



# MODERATING EFFECT OF WORK ENVIRONMENT ON THE RELATIONSHIP BETWEEN PERFORMANCE MANAGEMENT INITIATIVES AND THE PERFORMANCE OF PUBLIC SECONDARY SCHOOL TEACHERS IN KENYA

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## Abstract

The performance of teachers in Kenya, measured from their learners' performance in KCSE has remained wanting for a long time. In order to address this challenge, the teachers' employer, the Teachers Service Commission (TSC) adopted initiatives to manage the performance of duties of her employees. However, there seems to be no positive impact of these measures. This study sought to establish the influence of performance management initiatives on the performance of public secondary school teachers in Kenya and the moderating effect of work environment on this relationship.

. The study utilized a mixed method research design. The study population comprised of 122310 public secondary school teachers employed by the Teachers Service Commission, 295 Sub County TSC Directors who are the immediate supervisors of the teachers. Multistage sampling was used to

cluster the Country into eight geographical regions as administered by TSC regional directors as Primary Sampling Units (PSUs). Each region was again clustered into counties as Secondary Sampling Units (SSUs) and then each county was clustered into sub counties as Ultimate Sampling Units (USUs), where schools were stratified into National, Extra County, County and Sub County schools where teachers were purposefully selected according to how long they had taught students up to form four per subject and a sub county director from each sub county selected. Slovin's formula was used to select 399 respondents from teachers and TSC sub county directors. Self-administered questionnaires were used to collect primary data from teachers and interview schedules were done for principals and sub county directors. Collected data was analyzed by use of SPSS where both descriptive, inferential and regression statistical techniques were used. Frequencies, Means and Standard Deviations presented the descriptive data while inferential statistical tests were presented using Pearson Product Moment Correlational Coefficient and regression analyses

Null hypotheses was tested using stepwise regression analysis. The hypotheses' results indicated that Work environment significantly moderated the relationship between performance management initiatives and teacher performance in public secondary schools in Kenya.

It was recommended that the Ministry of Education should increase funding to ensure enough infrastructure and teaching/learning facilities in schools. Boards of Management should come up with ways of motivating both teachers and learners in order to improve their performance.

## **Introduction**

This section presents the background to the study, statement of the problem, objective and hypothesis of the study.

## **Background of the Study**

Given the competitive global environment in which organizations operate, the need to develop (and retain) highly skilled employees is paramount for prosperity and survival (Crawshaw, Van Dick, and Brodbeck, 2012). Performance management (PM) is widely advocated as a way to develop employees (Aguinis, 2013; Cascio, 2014). Broadly speaking, PM can be defined as "identifying, measuring, and developing the performance of individuals and teams and aligning performance with the strategic goals of the organization" (Aguinis, 2013).

## **Performance Management Initiatives**

As defined by Karen, Jiju and Susan (2009) a performance management initiative is a human resource intervention which seeks to improve quality and outcomes in organizations. It incorporates the approaches used to improve staff performance and improve service quality. Some of the most common performance management approaches include Quality Assurance, Quality Audits, total

Quality Management, Quality circles, Benchmarking, and performance appraisal among others. These initiatives in turn share some tools to ensure quality such as use/customer satisfaction surveys, personal development plans among others (Aquinis, 2009). Many contemporary organizations are placing a greater emphasis on their performance management initiatives as a means of generating higher levels of job performance (Gruman & Saks, 2011).

Performance management initiatives, along with other human resource management programs, directly impact key organizational outcomes such as financial performance, productivity, product or service quality, customer satisfaction, and employee job satisfaction. This prompts for adaptable performance management initiatives that are rooted to strategic goals that can guide these organizations to aim for favorable results in these success indicators (Pamela, 2012). The use of performance management initiatives has been acclaimed as an effective and promising means for enhancing service delivery of public enterprises as well as government departments

### Performance of Teachers in Kenya.

Performance of teachers in Kenya can be measured by several parameters such as KCSE subject mean scores, students' performance in co-curricular activities, stakeholders feedback among others (Macharia 2017). In a research done by Otundo (2021) on the causes of school unrest in secondary schools in Kenya, some of the causes discovered like lack of observance of professional ethics by teachers, strict school rules, forced repetition, prefects factor (prefects in schools are selected by teachers) and corporal punishment are related to teachers' performance of their duties. One of the factors mentioned is poor results in national examinations. Though this may not be caused by teachers, it is the major yard stick by which teacher performance is measured by the Employer, TSC. Below is the results of KCSE examinations from 2016 to 2021 in Kenya.

**Table 1.1: KCSE Results Nationally.**

GRADE	POINTS	2022	2021	2020	2019	2018	2017	2016
	NO. OF CADIDATES							
A.	12	1146	1138	893	627	315	142	141
A-	11	6407	5973	6420	5796	3417	2714	4645
B+	10	15682	13463	14427	13366	8268	7344	10976
B.	9	31303	25045	25207	24478	16403	12628	17261
B-	8	48719	39683	38194	35340	26156	19386	23645
C+	7	70088	59843	57999	46139	38818	27860	32207
C.	6	95154	81345	85458	63102	49707	40474	44792

C-	5	119061	99406	109454	83358	71047	61040	61026
D+	4	135021	116355	117898	101687	96512	88447	80952
D.	3	155480	145916	121946	137713	96512	13550	112135
D-	2	167758	187264	137361	152339	147918	179381	149929
E	1	30822	46151	28041	29318	165139	35536	33399
TOTAL		881416	821582	743385	693263	30840	610502	571108
MEAN SCORE		4.47	4.24	4.54	4.299	3.967	3.76	3.25

Source: Kenya National Examinations Council website 2023

Table 1.1 shows KCSE results for the whole country since the introduction of performance management by TSC in 2016 upto 2022. The mean score in all the years is D+ except only in 2020 when it was a C-. According to the findings of Kithuka (2010), this was a basic proficiency level which indicates that the learners were somewhat competent in the academic knowledge and skills tested which is below average performance. This indicates a problem of performance in the country hence the need to assess the effectiveness of the TSC performance management initiatives. According to statistics from the Kenya National Examinations Website, in 2018, 67% of KCSE candidates scored grade D+ (mean score of 4) and below, in 2019 it was 61% while in 2020 it was 55%. According to Manyasa (2021), between 2015 and 2017, this figure was 70%. The table below shows the pass rates in KCSE from 2016 to 2022 which is a reflection of a serious performance problem.

**Table 1.2: KCSE National Examination Pass Rates Compiled from the Kenya National Examination Council (KNEC) Website.**

Year of KCSE Exam	Total the Exam	Sitting KCSE	Total Grade above	Passing with C+ and above)	Percent Rate (C+ and above)	Pass and many passed with C+ and above?
2022	881,416		173,345		20%	2 out of 10 passed
2021	826,807		145,145		18%	2 out of 10 passed
2020	747,161		143,140		19%	2 out of 10 passed
2019	697,222		125,746		18%	2 out of 10 passed
2018	660,204		90,377		14%	1 out of 10 passed
2017	611,952		70,073		12%	1 out of 10 passed
2016	574,125		88,929		16%	2 out of 10 passed

KNEC website 2023

## Statement of the Problem

There is very scanty information on any study done on the influence of performance management on the performance of teachers in Kenya. The implementation of the PM in public schools created hope and expectations that schools' performance would improve. It is now five years since the introduction of the PM in public schools; hence, the goal of the teacher employer of raising performance has not been realized. So this is an appropriate time to assess how the PM has influenced the performance of teachers in Public Secondary Schools. Hence it is the researcher's desire to carry out this study to establish the influence of performance management initiatives on the performance of teachers in public secondary schools in Kenya.

## Objectives of the Study

### General Objective

The general objective of the study was to establish the influence of performance management initiatives on the performance of public secondary school teachers in Kenya and the moderating effect of work environment on this relationship.

### Specific Objectives of the Study

The study was guided by the following specific objective:

- i. Determine the moderating effect of work environment on the relationship between performance management initiatives and performance of public secondary school teachers in Kenya.

## Research Hypothesis

- i. **H<sub>06</sub>**. There is no significant influence of work environment on the performance of public secondary school teachers in Kenya.

## LITERATURE REVIEW

### Introduction

This chapter reviews the theoretical and empirical literature suitable to answer the research question of this study. The chapter begins by discussing the main theory the study would rely on to build the framework for the research. The chapter then discusses the specific literature for the study with focus on the main variable whose relationship was investigated. This covered literature review on the moderating effect of work environment on teacher productivity.

## Theoretical Review

This study was underpinned by two factor theory.

### Herzberg's Two-Factor Theory of Motivation

Herzberg two-factor theory was developed in (1959) by Frederick Herzberg, (Caroline & Kinyajui, 2019). Kinyajui defined two sets of variables that affect employee motivation at workplace; that is hygiene and motivator factors. The hygiene factors include: pay, company policies, fringe benefits, physical working conditions, status, interpersonal relations, and job security among others. They prevent dissatisfaction in employees. These factors are external to the job and prompt disappointing encounters to employees, (Ruthankoon & Ogunlana, 2013). Fulfilment of these factors alone does not motivate employees but their absence brings dissatisfaction. They are equated to Maslow's physiological and safety needs which are very basic and need to be fulfilled. They describe the job environment/ scenario. The hygiene factors do not lead to positive satisfaction for long but their absence leads to dissatisfaction.

The other set of factors defined by Herzberg is motivators. These factors are inherent to the job and yield positive satisfaction (Dartey & Amoako, 2011). They are also known as intrinsic factors. They include recognition, growth and promotional opportunities, training/ learning, responsibility, meaningfulness of the work among others. They motivate employees to higher productivity. They were perceived as needs on the higher side of Maslow's hierarchy of needs which include self-actualization. They are also perceived to be an additional benefit to the employee.

Thomas Sergiovanni (1975) tested Herzberg's theory with teachers and concluded that achievement, recognition and responsibility contributed to teacher motivation. Two-factor theory has contributed substantially to school leaders' thinking of what motivates teachers by distinguishing between intrinsic and extrinsic factors. For example, teachers were demotivated as a result of poor interpersonal relations with learners and other teachers, unconstructive leadership styles, and ineffective school policies and administrative practices (Adjei & Amofa, 2014). Therefore, the theory informs organizational leaders on how they can nurture hygiene factors to serve employees best and improve performance.

