**	**78**	**117**	**165**	**196**	**157**	**96**	**2**	**14**	**1**	**0**	**1**				
		DISTRICT MEAN	**4.652**																				

TESO DISTRICT

SNO.	CODE	NAME OF SCHOOL	ENT.	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	Z	U	MS 07	MS 06	MS 05	DEV.
1	606102	S.A. KOLANYA GIRLS	131	0	2	2	7	24	38	46	11	1	0	0	0	0	0	0	0	6.8550	6.2232	6.8673	0.6318
2	606101	S.A. KOLANYA BOYS	120	0	2	2	7	12	18	29	26	20	4	0	0	0	0	0	0	6.0250	6.5119	7.0729	-0.4869
3	606202	ST. MONICA CHAKOL G.	121	0	0	2	3	10	20	30	42	10	4	0	0	3	0	0	0	6.0085	6.6847	2.8506	-0.6762
4	606201	ST. PAULS AMUKURA	119	0	0	1	9	7	17	35	28	19	0	0	0	3	0	0	0	5.9655	5.7748	6.5914	0.1907
5	606105	MODING	61	0	0	0	2	1	5	13	21	11	7	1	0	0	0	0	0	5.0984	5.2222	5.2813	-0.1238

PART J

2005 KCSE EXAMINATION ANALYSIS – WESTERN PROVINCE

ANALYSIS BY MEAN SCORES BY DISTRICTS

S/NO.	CODE	NAME	MEAN SCORE	PROVINCIAL POSITION
1	601	BUSIA	5.8458	1
2	602	BUNGOMA	5.4267	4
3	603	KAKAMEGA	5.1810	6
4	604	VIHIGA	5.3028	5
5	605	MT. ELGON	4.9937	8
6	606	TESO	5.7577	2
7	607	LUGARI	5.1321	7
8	608	BUTERE/MUMIAS	5.6725	3
		PROVINCIAL MEAN SCORE	5.660	

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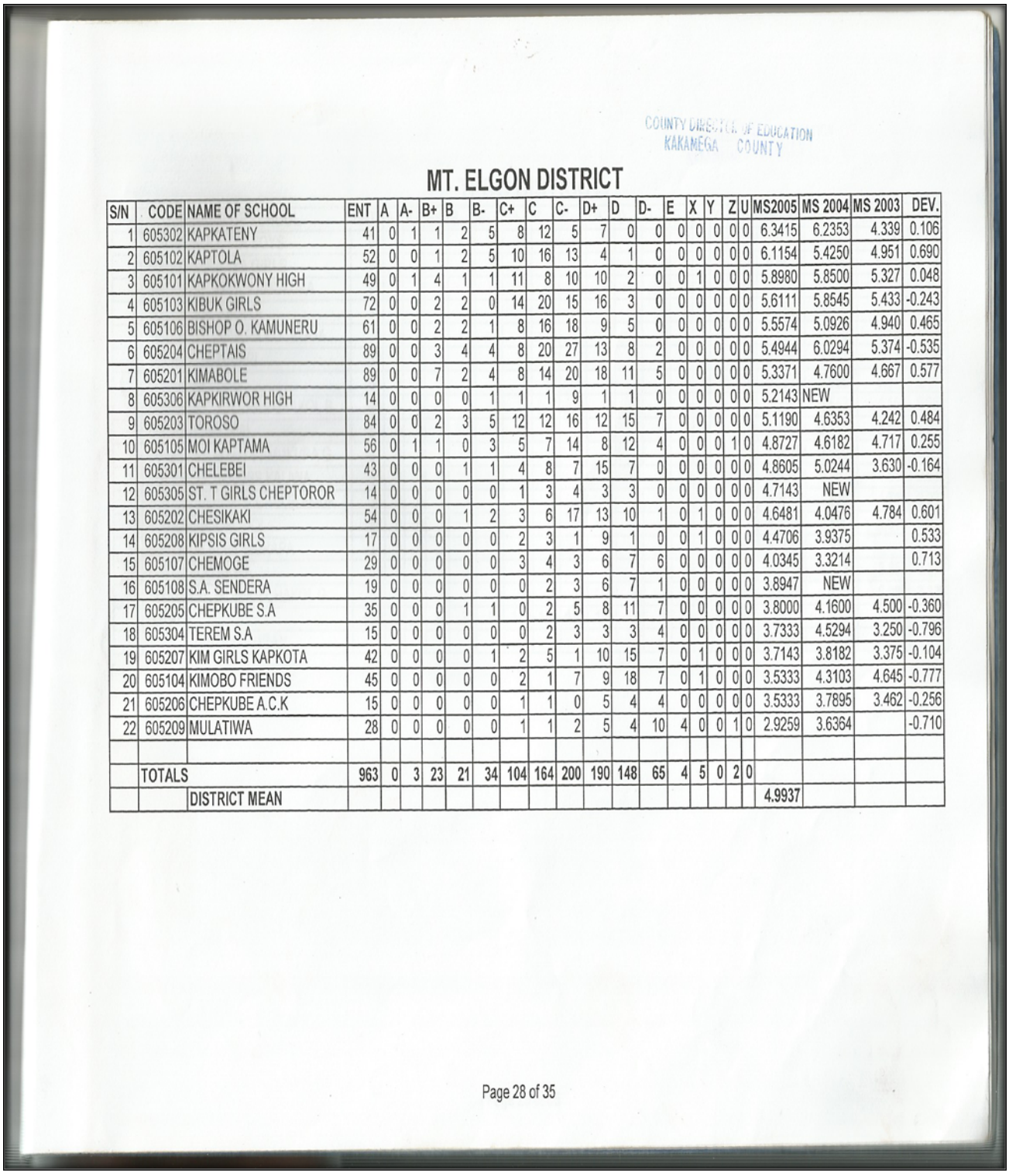
PART K



COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

MT. ELGON DISTRICT

S/N	CODE	NAME OF SCHOOL	ENT	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	Z	U	MS2005	MS 2004	MS 2003	DEV.
1	605302	KAPKATENY	41	0	1	1	2	5	8	12	5	7	0	0	0	0	0	0	0	6.3415	6.2353	4.339	0.106
2	605102	KAPTOLA	52	0	0	1	2	5	10	16	13	4	1	0	0	0	0	0	0	6.1154	5.4250	4.951	0.690
3	605101	KAPKOKWONY HIGH	49	0	1	4	1	1	11	8	10	10	2	0	0	1	0	0	0	5.8980	5.8500	5.327	0.048
4	605103	KIBUK GIRLS	72	0	0	2	2	0	14	20	15	16	3	0	0	0	0	0	0	5.6111	5.8545	5.433	-0.243
5	605106	BISHOP O. KAMUNERU	61	0	0	2	2	1	8	16	18	9	5	0	0	0	0	0	0	5.5574	5.0926	4.940	0.465
6	605204	CHEPTAIS	89	0	0	3	4	4	8	20	27	13	8	2	0	0	0	0	0	5.4944	6.0294	5.374	-0.535
7	605201	KIMABOLE	89	0	0	7	2	4	8	14	20	18	11	5	0	0	0	0	0	5.3371	4.7600	4.667	0.577
8	605306	KAPKIRWOR HIGH	14	0	0	0	0	1	1	1	9	1	1	0	0	0	0	0	0	5.2143	NEW		
9	605203	TOROSO	84	0	0	2	3	5	12	12	16	12	15	7	0	0	0	0	0	5.1190	4.6353	4.242	0.484
10	605105	MOI KAPTAMA	56	0	1	1	0	3	5	7	14	8	12	4	0	0	0	1	0	4.8727	4.6182	4.717	0.255
11	605301	CHELEBEI	43	0	0	0	1	1	4	8	7	15	7	0	0	0	0	0	0	4.8605	5.0244	3.630	-0.164
12	605305	ST. T GIRLS CHEPTOROR	14	0	0	0	0	0	1	3	4	3	3	0	0	0	0	0	0	4.7143	NEW		
13	605202	CHESIKAKI	54	0	0	0	1	2	3	6	17	13	10	1	0	1	0	0	0	4.6481	4.0476	4.784	0.601
14	605208	KIPSIS GIRLS	17	0	0	0	0	0	2	3	1	9	1	0	0	1	0	0	0	4.4706	3.9375		0.533
15	605107	CHEMOGE	29	0	0	0	0	0	3	4	3	6	7	6	0	0	0	0	0	4.0345	3.3214		0.713
16	605108	S.A. SENDERA	19	0	0	0	0	0	0	2	3	6	7	1	0	0	0	0	0	3.8947	NEW		
17	605205	CHEPKUBE S.A	35	0	0	0	1	1	0	2	5	8	11	7	0	0	0	0	0	3.8000	4.1600	4.500	-0.360
18	605304	TEREM S.A	15	0	0	0	0	0	0	2	3	3	3	4	0	0	0	0	0	3.7333	4.5294	3.250	-0.796
19	605207	KIM GIRLS KAPKOTA	42	0	0	0	0	1	2	5	1	10	15	7	0	1	0	0	0	3.7143	3.8182	3.375	-0.104
20	605104	KIMOBO FRIENDS	45	0	0	0	0	0	2	1	7	9	18	7	0	1	0	0	0	3.5333	4.3103	4.645	-0.777
21	605206	CHEPKUBE A.C.K	15	0	0	0	0	0	1	1	0	5	4	4	0	0	0	0	0	3.5333	3.7895	3.462	-0.256
22	605209	MULATIWA	28	0	0	0	0	0	1	1	2	5	4	10	4	0	0	1	0	2.9259	3.6364		-0.710
	TOTALS		963	0	3	23	21	34	104	164	200	190	148	65	4	5	0	2	0				
		DISTRICT MEAN																		4.9937			