Herzberg's two-factor theory when applied to educational organizations, would improve teachers' motivation and job performance through changes in the nature of their job through job enrichment. By this theory teachers will be empowered to have control over their tasks, which would improve degree of their responsibility and hence their performance. This empowerment would enhance their feeling of goal attainment and self- actualization. With the theory's application, teachers would be provided with

direct, clear, and regular feedback about their service delivery in relation to schools' vision, mission, goals and objectives (Heliyon, 2020).

It is imperative that management ensures provision of a conducive working environment to motivate teachers and learners to achieve efficient and effective teaching and learning processes. This theory is key to school management which is tasked to ensure that the teachers are provided with opportunities of improving their knowledge and skills, hence ensuring their personal growth, advancement and commitment to their job. The theory helps to explain factors that underlie teachers' perception, attitudes, beliefs and behaviors towards their profession. It is concerned with factors that affect employee performance in any work environment as they affect employee levels of motivation and job performance (Pardee, 1990; Daft, 2005; Guajardo, 2011; Richardson, 2014).

Herzberg's two-factor theory is focused on those sources of management and motivation that are pertinent to the accomplishment of work, (Hall & Williams, 1986, as cited in Pardee, 1990). Educational management would find sense in Herzberg's two-factor theory by not concentrating more on hygiene factors and neglecting motivators, for teachers are likely to seek more of the hygiene factors, which would yield a negative effect on developing a motivated workforce. Therefore, proper management of hygiene factors is an important first step in applying Herzberg's two-factor theory. First, by identifying the type of hygiene; secondly, giving hygiene for hygiene purposes; thirdly, providing hygiene for what hurts; fourthly, keeping the hygiene administration simple; and finally, giving it and shutting up about it (five rules for administering hygiene by Herzberg, 1976). These factors, (intrinsic and extrinsic) assisted the research to assess teachers' motivation as well as how they either positively or negatively affect teachers' job performance

Two factor theory is criticized in that the presence of Extrinsic Motivation Factors has positively contributed to respondents' job satisfactions; while absent of Intrinsic Motivation Factors don't really neutralized their feeling, but have de-motivated them. In China, a study conducted by Fang Yang (2011) has found that all Extrinsic Motivation Factors can motivate employees in China to work hard. The finding has shown a reverse effect where Extrinsic Motivation Factors have overridden Intrinsic Motivation Factors to be the first and second highest motivation factor for workers in China. Lastly, a recent empirical research from Wan Fauziah and Tan (2013) has found that the factor of generations plays an important role in determining employees' favourability in Intrinsic and Extrinsic Motivation factors. Interestingly, younger generation of workers were motivated by Extrinsic Motivation factors and demotivated by Intrinsic Motivation factors to perform Citizenship Performance in their workplace.

Older generation of worker were found vice versa, where their Citizenship Performance was motivated by Intrinsic Motivation factors and demotivated by Extrinsic Motivation factors.

## **Theoretical Review of Performance Management Initiatives and Teacher Performance**

### **Teacher Performance.**

Teaching performance, being a human aspect, is key to achieving a professional practice by society's requirements. It is responsible for promoting the necessary responsibility for good training and learning that serve the professional stage and personal development (Escribano, 2018). In this regard, teacher performance standards become a valuable reference for the work carried out in the classroom. They determine their activities and the way to do it while transmitting knowledge to students, which becomes a reference for reflection and continuous improvement of their work. The lack of adequate pedagogical support will prevent evidence of the achievements and progress of learning in the students, as well as analyzing and identifying the origin of the learning that was not achieved to make relevant changes (Pérez, Andrews, Huang, Isella, Dullemond Kurtovic & Ricci, 2018).

The word perform means to carry through, to achieve, to bring to completion, to execute, to accomplish and performance is the act of doing an action or task. The concept of teachers' performance refers to teacher behavior that is how he behaves in the process of teaching learning environment, in such a way teachers successfully carry out assigned action or complete their task (Duze, 2012). The teachers' performances are the most significant contribution in educational process that whatever policies may he lay down; eventually the teacher has to interpret and implement these policies through teaching learning process.

In higher education, teachers usually receive feedback from the superiors, peers or colleagues to a lesser extent and students as evaluation of their performance. Teachers consider students' feedback as a valuable indicator of the quality of their teaching performance and the curriculum (Surujlal, 2014). In the majority of the research, the degree of the effectiveness of teacher performance has been evaluated from different perspectives in higher education, such as course content (Hsu, 2014), examining teacher effectiveness using observations in the classroom (Garrett & Steinberg, 2015), effectiveness in novice teachers' performance (Darling-Hammond & Lieberman., 2013), in-classroom behaviors of teachers, and psychological characteristics of the teachers and evaluating teaching effectiveness (Klassen & Tze, 2014).

Teacher effectiveness is the outcome of classroom practices (Wenglinsky, 2000); self-regulation (Toussi et.al, 2011); emotional intelligence, (Hwang, 2006; Singh and Jha, 2012; Kauts, Chechi 2014;

Malik and Kapoor, 2014); work experience (Day et al 2006; Irvine, 2018; Pachaiyappan and Raj, 2014), personality traits (Cruickshank, 1990; Anyalewechi 1994; Renaud and Murray, 1996), job satisfaction (Aggarwal 2012; Halder and Roy, 2018) and self-efficacy (Barnes, 2000). Professional skills and attributes, such as teachers possessing good subject knowledge, good pedagogical knowledge and skills, and good communication, and being able to use a range of assessment techniques, all feature in the dominant teacher effectiveness.

The term is not only covering the effect or conduct of instruction, like student achievement or personal growth or also not teacher characteristics. Rather, teachers' performance is apprehensive, with progress variable rather than product variables (Taylor, 2012). According to Gibbs (2002) "Teachers need to be able to survive the demands, threats and challenges within the diverse circumstances of teaching". He stated that an effective teacher needs the capacity to be persistent, flexible, and innovative on new teaching approaches and be prepared in the case of failure.

Attempts are there to shift the emphasis of inspections, from its previous focus on formal examination results and student attainment as a measure of effective teaching and effective schools, to encompass a broader range of aspects of school life (Ofsted, 2019). The new framework includes a 'quality of education' judgement, with a keener focus on the curriculum and the specialist knowledge, understanding and skills necessary to teach. Inspections are required to consider the wider curriculum offering in schools in a bid to reduce the reliance on examination results as a measure of school quality (Ofsted, 2019). The framework also aims to take into account students' personal development, including their overall wellbeing.

Ofsted's current interpretation of an effective school is no longer limited to student academic outcomes but also takes into consideration a broader view of a student's educational experience. Teachers' subject knowledge, pedagogical skills and knowledge, and their ability to create a positive learning environment are among the key aspects of teachers' practice on which they are measured and judged. Thus examination scores still remain a key feature of how a school is judged in the UK, and schools are ranked according to their examination outcomes in nationally published league tables. In other words, despite a shift in emphasis in Ofsted's terms, 'effectiveness' in relation to student outcomes remains a high-stakes game in educational systems such as those in the UK (Goodley, 2018).

There are valid reasons for wanting to assess how well schools are doing – not least in terms of which students are well served or not by their educational experiences. The new inspection framework (Ofsted, 2019) goes some way to addressing the wider educational experience for all students;

however, the neoliberal logics that have positioned educational success in narrow, instrumental and economic ways (Grek, 2009; Verger et al., 2019) remain powerful in educational discourse. The 'successful' student is one who achieves well academically in high-stakes tests. The 'successful' teacher is one who can produce 'good' students like this. However, outcomes that stress academic credentialising and school performance can lead to some unintended consequences. Teachers can become caught up in tactics like revision, teaching to the test, booster classes and targeting those students most likely to score well (Ball, 2021).

### **Work Environment and Teacher Performance**

Babatunde and Ayonle (2018), define working environment as an entirety which comprises the totality of forces, actions and other influential factors that are currently and, or potentially contending with the employee's activities and performance. Working environment is the sum of the interrelationship that exists within the employees and the environment in which the employees work. Akinyele (2010) was of the opinion that "the ability to share knowledge throughout organizations depends on how the work environment is designed to enable organizations to utilize work environment as if it were an asset. This helps organizations to improve effectiveness and allow employees to benefit from collective knowledge". In addition, he argued that working environment designed to suit employee's satisfaction and free flow of exchange of ideas is a better medium of motivating employees towards higher productivity.

Noah and Steve (2012) defines working environment is a composite of three major sub environments: the technical environment, the human environment and the organizational environment. Technical environment refers to tools, equipment, technological infrastructure and other physical or technical elements. The technical environment creates elements that enable employees perform their respective responsibilities and activities. The human environment refers to peers, others with whom employees relates, team and work groups, interactional issues, the leadership and management. This environment is designed in such a way that encourages informal interaction in the work place so that the opportunity to share knowledge and exchange ideas could be enhanced. This is a basis to attain maximum productivity. Organizational environment includes systems, procedures, practices, values and philosophies. Management has control over organizational environment and measurement system where people are rewarded on quantity, hence workers will have little interest in helping those workers who are trying to improve quality. Thus, issues of organizational environment influence employee's productivity.

A conducive working environment could provide comfort and safety for teachers at work and remain productive. In addition, Mangkunegara (2004) said that teachers in educational institutions could maximize their performance supported by an appropriate working environment. According to Sedarmayanti (2011), the working environment is the entire tool and material faced, the surrounding environment where a person works, his/her work methods, and work arrangements both as individuals and groups. Handayani (2017) stated that a working environment is where teachers carry out activities every day. Furthermore, it is said that a sense of security and emotional stability allows teachers to work optimally. Therefore, the working environment must be conducive to create a sense of security. If teachers like the environment in which they work, they will feel comfortable at work. They can also conduct activities effectively, so that productivity will be high, and have an impact on high performance.

Suwatno and Priansa (2011) stated the factors that affect the working environment generally consist of the physical and the psychological working environment. Physical environmental factors are the environment around the teachers themselves. Conditions in the working environment can affect teachers' satisfaction which includes (1) workspace plans, (2) job designs, (3) working environment conditions and, (4) Visual Privacy and Acoustical Privacy levels. Meanwhile, Psychological-environmental factors are matters relating to social and organizational relationships. Psychological conditions that affect teachers' satisfaction are (1) excessive work, (2) poor supervision system, (3) frustration, (4) changes in all forms and, (5) disputes between individuals and groups.

In addition, Sedarmayanti (2011) divided the working environment into two types which are: Physical working environment which is including lighting/light, air temperature, humidity, air circulation, noise, mechanical adjustments, unpleasant odours, colour arrangement, decoration, music and safety in the workplace; and Non-physical working environment which is including social relationships at work between superiors and subordinates or relations between subordinates.

Rahmawanti, Swasto, and Prasetya (2014) found that, partially, the physical working environment significantly affects teacher performance. Simultaneous test results show that the physical working environment and non-physical working environment significantly influence teacher performance. Contrary to the results of this study, in her findings, Handayani (2017) revealed a positive and significant influence between education and training, motivation, and working environment on performance.

Regency/ Schultz's in Kuncoro and Dardiri (2017) stated that the problems of the working environment, including working conditions, physical conditions, and psychological conditions, were always highlighted as the contributing factor to teachers' poor performance to deliver lessons. It meant that the working environment was one of the factors that contributed to the poor performance of teachers in the teaching and learning process. A conducive working environment could provide comfort and safety for teachers at work and remain productive. In her findings, Handayani (2017) revealed a positive and significant influence between education and training, motivation, and working environment on performance.

Teachers pay great attention to their working environment, both in terms of personal comfort and the ease of doing a good job. The working environment, both in terms of physical and non-physical, also contributes to teacher performance. The success of any organization is closely tied to the job performance of its employees (Mohammed, 2014). Thus, the quality of workplace environment has impact on employees' motivation level as well as their performance (Ajala, 2012). Accordingly, Razig and Maulabakhsh (2015) noted that organisation must satisfy the needs of its employees by providing good working conditions which in turns will increase efficiency, effectiveness, productivity and the job commitment of employees.

According to research conducted by Zuhriyah (2015) teacher performance is influenced by several factors including teacher competence, teacher work motivation, work environment and leadership of the principal. In the opinion of Gibson (in Supardi, 2013), teacher performance factors are influenced by three groups of variables, including; 1) Individual variables, including: ability and skills in understanding curriculum, background (family, education, social level, experience), demographics (age, ethnicity, gender); 2) Organizational variables, including: resources, leadership (in this case the provision of supervision services), rewards, structure, job design; 3) Psychological variables, including: perception, attitude, personality, learning, motivation, job satisfaction and work climate.

### **Empirical Literature**

This section presents a review of relevant studies that have previously been done on performance management and employee productivity.

### **Work Environment and Performance**

Anshika, Devanshi. Pranika, Sneha and Vadini (2023) studied work environment and job satisfaction among employee in India. This paper examined the association between the two factors i.e., Work Environment and Job Satisfaction. This paper included reviews of already published articles as it was

a secondary paper .Work environment and job satisfaction are essential interrelated components of an employee's work life.. Findings from the research suggest that the work environment of an employee positively correlates with their job satisfaction. With the provision of a nurturing work environment both employees and the organization benefit.

Mochamad and Rhian (2022) investigated the influence of organizational culture, work environment and work motivation on employee performance. This study used a survey method by distributing questionnaires to employees of the Education Financing Service Center Kemdikbudristek as respondents. This study used quantitative research methods, and analytical methods using Structural Equation Modeling (SEM) with Smart PLS applications. Respondents in this study were 85 people. The results of this study indicate that all indicators used in this study are valid and reliable.

Zhenjing, Supat, Kuo, Nassani and Haffar (2022) examined the impact of workplace environment on employee task performance under the mediating role of employee commitment and achievement-striving ability. For this purpose, data were collected from the academic staff under a cross-sectional research design, and they were approached through convenience sampling technique. As per recommendations of established sample size criteria, they distributed a sum of 420 questionnaires among the respondents. The results indicated that a positive work environment had the power to improve employee performance. Similarly, a positive work environment also improved the employee commitment level and achievement-striving ability significantly. Both employee commitment and achievement-striving ability also improved employee performance. While in the case of mediation, it had also been observed that workplace environment triggered employee commitment and employee achievement-striving ability which further improved employee performance.

Samudim, Azma,Azmi and Rizal (2022) did a review of work environment and employee productivity in Mara. In this research paper the existing literature on the workplace environment in organizations is was reviewed. They found out that employee productivity, performance, health and safety, comfort, concentration, job satisfaction, and morale are all affected by the physical characteristics of the workplace environment. Workplace motivation is necessary, but the most important factor is internal motivation, which stimulates employees' desire to work hard and enthusiastically in order to increase production. When a person can carry out their activity optimally, healthily, safely, and comfortably, the environment is considered to be appropriate. Long-term, an incompatible environment evolves. Furthermore, adverse environmental conditions necessitate more energy and time, which is incompatible with efficient framework systems.

Bushiri (2014) assessed the impact of working environment on employees' performance at Institute of Finance Management in Dar es Salaam Region. Descriptive research design was used. Simple random sampling technique was respectively used to select the respondents for the study. Respondents for this study were fifty (50) made up of twenty-five (25) senior staff and twenty-five (25) junior staff. Structured questionnaires were used for data collection. The study findings indicate that, organization working environment had an impact on members as far as respondents are concerned. The study also revealed that employees' will improve their performance if the problems identified during the research are tackled by the management. The problems are flexibility of working environment, work noise distraction, supervisor's interpersonal relationship with subordinates, presence of job aid, the use of performance feedback and improvement of work incentives in the organization so as to motivate employees to perform their job.

Anwar, Khan and Jabbar (2022) sought to determine the effect of the working environment on teachers' performance of teaching faculty. This study was quantitative based on a cross-sectional research design. In this study, the working environment was used as an independent variable, while the teachers' job performance was treated as a dependent variable. The population of the study was public secondary school teachers in Sheikhpura, while 234 respondents were selected as a sample through a simple random sampling technique. The self-administered questionnaire was adapted based on five points Likert scale format. The data were collected by research tool through a survey method. The study's findings revealed a positive and significant correlation between the working environment and job performance. Moreover, the working environment had a positive and moderate effect on teachers' job performance.

Baharuddin (2021) interrogated the effect of the working environment on teachers' performance at MTS Madani Pao-Pao. This research used Quantitative Approach with the Ex-post Facto type. The sample was 12 teachers selected using purposive sampling. The data were collected through a questionnaire with the Likert Scale and then analyzed using descriptive and inferential analyses. The finding indicated a significant influence between the work environment and the teachers' performance. Therefore, the conducive, comfortable, safe, and enjoyable working environment affected the teachers' performance at MTS Madani Pao-Pao.

Mwita (2019) investigated the effects of working Environment on teachers' performance at Ilala Municipal Council. Specifically the study focused at finding out the following guided objectives; to examine on how working environment improved teachers performance. To analyze the effect of the office of Dar es salaam Regional Commissioner conducive working environment plan on teachers'

effectiveness. To determine whether the school National Results improved after the improvements of teachers working environment as well as to compare the resources available in public secondary schools and private secondary schools. Data were collected in twelve selected secondary schools with the total 80 respondents include DEO, WEO, CWT Officers, Head of the secondary schools as well as teachers. Questionnaires, observation and interview instruments were used. The study found that the work environment to public secondary schools in Ilala Municipal was not favorable and supportive to teachers while performing their duties as there are many challenges facing teachers like; low salaries, lack of teachers houses in many schools, lack of incentives, delaying in promotion, and others of the same consideration.

Ekabu, Kalai and Nyaga (2018) conducted a study whose aim was to examine the relationship between working conditions and teacher turnover intentions in public secondary schools in Meru County, Kenya. The study used a descriptive survey design with both quantitative and qualitative approaches in data collection and analysis. A total of 520 respondents were involved in the study that included 503 secondary school teachers, 15 principals and 2 staffing officers. Teachers working conditions were examined to determine their relationship with turnover intentions.

The results therefore established that teachers' motivation in secondary schools in Meru County is low due to poor working conditions and the education system appears to be staffed with teachers with poor morale and low levels of commitment to their jobs leading to high turnover intentions.

## **RESEARCH METHODOLOGY**

### **Introduction**

This chapter covers the research design, research philosophy, the target population, sampling procedure and sample size, validity and reliability. It also discusses the data collection instruments and data analysis methods that will be employed when carrying out this study.

### **Research Philosophy**

This study was anchored on the pragmatic paradigm. The paradigm arose among philosophers who argued that it was not possible to access the truth about the real world solely by virtue of a single scientific method as advocated by the positivist paradigm, nor was it possible to determine social reality as constructed under the interpretivist paradigm. For them, a mono-paradigmatic orientation of research was not good enough. Rather, these philosophers such as Snyder (2019) observes that what was needed was a worldview which would provide methods of research that are seen to be most appropriate for studying the phenomenon at hand.

A worldview that provided the most practical, appropriate and pluralistic research methods for studying the phenomenon at hand was thus needed. This gave rise to a paradigm that employs mixed methods as a pragmatic way (pragmatic paradigm) to understand participants' actual behaviors, their beliefs behind the behaviors and the consequences that are likely to follow from their different behaviors (Kivunja & Kuyini, 2017). This paradigm generally advocates a relational epistemology (that is, relationships in research are best determined by what the researcher deems appropriate to that particular study), a non-singular reality ontology (that there is no single reality and all individuals have their own and unique interpretations of reality), a mixed methods methodology (a combination of quantitative and qualitative research methods), and a value-laden axiology (conducting research that benefits people) (Nguyen, 2019).