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PART L

BUNGOMA DISTRICT

S/N	CODE	NAME OF SCHOOL	ENT	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	Z	U	MS2005	MS 2004	MS 2003	DEV.
1	602606	F. S. KAMUSINGA	174	9	55	46	37	20	6	1	0	0	0	0	0	0	0	0	0	9.8506	10.1242	9.907	-0.274
2	602401	LUGULU GIRLS	239	9	49	53	59	36	24	7	2	0	0	0	0	0	0	0	0	9.2720	9.7861	9.421	-0.514
3	602102	KIBABII	208	3	25	31	53	54	32	7	3	0	0	0	0	0	0	0	0	8.7067	8.5946	8.455	0.112
4	602512	A. C. BUTONGE	29	0	2	4	3	3	8	8	1	0	0	0	0	0	0	0	0	7.6552	6.5556	5.066	1.100
5	602601	CHESAMISI BOYS	186	1	5	21	30	33	44	36	10	5	0	0	0	0	0	1	0	7.5946	7.3203	7.345	0.274
6	602304	TEREMI	212	0	10	32	30	41	35	39	17	3	1	0	0	4	0	0	0	7.5802	7.7047	7.158	-0.125
7	602201	KHASOKO	59	0	0	4	7	13	23	12	0	0	0	0	0	0	0	0	0	7.4576	7.0465	7.500	0.411
8	602610	KIMILILI BOYS	153	1	3	10	18	32	45	32	10	2	0	0	0	0	0	0	0	7.3725	7.2276	6.761	0.145
9	602608	MOI GIRLS KAMUSINGA	123	0	1	5	7	32	34	35	9	0	0	0	0	0	0	0	0	7.0976	6.5625	5.736	0.535
10	602101	BUNGOMA HIGH	197	0	4	12	30	38	45	39	14	3	1	0	0	1	10	0	0	6.9645	7.1744	7.491	-0.210
11	602103	CARDINAL OTUNGA GIRLS	104	0	1	1	10	13	33	30	12	3	1	0	0	0	0	0	0	6.7404	6.4301	7.446	0.310
12	602513	NAMANG'OFULO	40	0	2	2	5	4	5	10	6	3	2	0	0	1	0	0	0	6.5500	5.7551	4.913	0.795
13	602418	MILO	77	0	0	4	8	9	14	21	12	6	2	0	0	1	0	0	0	6.4675	6.7727	6.282	-0.305
14	602422	ST. MARY'S WEBUYE	39	0	0	0	6	3	9	10	7	3	1	0	0	0	0	0	0	6.4359	6.0938	5.556	0.342
15	602409	ST.CECILIA GIRLS MISIKHU	213	0	1	7	13	19	43	65	47	15	3	0	0	0	0	0	0	6.3146	6.0772	6.685	0.237
16	602119	NAMACHANJA	123	0	2	5	15	12	16	24	26	12	10	1	0	0	0	0	0	6.2520	5.5522	5.721	0.700
17	602112	SIKALAME	17	0	0	1	3	1	1	3	5	1	2	0	0	0	0	0	0	6.1765	4.9444	3.808	1.232
18	602501	CHWELE GIRLS	101	0	1	0	2	9	23	31	29	6	0	0	0	0	0	0	0	6.1089	6.2039	5.663	-0.095
19	602116	ST. MARTINS' MWIBALE	28	0	0	0	4	2	3	6	6	6	0	1	0	0	0	0	0	5.8929	6.2941	5.300	-0.401
20	602504	NAMWELA	95	0	0	5	9	9	12	18	17	16	4	1	0	4	0	0	0	5.8737	5.9444	5.050	-0.071
21	602402	BOKOLI BOYS	88	0	0	1	5	7	16	18	26	10	3	1	0	1	0	0	0	5.8182	5.5278	4.071	0.290
22	602206	MUNG'ORE GIRLS	28	0	0	0	0	3	3	8	11	2	1	0	0	0	0	0	0	5.6786	4.6087	5.111	1.070
23	602602	KAMUSINDE	110	0	2	3	4	11	10	24	21	24	10	1	0	0	0	0	0	5.6636	5.5421	5.671	0.122
24	602428	ST. MATHEWS ACK WEB.	147	1	3	3	8	11	23	21	32	20	18	7	0	0	0	0	0	5.6463	5.3217	5.586	0.325
25	602406	NAMAWANGA GIRLS	86	0	0	3	2	4	16	18	20	15	8	0	0	0	0	0	0	5.6279	5.2167	5.250	0.411
26	602202	KABULA	137	1	1	0	4	9	17	41	28	27	7	1	0	1	0	0	0	5.5985	5.8232	5.301	-0.225
27	602420	MATULO FRIENDS	80	0	0	0	7	3	10	18	19	18	5	0	0	0	0	0	0	5.5875	5.1200	4.687	0.468
28	602710	LUKHUNA	81	0	0	2	4	6	10	16	18	17	7	1	0	0	0	0	0	5.5679	5.6545	4.904	-0.087
29	602709	BIS. ANYOLO KAKAMWE	130	0	1	6	7	10	13	25	29	16	17	3	2	1	0	0	0	5.5615	4.7778	5.159	0.784
30	602702	NAITIRI BOYS	87	0	0	3	3	9	8	21	15	15	11	2	0	0	0	0	0	5.5517	5.9267	5.843	-0.375
31	602215	ST. KIZITO MAYANJA	30	0	0	0	2	2	4	1	15	5	1	0	0	0	0	0	0	5.5333	5.6667		-0.133
32	602302	SIKUSI	81	0	0	1	0	10	13	13	23	11	10	0	0	0	0	0	0	5.5309	5.0779	4.368	0.453

PART M

COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

S/N	CODE	NAME OF SCHOOL	ENT	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	Z	U	MS2005	MS 2004	MS 2003	DEV.
105	602415	SINOKO	75	0	0	0	0	4	3	8	13	13	22	10	0	2	0	0	0	4.0533	4.3279	4.519	-0.275
106	602703	KIBISI	41	0	0	0	1	2	0	4	9	10	5	8	1	1	0	0	0	4.0488	3.9800	2.811	0.069
107	602432	LUMONYA	44	0	0	0	0	1	4	2	8	13	8	6	2	0	0	0	0	4.0455	3.6571		0.388
108	602719	ST. PETERS NDALU	57	0	0	0	2	1	2	5	7	15	15	10	0	0	0	0	0	4.0351	4.3438		-0.309
109	602408	KITUNI	82	0	0	0	1	2	5	7	12	23	18	8	6	0	0	0	0	4.0244	2.9298	3.978	1.095
110	602411	MAGEMO FRIENDS	45	0	0	0	0	1	3	6	4	9	14	8	0	0	0	0	0	3.9778	4.4359	5.400	-0.458
111	602718	BISHOP ATUNDO	36	0	0	0	0	1	1	2	11	6	9	4	2	0	0	0	0	3.9722	3.6087	4.143	0.364
112	602705	MALIKI	92	0	0	1	3	1	3	7	12	20	26	19	0	0	0	0	0	3.9565	3.9636	4.339	-0.007
113	602312	ST. CH. LWANGA BWAKE	39	0	0	1	1	0	1	3	3	9	17	4	0	0	0	0	0	3.9487	4.1212	4.378	-0.172
114	602410	LUTACHO	61	0	0	0	0	2	4	2	11	15	13	14	0	0	0	0	0	3.9016	4.5893	4.078	-0.688
115	602509	MACHAKHA	19	0	0	0	0	0	0	2	5	5	4	2	1	0	0	0	0	3.8947	4.8462	4.833	-0.951
116	602508	LWANDANYI	29	0	0	0	0	0	0	3	8	5	9	3	1	0	0	0	0	3.8621	3.0000	3.727	0.862
117	602607	ST. IMMANUEL'S MIRURI	60	0	0	0	2	2	1	4	7	13	17	11	2	0	0	1	0	3.8475	4.2642	3.760	-0.417
118	602114	LUTUNGU	33	0	0	0	1	0	0	2	9	6	5	9	0	0	0	1	0	3.8438	4.2609	3.714	-0.417
119	602514	TAMULEGA	11	0	0	0	0	0	1	2	3	2	0	0	0	0	3	0	0	3.8182	5.7273	4.037	-1.909
120	602603	MAENI GIRLS	38	0	0	0	0	0	1	4	7	8	13	4	0	1	0	0	0	3.8158	4.6296	3.730	-0.814
121	602615	KIMILILI FRIENDS GIRLS	20	0	0	0	0	0	1	1	4	4	8	1	1	0	0	0	0	3.8000	NEW		
122	602511	BUKOKHOLO	24	0	0	0	0	0	1	3	2	5	10	3	0	0	0	0	0	3.7917	3.6667	3.833	0.125
123	602115	BULONDO	26	0	0	0	0	0	0	4	2	8	9	2	1	0	0	0	0	3.7692	4.0000	3.000	-0.231
124	602106	BUNGOMA TOWN	69	0	0	0	1	2	5	0	6	19	21	15	0	0	0	0	0	3.7536	3.5357	3.747	0.218
125	602313	KHACHONGE GIRLS	11	0	0	0	0	0	0	1	1	5	2	2	0	0	0	0	0	3.7273	4.6000	3.867	-0.873
126	602423	RELIANCE	27	0	0	0	1	0	0	3	2	7	7	7	0	0	0	0	0	3.7037	3.4828	3.594	0.221
127	602412	MIHUU	115	0	0	0	1	0	2	13	11	21	46	20	1	0	0	0	0	3.6435	4.8108	4.232	-1.167
128	602118	TEN STAR	90	0	0	0	0	0	2	9	13	20	24	19	2	1	0	0	0	3.6111	1.1579	4.750	2.453
129	602105	ST. PATRICK KIMUKUNGI	29	0	0	0	0	0	0	5	0	9	8	7	0	0	0	0	0	3.5862	3.4444	3.909	0.142
130	602431	ST. MARYS BOKOLI	54	0	0	0	1	0	0	5	9	9	13	14	3	0	0	0	0	3.5185	4.1786	1.150	-0.660
131	602407	SIRENDE GIRLS	64	0	0	1	0	3	0	3	6	12	20	16	2	1	0	0	0	3.5000	3.5833	3.902	-0.083
132	602433	NGWELO FRIENDS	34	0	0	0	0	0	2	2	4	4	12	8	2	0	0	0	0	3.4118	NEW		
133	602616	KAMUKUYWA FRIENDS	32	0	0	0	0	0	0	3	2	10	7	10	0	0	0	0	0	3.4063	NEW		
134	602317	MAKHONGE FRIENDS	30	0	0	0	0	0	0	3	1	7	11	8	0	0	0	0	0	3.3333	3.6364	3.063	-0.303
135	602413	MISEMWA	32	0	0	0	0	0	0	1	4	9	8	9	1	0	0	0	0	3.2813	3.8095	3.636	-0.528
136	602121	MODERN COM. ACADEMY	63	0	0	0	0	0	2	4	4	11	16	25	1	0	0	0	0	3.1905	NEW		
137	602720	MITUA GIRLS	10	0	0	0	0	0	0	0	2	2	2	3	1	0	0	0	0	3.1000	NEW		
138	602502	KAPTANAI	24	0	0	0	0	0	0	0	1	1	12	8	2	0	0	0	0	2.6250	3.0000	3.424	-0.375
	TOTALS		8926	26	179	310	495	650	919	1347	1491	1493	1330	594	49	25	14	4	0				
		DISTRICT MEAN																		5.4267			