Agoi (2017) used this approach to study the influence of Human Resource Management practices on employee satisfaction in public sugar manufacturing firms in Kenya. Al Khajeh (2018) used mixed methods in a study on Human Resource Management practices and tutor turnover intentions in public primary teacher colleges in Nairobi metropolitan region in Kenya. This paradigm was best suited for this study since the phenomenon of performance management initiatives and the performance of teachers in Kenya was assessed using a mixed methodology where both qualitative and quantitative research methods were used.

### **Research Design**

This study employed a descriptive research design. The research design used both the qualitative and quantitative methods at the same time in the research process where both methods were equally prioritized, but kept separately when analyzing data (Ørngreen & Levinsen, 2017). The results from both approaches were merged in the overall interpretation stage. Therefore, the research approach used diverse kinds of information comprising of qualitative views of the respondents on the study subject and quantitative scores which yielded complementary results were obtained.

Caruth (2013) notes that no research design exists on its own and combining different designs in one study increases validity of the findings. Through this research design, the validity of the findings were enhanced. It was possible to maximize on the strengths and minimize on the weaknesses of the quantitative and qualitative approaches of research. The quantitative approach will be hinged on the descriptive study approach which determines what, where and how of the study phenomenon and also assists in the description of the phenomenon in its current state along the lines of (Cooper & Schindler 2011).

Amadi and Ezeugo (2019) used mixed methods to examine physical infrastructure availabilities and the academic performance of students in the Universal Basic education Scheme, Rivers state, Nigeria. Omisore and Okofu (2018) used mixed research methods to study the link between staff recruitment and selection process in the Nigerian public service. The study design facilitated the description of performance management initiatives adopted in public secondary schools in Kenya and how they affected the performance of teachers in those schools. The approach helped in making sure that the study problem was not assessed through a single lens, but rather, diverse lenses which assisted in ensuring that the multiple facets of the study phenomenon were revealed and understood.

### Target Population

The target population of this study was 122605 public secondary school teachers employed by the teachers' service commission in Kenya and TSC sub county directors of the respective sub counties selected in each targeted county. The unit of study was teachers whose direct TSC agent is the Board of Management represented by the principal as the secretary then the immediate overseer of the TSC performance management initiatives is the TSC sub county director.

**Table 3.1: Target population**

School category	Number of teachers
National	5250
Extra county	9960
County	22940
Sub county	84160
TSC Sub county directors	295
<b>TOTAL</b>	<b>122605</b>

### Sampling Procedure and Sample Size

Given that the population in this study was very large (122310 teachers and 295 sub county TSC directors), a representative sample was determined using Slovin's formula (Ellen, 2012) as shown in equation.....

$$n = \frac{N}{(1 + N(e)^2)} = \frac{122605}{(1 + 122605(0.05)^2)} = 399.$$

Where n was the sample size, N was the total population, e was the margin error of 0.05 based on 95 per cent confidence level.

Multistage sampling was used to cluster the country into 8 geographical regions as administered by TSC regional directors as Primary Sampling Units (PSUs). According to Kothari and Garg (2014), multistage sampling is a sampling technique most preferred for studies involving large geographical

areas such as a whole country. It is a method that entails sampling in stages based on one or more criteria and the first stage involves selecting large primary sampling units such as states, followed by smaller units like districts, towns and families.

Each region was again clustered in counties as Secondary Sampling Units (SSUs) so from Eastern we had Kitui, Western-Busia, Rift Valley- Uasin Gishu, Nyanza-Migori, Central- Kiambu, North Eastern – Garissa, Coast- Kwale and Nairobi and then each county was clustered into sub counties as Ultimate Sampling Units (USUs) in which the central sub county was purposively selected since it is likely to have the four categories of schools which were stratified in National, Extra county, County and Sub county schools.

So 4 schools per sub county where teachers were purposefully selected according to how long they had taught students up to form four per subject and a sub county director from each sub county selected so 12 teachers as per KCSE subjects in each extra county, county and sub county school and 13 in each national school plus the sub county TSC director of the sub county. Babbie and Earl (2010) describes purposeful sampling as a technique of sampling based on researcher's judgment on the most useful units to the study.

Kothari and Garg (2014) describe stratified sampling as a technique that stratifies a population into non overlapping subgroups, especially when the population is not homogenous, for purposes of representing the peculiarity of each subgroup in the sample. Based on KCSE performance and admission criteria, Public secondary schools have been classified into national schools, extra county schools, county schools and sub county schools.

This ensured that there was representation from each category of the population (Ørngreen & Levinsen, 2017). Stratified sampling ensured a desired representation from each stratum. It also gave the researcher confidence that if another sample of the same size was to be selected, the findings from the two samples would be similar to a high degree.

**Table 3.2: Sample Size**

School category	Target population	Percentage	Sample size
National	5250	26	104

Extra county	9960	24	96
County	22940	24	96
Sub county	84160	24	95
TSC sub county directors	295	2	8
<b>Total</b>	<b>122605</b>	<b>100</b>	<b>399</b>

### Data Collection Instruments

Structured questionnaire and interview schedule were used to collect information from the respondents. Questionnaires were economical to administer in terms of time and cost to a large number of respondents. They ensured anonymity hence respondents were able to respond genuinely without fear of identification. The questions on paper were standardized hence no opportunity for the researcher to be biased (Dźwigoł & DźwigołBarosz, 2018).

The open ended questionnaire gave the respondents a leeway to give their honest views while closed ended questionnaires was used to generate statistics for ease of tabulation and analysis (Daniel & Harland, 2017). The questionnaire consisted of a section on demographic information of the respondents and a set of items to measure the influence of performance management initiatives on the performance of teachers in public secondary school in Kenya. The Likert Scale was used for the closed ended questionnaires because it was relatively easy to construct. It facilitated quantification of the responses, ranking of items thus tendencies could be identified as the respondents were more likely to respond to all the statements in the instrument and best helped to capture people 's opinions (Snyder, 2019). An oral interview schedule was used to gather qualitative data from the principals and TSC sub county directors. Interviews helped in collecting in-depth explanations which would not be possible to get from the questionnaire. Interviews allowed the interviewer to probe the respondents and get clarification and more details in the area of study (Kivunja & Kuyini, 2017).

### Data Collection Procedures

Approval was granted from the University to conduct the study and clearance was sought from the National Council of Science Technology and innovation (NACOSTI). Once granted, visits to the sampled secondary schools were done and authority was sought from the TSC County Director, to administer the questionnaires and collect data. The questionnaires were dropped and picked later. Some questionnaires were send to respondents via email and the filled hard copies were send as parcels and collected from Nairobi. This ensured a higher response rate and reduced non-coverage error since respondents had time to express their views and opinions since they were all literate (Nguyen, 2019). Time was agreed on when to collect the duly-filled questionnaires. This gave the

respondents adequate time to respond. Follow-up courtesy calls were made to remind the respondents to fill in the questionnaires to try to increase the response rate. Three research assistants were contracted to assist in administering the questionnaires. Interviews were administered to the sampled respondents personally by the researcher.

### **Data Analysis and Presentation**

Data analysis is the categorizing, manipulating and summarizing of data in order to get answers to research questions (Daniel & Harland, 2017). In this study, both quantitative and qualitative approaches to data analysis were applied.

### **Qualitative Data Analysis and Presentation**

Qualitative data obtained was analyzed using content analysis (Clarke & Braun, 2013). The qualitative data collected was categorised first and organised by identifying main themes by coding. Analysis was then done using the categorised themes in line with the research questions. Non parametric data analysis such as chi square test was employed. This is an analytic technique used with qualitative data. It is a method for identifying, analyzing and reporting patterns within data. It entails perusing through the collected data and identifying information that is relevant to the research objectives.

It also involves coding of data, highlighting key quotations or insights and interpretations, placing together all materials relevant to a certain topic and finally developing a summary report identifying major themes and the associations between them (Kivunja & Kuyini, 2017). Hence, the notes taken in the course of the interview were read through and common themes emerging from the responses given were highlighted. The qualitative findings generated were presented using direct quotes or in a narrative form in some cases. Others were summarized and presented in tabular form for easier reference.

### **Quantitative Data Analysis and Presentation**

Quantitative data is commonly presented by use of frequency tables, graphs, pie-charts and frequency polygons (Ørngreen & Levinsen, 2017). Interpretation is the process of making inferences and drawing conclusions concerning the meaning and implications of a research investigation (Caruth, 2013). The quantitative data collected was processed and organized for statistical analysis. First, the responses from the questionnaire were coded, tabulated and then the researcher performed several statistical computations. The demographic characteristics of the respondents were summarized using frequencies and percentages.

Descriptive statistics comprising of means and standard deviation were then computed for all variables so as to summarize and describe the data collected. This helped in determining the extent that different performance management initiatives had been adopted and also the level of teacher performance in the sampled schools. Inferential analysis were afterwards undertaken and

computations used to make conclusions and generalizations about the teachers based on data collected from the sample.

Pearson correlation coefficients was used to assess the nature of the association or correlation between performance management initiatives and the performance of teachers in Kenya. The strength, direction and significance of the associations between these variables were determined. Cooper and Schindler (2011) note that Pearson correlation coefficient is a popular measure of correlation for descriptive studies. It is most commonly used in linear regression and is a measure of the strength of the association between two variables.

The computation of a correlation coefficient yields a statistic that ranges from -1 to 1. The correlation coefficient informs one about the magnitude and direction of the association between two variables and the higher the coefficient the stronger the association. If the correlation is (+), it means there is a positive relationship between the two and vice versa. The significance of the correlation was assessed at the 95% confidence level or the 0.05 significance level (probability value). The rule of the thumb was that a calculated p value less than the critical p value of 0.05 for this study would imply that the correlation between the variables was significant and vice versa.

Regression analysis was then done in order to determine the effect that each of the variables under study had on the performance of public secondary school teachers in the Country. Both bivariate and multiple regression analyses were conducted. Bivariate regression analysis was done to see the individual influence of each performance management initiative on the performance of teachers since the effectiveness of performance management initiative in influencing teacher performance in public secondary when assessed individually was quite different. A multiple regression analysis was on the other hand was done to find out influence of each independent variable on the performance of public secondary school teachers in Kenya.