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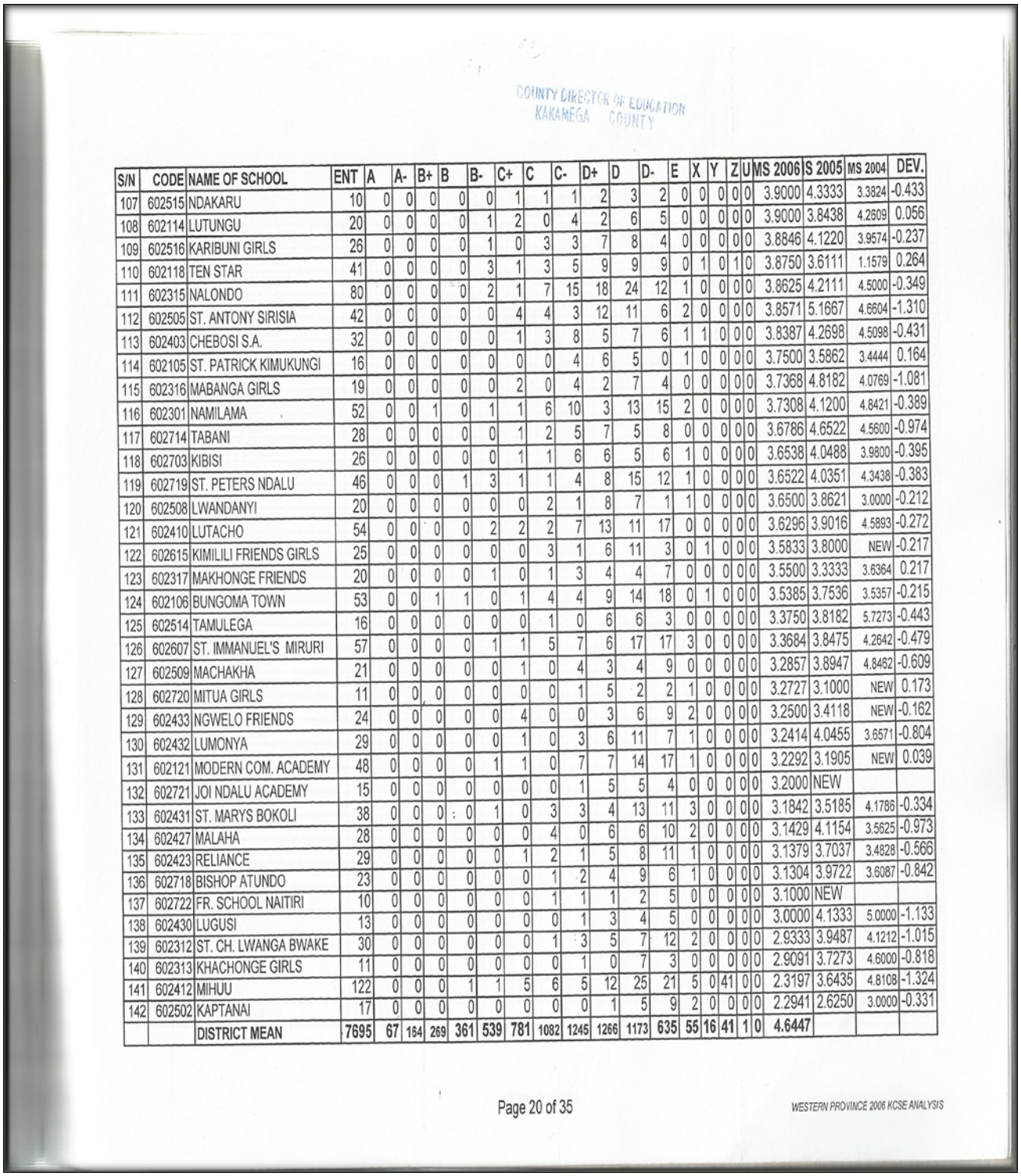
PART N

BUNGOMA DISTRICT

S/N	CODE	NAME OF SCHOOL	ENT	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	Z	U	MS2006	S 2005	MS 2004	DEV.
1	602606	F. S. KAMUSINGA	206	41	56	46	33	25	4	0	1	0	0	0	0	0	0	0	0	10.1845	9.8506	10.1242	0.334
2	602401	LUGULU GIRLS	235	20	41	59	36	37	22	12	3	1	3	1	0	0	0	0	0	9.1787	9.2720	9.7861	-0.093
3	602102	KIBABII	168	3	17	24	34	43	24	17	4	1	0	0	0	1	0	0	0	8.4251	8.7067	8.5946	-0.282
4	602601	CHESAMISI BOYS	143	0	6	17	33	33	29	18	6	1	0	0	0	0	0	0	0	7.9860	7.5946	7.3203	0.391
5	602103	CARDINAL OTUNGA GIRLS	85	0	0	5	15	13	28	22	2	0	0	0	0	0	0	0	0	7.3765	6.7404	6.4301	0.636
6	602101	BUNGOMA HIGH	219	0	7	20	30	38	53	45	17	7	1	0	0	1	0	0	0	7.3761	6.9645	7.1744	0.412
7	602304	TEREMI	226	1	11	10	24	42	48	49	28	9	2	1	0	1	0	0	0	7.1067	7.5802	7.7047	-0.474
8	602610	KIMILILI BOYS	140	0	3	5	13	31	34	39	13	2	0	0	0	0	0	0	0	7.0929	7.3725	7.2276	-0.280
9	602409	ST.CECILIA G. MISIKHU	201	0	3	10	17	31	57	52	23	8	0	0	0	0	0	0	0	6.9254	6.3146	6.0772	0.611
10	602608	MOI GIRLS KAMUSINGA	92	0	1	2	9	15	21	27	15	0	0	0	0	2	0	0	0	6.6957	7.0976	6.5625	-0.402
11	602402	BOKOLI BOYS	57	0	1	1	9	4	13	15	10	4	0	0	0	0	0	0	0	6.6842	5.8182	5.5278	0.866
12	602201	KHASOKO	78	0	0	3	5	9	23	25	11	2	0	0	0	0	0	0	0	6.6795	7.4576	7.0465	-0.778
13	602419	MUJI	23	0	1	2	0	4	2	5	8	1	0	0	0	0	0	0	0	6.5652	4.7955	5.2083	1.770
14	602418	MILO	39	0	1	2	2	4	10	8	4	5	2	1	0	0	0	0	0	6.3333	6.4675	6.7727	-0.134
15	602422	ST. MARY'S WEBUYE	56	0	0	0	1	7	13	25	5	5	0	0	0	0	0	0	0	6.2679	6.4359	6.0938	-0.168
16	602512	A. C. BUTONGE	33	0	0	1	3	3	4	8	12	2	0	0	0	0	0	0	0	6.2121	7.6552	6.5556	-1.443
17	602119	NAMACHANJA	125	1	1	2	4	8	28	29	33	15	4	0	0	0	0	0	0	6.0000	6.2520	5.5522	-0.252
18	602203	BUMULA	44	0	1	0	5	4	1	11	12	7	3	0	0	0	0	0	0	5.8636	4.8947	5.2609	0.969
19	602504	NAMWELA	67	0	0	1	5	8	6	10	20	12	5	0	0	0	0	0	0	5.7313	5.8737	5.9444	-0.142
20	602428	ST. MATHEWS ACK WEB.	92	0	1	2	6	7	10	17	26	15	7	1	0	0	0	0	0	5.7174	5.6463	5.3217	0.071
21	602202	KABULA	136	1	2	7	5	7	21	22	23	30	15	3	0	0	0	0	0	5.6618	5.5985	5.8232	0.063
22	602501	CHWELE GIRLS	111	0	0	1	2	6	15	27	36	21	3	0	0	0	0	0	0	5.5495	6.1089	6.2039	-0.559
23	602110	FR. SCHOOL LWANDA	50	0	0	2	2	3	8	5	13	12	5	0	0	0	0	0	0	5.5200	5.2727	5.0845	0.247
24	602709	BIS. ANYOLO KAKAMWE	118	0	3	4	4	4	12	27	25	21	13	5	0	0	0	0	0	5.4661	5.5615	4.7778	-0.095
25	602212	MYANGA	20	0	0	1	0	1	4	3	4	4	3	0	0	0	0	0	0	5.4500	5.1111	4.4545	0.339
26	602424	MAKEMO R. C.	21	0	0	1	0	1	5	2	5	3	4	0	0	0	0	0	0	5.4286	4.8571	3.4091	0.571
27	602603	MAENI GIRLS	19	0	0	0	0	1	4	3	5	6	0	0	0	0	0	0	0	5.4211	3.8158	4.6296	1.605
28	602420	MATULO FRIENDS	42	0	0	0	0	3	7	9	11	9	2	1	0	0	0	0	0	5.3810	5.5875	5.1200	-0.207
29	602702	NAITIRI BOYS	73	0	1	0	4	3	10	10	21	13	9	1	0	1	0	0	0	5.3750	5.5517	5.9267	-0.177
30	602215	ST. KIZITO MAYANJA	29	0	0	1	0	0	8	4	6	5	5	0	0	0	0	0	0	5.3448	5.5333	5.6667	-0.188
31	602206	MUNG'ORE GIRLS	32	0	0	0	0	2	3	8	9	9	1	0	0	0	0	0	0	5.2813	5.6786	4.6087	-0.397
32	602602	KAMUSINDE	104	0	0	4	2	3	11	22	29	16	14	3	0	0	0	0	0	5.2692	5.6636	5.5421	-0.394
33	602513	NAMANG'OFULO	37	0	0	0	0	1	4	10	10	11	1	0	0	0	0	0	0	5.2162	6.5500	5.7551	-1.334
34	602308	KUYWA GIRLS	19	0	0	0	0	0	3	4	6	6	0	0	0	0	0	0	0	5.2105	5.2857	5.4667	-0.075