The significance of the regression coefficients (beta coefficients) computed was determined by checking the associated p value. A regression coefficient with a p value of less than 0.05 indicated that the variables (independent variables) significantly influenced the dependent variable. This was crucial in testing the research hypotheses. Amadi and Ezeugo (2019) used a regression model previously in a study which investigated the impact of HRM practices on organizational performance in Debre Brehan University. Sahar (2013) also used the same model to test the influence of human resource management practices on the performance of teachers in catholic sponsored schools in Pakistan.

The regression equation is as shown;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

$$Y_1 = \beta_0 + \beta_1 X_1 + e$$

$$Y_2 = \beta_0 + \beta_2 X_2 + e$$

$$Y_3 = \beta_0 + \beta_3 X_3 + e$$

$$Y_4 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

$Y$  = is the dependent variable which is a measure teacher performance of all public secondary schools in Kenya of all performance management initiatives under study.

$Y_1, Y_2, Y_3, Y_4$  = dependent variables which are measures of teacher performance in public secondary schools in Kenya for each performance management initiative.

$X_1$  = Performance target setting

$X_2$  = Performance appraisal (TPAD)

$X_3$  = Internal quality assurance

$X_4$  = Teaching staff training.

$\beta_1, \beta_2, \beta_3,$  and  $\beta_4$  = Beta coefficients for each of the four independent variables

$\beta_0$  = Constant Term

$\epsilon$  = Error term

The moderating effect of work environment on the relationship between the independent variables and the dependent variable, performance of public secondary school teachers in the Country was tested using stepwise regression analysis proposed by Snyder (2019). Step one tested the influence of the composite of the dependent variables on the dependent variable. The composite value was determined by undertaking an overall mean score of all the individual mean of responses for all the performance management initiatives.

$$Y = \beta_0 + \beta_1 X + \epsilon \dots\dots\dots \text{(Model specified for under Step 1)}$$

In the step two, the influence of predictor variables (composite of performance management initiatives and work environment) on the dependent variable (performance of public secondary school teachers in Kenya) was tested.

$$Y = \beta_0 + \beta_1 X + \beta_2 M + \epsilon \dots\dots\dots \text{(Model specified under Step 2)}$$

In step three, an interaction term (computed as the product of standardized values for composite of performance management initiatives and work environment) was introduced and its influence on the performance of public secondary school teachers tested.

$$Y = \beta_0 + \beta_1 X + \beta_2 M + \beta_3 X * M + \epsilon \dots\dots\dots \text{(Model specified under Step 3)}$$

Where;

$Y$  is the performance of public secondary school teachers in Kenya

$X$  is Composite for all the independent variables (performance management initiative

$M$  = Work environment (Moderating Variable)

$X * M$  = Moderator multiplied by the composite for all the independent variables (Intellectualx)

$\varepsilon$ = Error term

Moderation was established if the influence of the composite of performance management initiatives, work environment and intellectual term on the performance of public secondary school teachers in step three was significant. The main software used in analyzing the quantitative data was the statistical package for social sciences (SPSS). The findings were presented by use of charts and tables.

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS, INTERPRETATION AND DISCUSSION OF FINDINGS**

#### **Introduction**

This chapter comprises of general and demographic information, the study findings, interpretation and discussions. The chapter is organized based on the specific objectives of the study. Content analysis was done for the qualitative data while descriptive analysis, inferential and regression analysis were contacted to analyze quantitative data. The findings were presented in tables, charts, narratives and direct quotes.

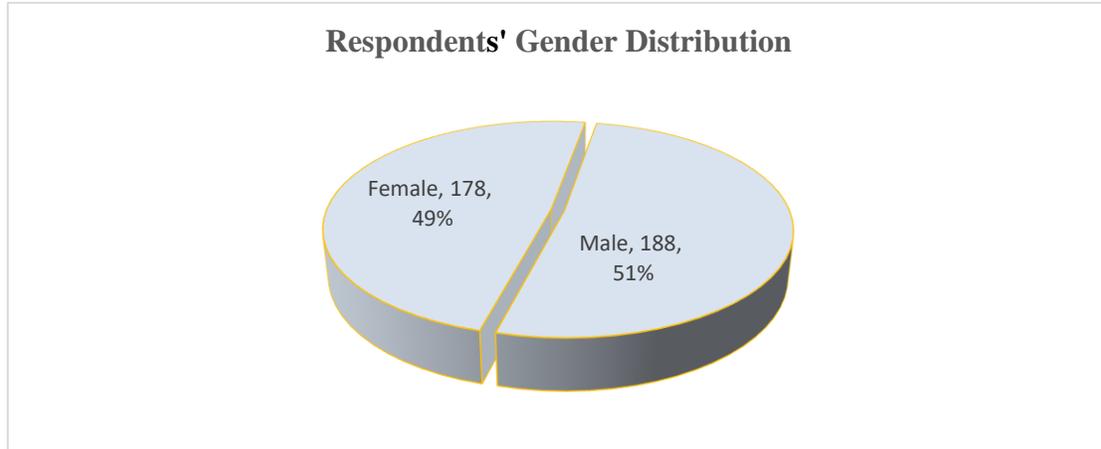
#### **Response Rate**

A total of 399 questionnaires were administered to teachers drawn from public secondary schools in Kitui, Garissa, Kwale, Migori, Uasin Gishu, Nairobi, Kiambu and Busia Counties. Out of 399 questionnaires, 366 were adequately completed and returned. This yielded a 91.72% response rate. For the interviews, a 100.00% response rate was attained as all the 40 key informants were interviewed. According to the National Science Foundation, a return rate of above 60 percent is appropriate for a Social Science Research (Richardson, 2005).

#### **Demographic Information of the Respondents**

This segment describes the demographic facts of the respondents in relation to age, gender, education level, length of stay in current school and teaching subject. The researcher needed demographic data to comprehend the characteristics of the respondents and to appreciate the roles played by confounding factors connected to demographic data other than the major aspects under examination.

## Gender of the Respondents

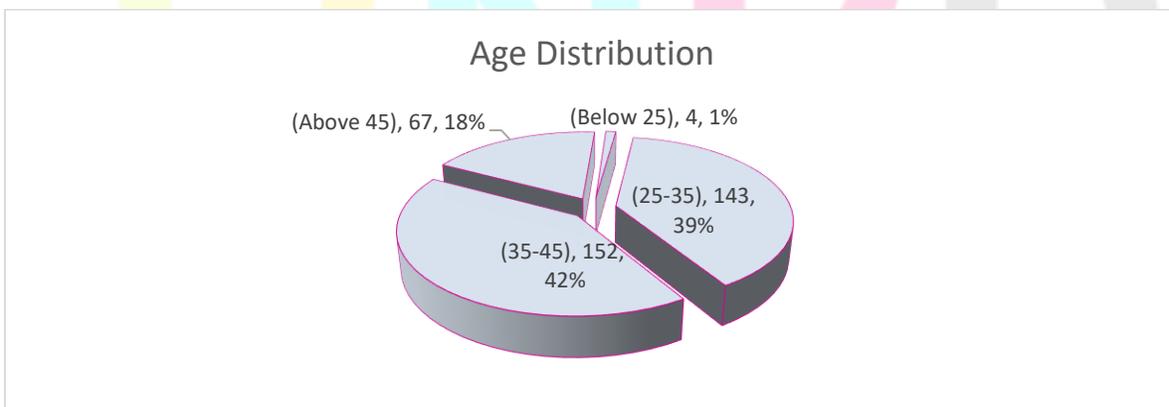


**Figure 4.1: Gender of the Respondents**

The gender representation shows that 49% were female and 51% were male. This showed that there were more male than female teachers. This distribution is in line with the requirements of the Kenya Constitution (2010) that no one gender should take up more than two thirds of employment positions in public and private institutions. Gender was likely to impact the effectiveness of the teachers in their work. Female teachers provide feedback differently to girls and boys which alters girls' beliefs about commonly held gender stereotypes thus increasing their motivation to learn (Gong, Lu & Song, 2016).

## Age of the Respondents

The study found that 4 (1%) of the teachers were aged 25 years and below, 57 (18%) were between 25 and 35 years, 143 (39%) were in the age bracket of 35 to 45 years while 152 (42%) were above 45 years (See Figure 4.2).

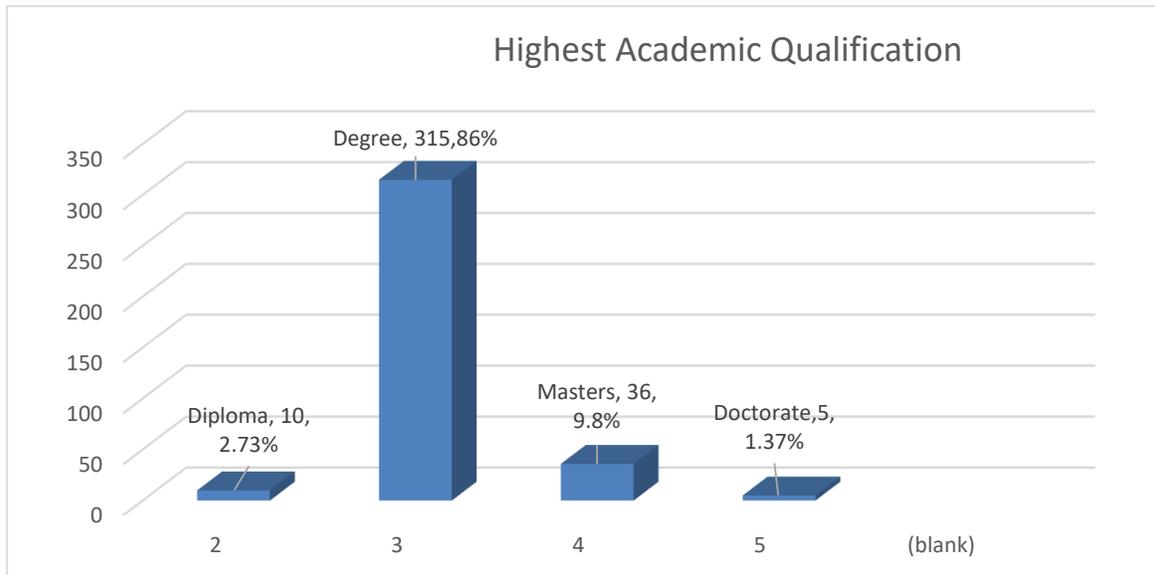


**Figure 4.2 Age of the Respondents**

The findings in figure 4.2 imply that majority of respondents were mature and hence were experienced in teaching profession which had an impact on the performance of candidates in the KCSE exam.

### Academic Qualification

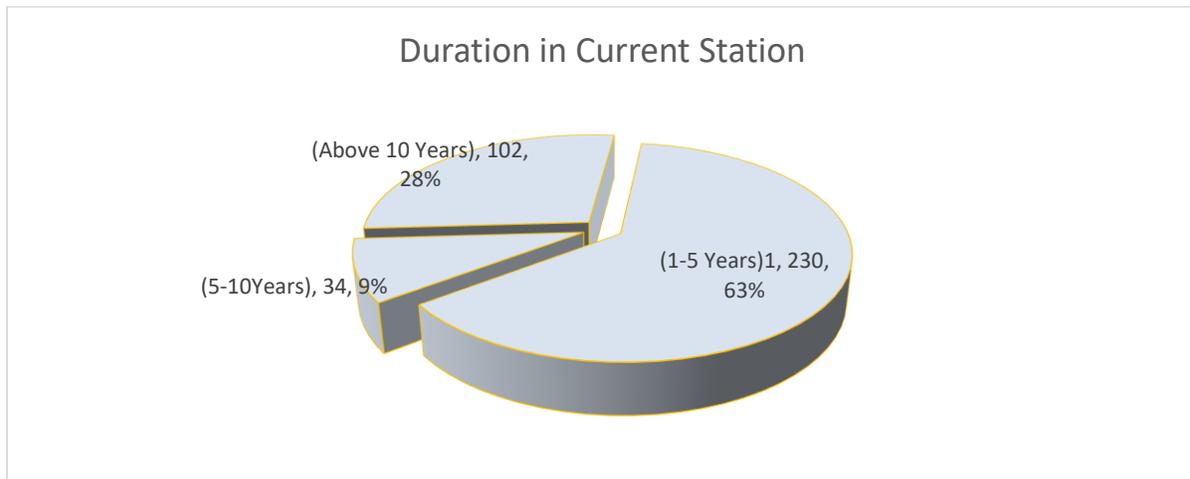
The findings presented in Figure 4.3 show that 10 (2.73%) of the teachers had obtained diploma, 315 (86.06%) had bachelor's degrees, 36 (9.8%) of the teachers had master's degrees while the rest, 5 (1.37%) had earned PhDs.



**Figure 4.3 Highest Academic Qualifications**

The findings in Figure 4.3 showed that majority of respondents obtained Bachelor's Degree hence, they had the necessary qualifications as in secondary level its a major requirement in Kenya. The educational qualifications was considered a fundamental characteristic to enable them perform their duties effectively and take the schools into high performance levels (Mugambi, 2015). It can therefore, be inferred that all the teachers had the required professional qualifications that enabled them to teach effectively and efficiently for better performance.

## Respondents' Duration in Current School

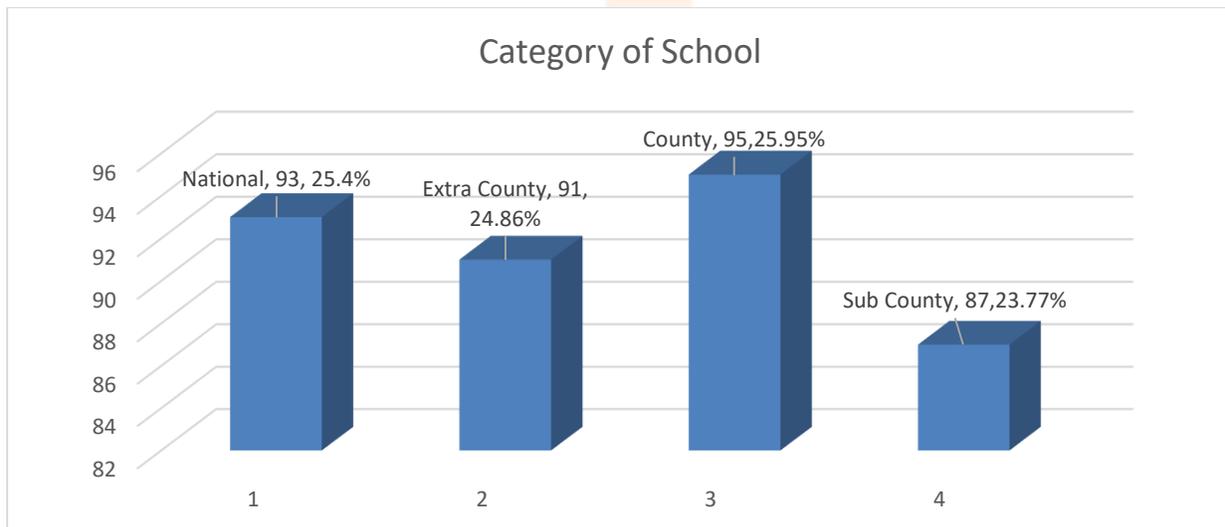


**Figure 4.4 Duration in Current School**

Majority of respondents 63% were in their current schools between 1 -5 years, while the least (9 %) had stayed in their current station between 5-10 years. Only 28% were in their stations for 10 years and above. Teachers who had served more than 10 years achieve better results than teachers had less than 10 years' experience (Oluwakemi & Olukayode, 2015).

## School Category

The findings showed that 93(25.4%) of the teachers were teaching in national schools, 91(24.86%) were in extra county schools, 95 (25.95%) were from county schools as presented in Figure 4.5



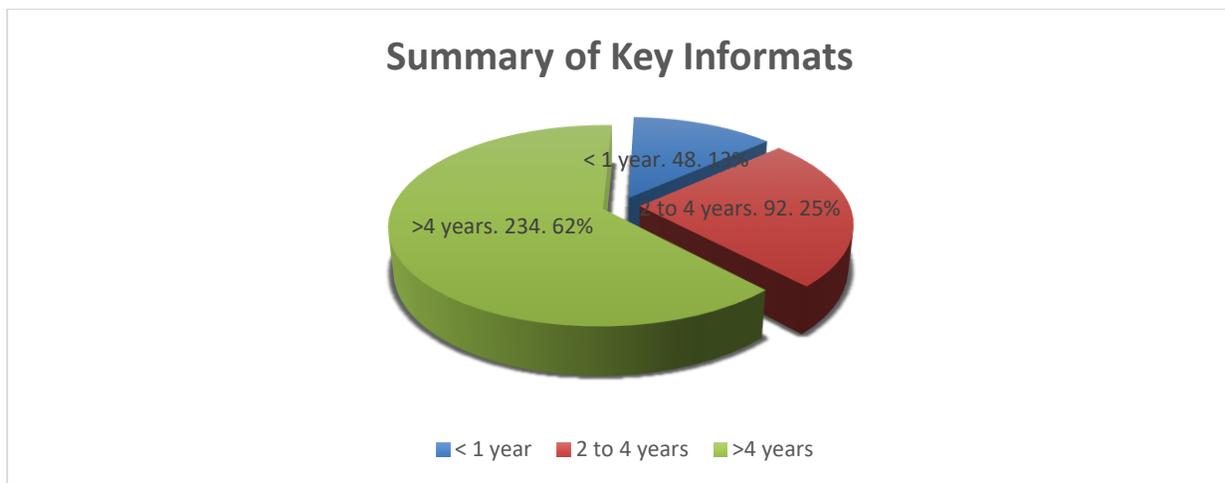
**Figure 4.5 Category of School**

The category of schools was necessary since the performance management initiatives were likely to vary significantly across the categories triggering variation in performance as supported by Kumwenda

et al. (2018), who assert that, the school category a child attends affects academic outcomes., which the researcher agrees with.

### Summary of Characteristics of Interviewees

Interviewees were principals from selected public secondary schools and TSC sub county offices there were eight sub county directors and 32 principals. Majority of interviewees 25 (62.5%) had stayed in the sub counties/ schools for four years and above, 10(24.6%) had stayed between 2 to 4 years and 5(12.8%) were less than a year. Teachers who have served for more than 10 years achieve better results than those with less than 10 years' experience (Oluwakemi & Olukayode, 2015).



**Figure 4.6 Summary of Key Informants**

### Descriptive Analysis

This section presents the descriptive statistics of the independent and the dependent variables. The mean responses for the different statements (items) in all the constructs were interpreted using a scale interval where a mean value of (1.0 – 2.4) indicated respondents were not in agreement, (2.5 – 3.4) were neutral, while (3.5 – 5.0) were in agreement.

### Work Environment

The fifth objective aimed at determining the influence of work environment on the performance of public secondary school teachers in Kenya. Various questions were presented to teachers in relation to this subject and the findings are as presented in Table 4.14:

### Aspects of Work Environment

Work environment acted as a moderating variable on the relationship between management initiative and performance of public secondary school teachers' performance. The findings in Table 4.14 showed that majority of teachers fairly agreed that their schools had most of the teaching and learning resources which made their teaching effective as shown by the item mean 3.63 and standard deviation of 1.059. Further, 290 (79.2%) of teachers agreed that their principal's leadership style made them

enjoy their work and be effective in teaching. Likewise, majority of teachers 348 (95.1%) totally agreed that their colleagues assist them when they got a challenge in performing their duties. This implies that in most public secondary schools there existed team work, which is a cartelist of performance in any organization.

Further, majority of teachers 277 (75.7%) agreed that their school infrastructure made their learning / teaching activities effective. However, teachers neutrally agreed that the parents of their school offer great support to make them effective in their work. Generally, teachers in public secondary schools agreed that work environment helped in the performance of KCSE examination in their respective teaching subjects.