PART O



COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

S/N	CODE	NAME OF SCHOOL	ENT	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	X	Y	Z	U	MS 2006	S 2005	MS 2004	DEV.
107	602515	NDAKARU	10	0	0	0	0	0	1	1	1	2	3	2	0	0	0	0	0	3.9000	4.3333	3.3824	-0.433
108	602114	LUTUNGU	20	0	0	0	0	1	2	0	4	2	6	5	0	0	0	0	0	3.9000	3.8438	4.2609	0.056
109	602516	KARIBUNI GIRLS	26	0	0	0	0	1	0	3	3	7	8	4	0	0	0	0	0	3.8846	4.1220	3.9574	-0.237
110	602118	TEN STAR	41	0	0	0	0	3	1	3	5	9	9	9	0	1	0	1	0	3.8750	3.6111	1.1579	0.264
111	602315	NALONDO	80	0	0	0	0	2	1	7	15	18	24	12	1	0	0	0	0	3.8625	4.2111	4.5000	-0.349
112	602505	ST. ANTONY SIRISIA	42	0	0	0	0	0	4	4	3	12	11	6	2	0	0	0	0	3.8571	5.1667	4.6604	-1.310
113	602403	CHEBOSI S.A.	32	0	0	0	0	0	1	3	8	5	7	6	1	1	0	0	0	3.8387	4.2698	4.5098	-0.431
114	602105	ST. PATRICK KIMUKUNGI	16	0	0	0	0	0	0	0	4	6	5	0	1	0	0	0	0	3.7500	3.5862	3.4444	0.164
115	602316	MABANGA GIRLS	19	0	0	0	0	0	2	0	4	2	7	4	0	0	0	0	0	3.7368	4.8182	4.0769	-1.081
116	602301	NAMILAMA	52	0	0	1	0	1	1	6	10	3	13	15	2	0	0	0	0	3.7308	4.1200	4.6421	-0.389
117	602714	TABANI	28	0	0	0	0	0	1	2	5	7	5	8	0	0	0	0	0	3.6786	4.6522	4.5600	-0.974
118	602703	KIBISI	26	0	0	0	0	0	1	1	6	6	5	6	1	0	0	0	0	3.6538	4.0488	3.9800	-0.395
119	602719	ST. PETERS NDALU	46	0	0	0	1	3	1	1	4	8	15	12	1	0	0	0	0	3.6522	4.0351	4.3438	-0.383
120	602508	LWANDANYI	20	0	0	0	0	0	0	2	1	8	7	1	1	0	0	0	0	3.6500	3.8621	3.0000	-0.212
121	602410	LUTACHO	54	0	0	0	0	2	2	2	7	13	11	17	0	0	0	0	0	3.6296	3.9016	4.5893	-0.272
122	602615	KIMILILI FRIENDS GIRLS	25	0	0	0	0	0	0	3	1	6	11	3	0	1	0	0	0	3.5833	3.8000	NEW	-0.217
123	602317	MAKHONGE FRIENDS	20	0	0	0	0	1	0	1	3	4	4	7	0	0	0	0	0	3.5500	3.3333	3.6364	0.217