**Table 4.14 Work Environment**

Statement	SD	D	NS	A	SA	n	$\mu$	$\sigma$
Work Environment	F	F	F	F	F	F		
	(%)	(%)	(%)	(%)	(%)	(%)		
1) My school has most of the teaching/learning resources which make my teaching effective	10 2.7	62 16.9	51 13.9	173 47.3	75 19.1	366 100	3.63	1.059
2) My principal's leadership style makes me enjoy my work and be effective in teaching.	12 3.3	15 4.1	48 13.4	185 50.5	105 28.7	366 100	3.97	.939
3) My colleagues assist me when I get a challenge in performing my duties.	4 1.0	12 3.3	2 0.5	221 60.4	127 34.7	366 100	4.24	.724
4) The parents of our school offer great support to make me effective in my wok.	26 7.1	64 17.5	73 19.9	163 44.5	40 10.9	366 100	3.35	1.107
5) Our school infrastructure makes my learning/ teaching activities effective.	21 5.7	43 11.7	25 6.8	232 63.4	45 12.3	366 100	3.65	1.028
<b>Compound mean</b>							<b>3.77</b>	<b>0.750</b>

**SD** = Strongly Disagree; **D** = Disagree; **NS** = Not Sure; **A** = Agree; **SA** = Strongly Agree **n** = Sample Size;  $\mu$  = Mean  $\sigma$  = Standard Deviation

These results were backed by the findings of Anwar, Khan and Jabbar (2022) who sought to determine the effect of the working environment on teachers' performance of teaching faculty in public secondary schools in Sheikhhupura and found out that work environment had a positive and moderate effect on teachers' performance.

### **Influence of work environment in enhancing Performance of Secondary School Teachers**

The Teachers' opinions on whether their schools' work environment assisted their performance in the selected public secondary schools was sought. A majority of the teachers 349 (95.5%) stated that their work environment assisted them to achieve improved KCSE performance while the rest of the teachers, 17 (4.5%), believed work environment did not assist them at all in improving their KCSE performance in their schools. Table 4.15 shows the various ways work environment influence the performance of public secondary school teachers.

Table 4.15 shows the ways in which work environment influenced the performance of public secondary school teachers and majority of teachers 183 (50.14%) felt that work environment creates comfort and satisfaction in their work and therefore makes them comfortable and satisfied when which makes them effectively. 104 (28.57%) of teachers indicated that work environment motivates them which enhances improved performance in their respective subjects. While 40 (14.29 and 39 (14.18%) of teachers narrated that work environment enables them to utilize fully the learning and teaching materials, and that it makes them work effectively respectively.

**Table 4.15 Influence of Work Environment on Performance Public Secondary School Teachers**

<b>Highlighted ways</b>	<b>Frequency</b>	<b>Percent</b>
Creates comfort and satisfaction in work	183	50.14
Motivates teachers which enhances improved performance	104	28.57
Enables full utilization of learning materials and aids	40	14.29
Makes teachers work effectively	39	14.18

These findings were supported by the study done by Baharuddin (2021) who did a research to investigate the effect of working environment on teachers' performance in MTS Madani Pao-Pao and found out that the conducive, comfortable, safe and enjoyable working environment positively affected teachers' performance.

## Possible Ways of Improving School Work Environment to Enhance Performance of Secondary School Teachers

Possible ways of improving school work environment to enhance teacher performance was sought from teachers in the selected public schools. The possible ways were aligned in Table 4.16.

Possible ways of improving work environment in selected schools to boost teacher performance was pursued and teachers responded as indicated in Table 4.16. The results showed some of the possible ways of improving work environment in the sampled schools as suggested by the teachers. The findings established that 152 (41.53%) of the teachers indicated that involving teachers in decision making is the most possible way of improving their performance. When teachers are involved in decision making on matters touching their duties, they could express themselves and give practical ideas on how they could enhance their teaching and learning methods, which could contribute a lot in the learning of their learners. This could work better because teachers interact on daily basis with their learners and thus understand their behavior and capabilities.

Further, 142 (38.80%) of teachers mentioned that communication among teaching staff, administrators and non-teaching staff as a possible way of work environment that could help in improving performance in their duties. Communication in an organization among all cadres of employees enhances performance. Likewise, 40 (10.93%) of teachers suggested providing more teaching and learning aids in public secondary schools will enhance their performance in their duties. Otherwise, 9 (2.43%) mentioned improving infrastructure and enlightening parents on matters is another possible way of improving work environment which would enhance their performance and give good results.

**Table 4.16 Other Possible Ways of Improving Work Environment in School**

	Frequency	Percent
Involve teachers in decision making	152	41.53
Communication among teaching staff, administrators and non-teaching staff	142	38.80
Provide more teaching and learning aids	40	10.93
Improve infrastructure and enlighten parents	13	3.55
Provide wifi in school	9	2.46
Have teacher satisfaction	6	1.64
Entertainment	3	0.82
More teacher satisfaction	1	0.27

## Model Assumptions Tests

Various diagnostic tests were done prior to estimating the different models in this study. Such tests were essential in testing whether the assumptions of the ordinary linear regression model were met or not. This assisted in reducing the risks of obtaining biased, inefficient, and inconsistent parameter estimates. Normality test, multicollinearity test and linearity test were conducted.

### Test for Normality

Data normality was tested to examine whether it was normally distributed to ensure the right statistical analysis technique is applied. Shapiro-Wilk ( $W$ ) applies whenever  $n > 3$  and  $n \leq 2000$ , therefore this research adapted Shapiro-Wilk test to determine its normality distribution of the variables, since  $n = 399$ . Table 4.20 displays the statistics based on Shapiro-Wilk.

The statistics showed the test ( $W$ ) ranged between .886 and .947, implying that none of the variables had  $W$  statistics = 1, though the scores were closer to 1 which was satisfactory, as it is not always easy to achieve perfectly normal distribution

**Table 4.20 Normality Test of Data**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Performance-Target-Setting	.159	353	.000	.915	353	.000
TPAD	.232	353	.000	.886	353	.000
Quality Assurance	.173	353	.000	.947	353	.000
Training	.136	353	.000	.922	353	.000
Work environment	.141	353	.000	.943	353	.000

This implies that performance target setting, teacher performance appraisal and development, quality assurance, training and work environment were distributed normally.

### Test for Multicollinearity

Multicollinearity is a condition where correlation among predictors strongly achieved. Regression analysis technique postulates multicollinearity does not exist among independent variables. This postulation was then tested by tolerance and Variance Inflation factor (VIF). To determine multicollinearity, all mean values for items by indicator of the independent variable were added together to form a compound mean. Correlation among independent variables indicates that there is a problem, as independent should remain independent. According to Cooper & Schendler (2011),

detections of tolerance and VIF method was used to test for multicollinearity. O'Brien, (2007) argued that VIF of above 5 and tolerance of below 0.20 is an indication of a multicollinearity problem. Values of tolerance and VIF for independent variables are as shown in Table 4.21.

This research results indicated that all independent variables had VIF values between 1.321 to 1.744 which is less than 5, while the tolerance of all independent variables is greater than 0.20. This meant that multicollinearity had no problem, thus the researcher made the decision to use regression analysis.

**Table 4.21: Multicollinearity Test Results**

Variable	VIF	1/VIF (Tolerance)
Performance target setting	1.399	0.715
Teacher performance appraisal and development	1.323	0.756
Quality Assurance	1.610	0.621
Training	1.321	0.757
Work environment	1.744	0.573

### **Moderating Influence of Work Environment on the Relationship between Joint Performance Management Initiatives and Teacher Performance**

Sixth and last objective aimed at determining the moderating influence of work environment on the relationship between performance management initiatives and teacher.

The moderating relationship between predictor and criterion variables as a function of a third variable was investigated using regression analysis. This aimed at checking how the independent variable influences the dependent variable deviations after the insertion of a moderator (Field, 2013). Moderation variable here was work environment. It was assumed that work environment improves performance management initiatives which in turn enhances teacher performance in their respective duties. Compound mean of teacher performance in the selected public secondary schools formed a dependent variable and the compound mean of combined performance management initiatives became the independent variable, while work environment acted as the moderator.

The test of this hypothesis used stepwise regression analysis:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + c + e$$

Where:

$Y$ = teacher performance in the selected public secondary schools

$\beta_1 \dots \beta_5$ =Beta Coefficient

$X_1$ =Performance target setting

$X_2$ =Teacher performance appraisal and development

$X_3$ =Quality assurance

$X_4$ =Teaching staff training

$X_5$ =work environment

$C$ = Intellectualx

$e$ =error term

The research utilized stepwise regression analysis method to determine work environment had no significant moderating relationship between performance management initiatives and teacher performance in the selected public secondary schools in Kenya. Therefore, three level regression models were considered. 1st model determined the combined performance management initiatives influence on teacher performance in the selected public secondary schools in Kenya. Compound mean of combined performance management initiatives was employed as independent variable and teacher performance in the selected public secondary schools in Kenya as dependent variables. 2<sup>nd</sup> model initiated the moderator (work environment) to the first model. Thus the model utilized two independent variables i.e. combined performance management initiatives and work environment 3<sup>rd</sup> model added a variable which was a product of the two variables used in second model. If change in R squared in first model is significantly different from that in 2<sup>nd</sup> model and 3<sup>rd</sup> model, it is said that moderation have occurred. The summary of the results was illustrated in Table 4.28 as per the hierarchical regression analysis.