124	602106	BUNGOMA TOWN	53	0	0	1	1	0	1	4	4	9	14	18	0	1	0	0	0	3.5385	3.7536	3.5357	-0.215
125	602514	TAMULEGA	16	0	0	0	0	0	0	1	0	6	6	3	0	0	0	0	0	3.3750	3.8182	5.7273	-0.443
126	602607	ST. IMMANUEL'S MIRURI	57	0	0	0	0	1	1	5	7	6	17	17	3	0	0	0	0	3.3684	3.8475	4.2642	-0.479
127	602509	MACHAKHA	21	0	0	0	0	0	1	0	4	3	4	9	0	0	0	0	0	3.2857	3.8947	4.8462	-0.609
128	602720	MITUA GIRLS	11	0	0	0	0	0	0	0	1	5	2	2	1	0	0	0	0	3.2727	3.1000	NEW	0.173
129	602433	NGWELO FRIENDS	24	0	0	0	0	0	4	0	0	3	6	9	2	0	0	0	0	3.2500	3.4118	NEW	-0.162
130	602432	LUMONYA	29	0	0	0	0	0	1	0	3	6	11	7	1	0	0	0	0	3.2414	4.0455	3.6571	-0.804
131	602121	MODERN COM. ACADEMY	48	0	0	0	0	1	1	0	7	7	14	17	1	0	0	0	0	3.2292	3.1905	NEW	0.039
132	602721	JOI NDALU ACADEMY	15	0	0	0	0	0	0	0	1	5	5	4	0	0	0	0	0	3.2000	NEW		
133	602431	ST. MARYS BOKOLI	38	0	0	0	0	1	0	3	3	4	13	11	3	0	0	0	0	3.1842	3.5185	4.1786	-0.334
134	602427	MALAHA	28	0	0	0	0	0	0	4	0	6	6	10	2	0	0	0	0	3.1429	4.1154	3.5625	-0.973
135	602423	RELIANCE	29	0	0	0	0	0	1	2	1	5	8	11	1	0	0	0	0	3.1379	3.7037	3.4828	-0.566
136	602718	BISHOP ATUNDO	23	0	0	0	0	0	0	1	2	4	9	6	1	0	0	0	0	3.1304	3.9722	3.6087	-0.842
137	602722	FR. SCHOOL NAITIRI	10	0	0	0	0	0	0	1	1	1	2	5	0	0	0	0	0	3.1000	NEW		
138	602430	LUGUSI	13	0	0	0	0	0	0	0	1	3	4	5	0	0	0	0	0	3.0000	4.1333	5.0000	-1.133
139	602312	ST. CH. LWANGA BWAKE	30	0	0	0	0	0	0	1	3	5	7	12	2	0	0	0	0	2.9333	3.9487	4.1212	-1.015
140	602313	KHACHONGE GIRLS	11	0	0	0	0	0	0	0	1	0	7	3	0	0	0	0	0	2.9091	3.7273	4.6000	-0.818
141	602412	MIHUU	122	0	0	0	1	1	5	6	5	12	25	21	5	0	41	0	0	2.3197	3.6435	4.8108	-1.324
142	602502	KAPTANAI	17	0	0	0	0	0	0	0	0	1	5	9	2	0	0	0	0	2.2941	2.6250	3.0000	-0.331
		DISTRICT MEAN	7695	67	164	269	361	539	781	1082	1245	1266	1173	635	55	16	41	1	0	4.6447			