**Table 4.28 Moderating Influence of e-Readiness on the Relationship between Joint Performance Management Initiatives and Teacher Performance**

Model	R	R Squared	R Squared change	Error of Estimate	F change	Df1	Df2	Sig.	F
1 <sup>st</sup> model	.645 <sup>a</sup>	.416	.415	.620	250.257	1	351	.000	
2 <sup>nd</sup> model	.664 <sup>b</sup>	.441	.438	.607	138.320	2	350	.000	
3 <sup>rd</sup> model	.665 <sup>c</sup>	.442	.439	.608	92.264	3	349	.000	

a. Predictors: (Constant), Combined performance management initiatives (PMI)

b. Predictors: (Constant), Combined performance management initiatives, work environment

c. Predictors: (Constant), Combined performance management initiatives, work environment, Intellectualx (Product of combined and e-readiness)

Dependent Variable: Teacher performance in the selected public secondary schools in Kenya

### **Step 1: Performance management initiatives and Teacher performance in the selected public secondary schools**

R squared of 1st model is 0.416 indicated that 41.6% of alteration in teacher performance in public secondary schools is expounded by performance management initiatives. The value of F ratio was  $F(1, 351) = 250.257$  at  $P=0.000$

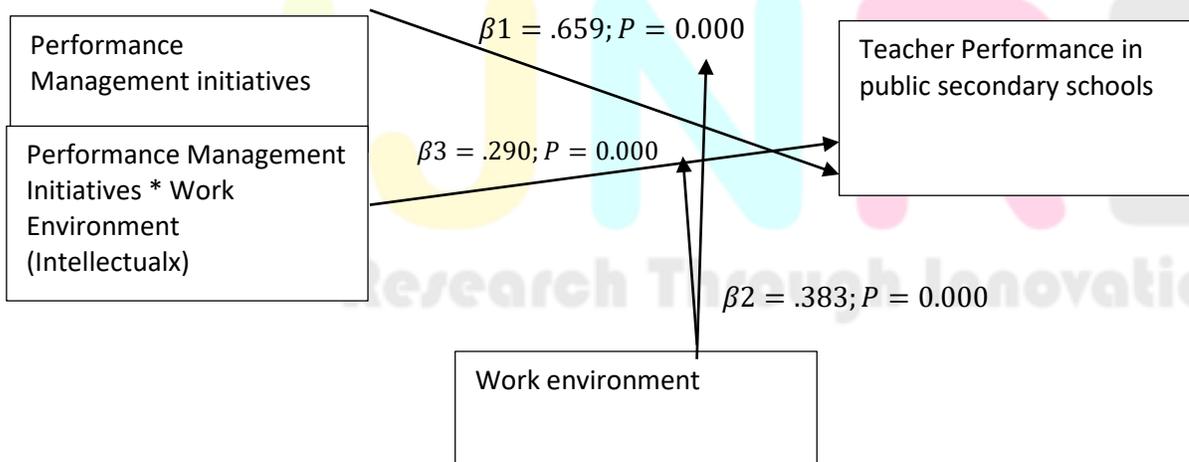
### **Step 2: Performance management initiatives, work environment and Teacher performance in the selected public secondary schools**

Introduction of the moderator in 2nd model, caused the influence of predictors on teacher performance in public secondary schools better significantly. R squared was 0.441 which signifies that a combination of performance management initiatives and work environment describes 44.1% of disparity in teacher performance in public secondary schools. R squared change was 0.416 a significance increase of 0.025%. Statistically the model was significant since  $F(2, 350) = 138.320$  at  $P=0.000$ .

### Step 3: Performance management initiatives, work environment, and Teacher performance in the selected public secondary schools

A product of combined performance management initiatives and work environment (intellectualx) were included in 3rd model, the influence of combined performance management initiatives, work environment and Intellectualx on teacher performance in public secondary schools. The results improved significantly. R squared increased up from 0.441 to 0.442. This explains that with the addition of a product of the two, the model described 0.1% of difference in implementation. R squared change, showed an upsurge of 0.1% from 2<sup>nd</sup> model and an extra of 2.4% from 1<sup>st</sup> model. F ratio was  $F(3, 349) = 92.264$  at  $P=0.001$ . The results implied that there was significance in the influence of performance management initiatives and work environment on teacher performance in public secondary schools. A change in F from 138.320 to 92.264 was noticed, showing a reduction with the introduction of intellectualx, indicating significance in regression of performance management initiatives and work environment on teacher performance in public secondary schools in Kenya.

Therefore, it was proved that the relationship among the three variables existed, whereby the goodness of fit in the link between the performance management initiatives on the teacher performance in public secondary schools was improved by work environment and it was statistically significant at 0.05. Thus, the null hypothesis; work environment does not significantly moderate the relationship between performance management initiatives and teacher performance in public secondary schools was rejected. Hence, work environment does significantly moderate the relationship between performance management initiatives and teacher performance in public secondary schools in Kenya.

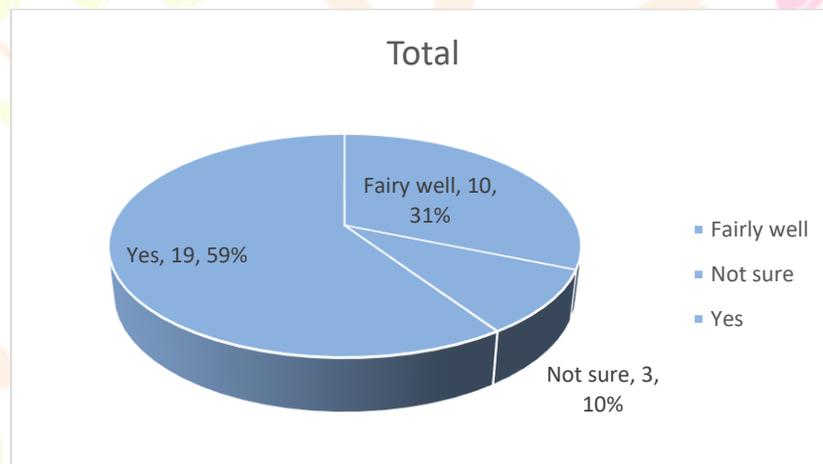


**Figure 4.17: Moderation Path Diagram for the moderating Effect of Work Environment on the Relationship between Performance Management Initiatives and Teacher Performance**

Figure 4.17 contains the path diagram showing the moderation influence of work environment resulting to the stepwise regression analysis conducted. The figure shows 3<sup>rd</sup> step of the stepwise regression where the combined performance management initiatives, work environment as a moderator and the Intellectualx (combined performance management initiatives \* work environment) were entered in the regression model. The first arrow indicates the beta coefficient (0.659) associated with the combined performance management initiatives, the second arrow shows beta coefficient (0.383) corresponding to work environment as the moderating variable while the third arrow indicates the beta coefficient (0.290) associated with the intellectual which is a product of combined performance management initiatives and work environment.

### Key Informants Responses on Influence of Work Environment on the Performance of Secondary School Teachers

The reactions of the key informants as to whether teachers enjoy the work environment in their school was sought. Having a good work environment enables teachers work with peace of mind and therefore concentrate and focus on their work. Different reactions were given as shown in figure 4.7.



**Figure 4.18: Influence of Work Environment**

24 (59.0%) of the KIs noted their teachers do enjoy the work environment, 12(31.0%) indicated that teachers fairly enjoy the work environment and finally 4 (10.0%) felt that teachers don't enjoy their work environment because of one reason or the other. According to KIs, work environment impact on the school performance in various ways. KI2, KI14, KI15, KI17, KI21, KI31, and KI32 noted that work environment positively impacted their school performance as the schools are isolated and had no external influence. They quoted that: -*"The impact of work environment on the performance of my school is positive. Teachers spend most of their free time within the school compound since there are no shopping centres surrounding the school and teachers reside in the staff quarters within the compound"*.

Others indicated that work environment positively impacted their school performance due to team work spirit and shared responsibility among the teachers. They quoted that: *“Teachers embrace team work spirit and they always meet regularly to discuss any issues on their performance and duties”*.

On the other hand, they argued that cohesiveness and team work as a an initiative of work environment impacted school performance as teachers work hard to compete within their departments. One of the Sub county directors mentioned that: *“I have encouraged my teachers to compete for various reward initiatives in terms of individual and departmental achievements. For departmental awards, each department achieving a mean score of 6.5 and above, the sub county takes them for a refreshment tour for one day. This alone has made teachers work hard and with a lot of team work.”*

These findings were supported by the study done by Baharuddin (2021) who did a research to investigate the effect of working environment on teachers' performance in MTS Madani Pao-Pao and found out that the conducive, comfortable, safe and enjoyable working environment positively affected teachers' performance.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **Introduction**

This chapter delivers a summary of the main findings of the study, the inferences drawn as well as the recommendations for future practice and policy. The chapter also gives different suggestions for further research. This is done as per the study specific objectives.

#### **Summary of Findings**

The main objective of this study was to investigate the influence of performance management initiatives, work environment on performance of public secondary school teachers in Kenya. To realize this objective, six specific objectives were examined as follows: to examine the influence of performance target setting on performance of public secondary school teachers in Kenya; to assess the influence of teacher performance appraisal and development on performance of public secondary school teachers in Kenya; to evaluate the influence of internal quality assurance on performance of public secondary school teachers in Kenya; to scrutinize the influence of teaching staff training on performance of public secondary school teachers in Kenya; to examine the influence of combined performance management initiatives on performance of public secondary school teachers in Kenya and; to determine the moderating effect of work environment on the relationship between performance management initiatives and performance of public secondary school teachers in Kenya. Six null research hypotheses were tested.

## **Moderating Influence of Work Environment on the Relationship between Joint Performance Management Initiatives and Performance of Public Secondary School Teachers**

The sixth objective was to determine the moderating effect of work environment on the relationship between performance management initiatives and performance of public secondary school teachers. From the descriptive analysis conducted, it was discovered that public secondary schools in Kenya had diverse work environment needs. For most public schools, the work environment needed to be enhanced as majority of teachers fairly agreed that their school had most of the teaching and learning resources which made their teaching effective.

Also established was that leadership styles by their principals made teachers enjoy their work and therefore were effective in teaching. It was also reviewed that team work was embraced in the schools where teachers sought assistance from their colleagues on the challenges related to their work. However, teachers neutrally agreed that the parents of their school offer great support to make them effective in their work. Generally, teachers in public secondary schools agreed that work environment helped in the performance of KCSE examination in their respective teaching subjects.

The study discovered that work environment had significant moderating effect on the relationship between performance management initiatives under study and performance of public secondary school teachers in Kenya. This was illustrated by the calculated p value of 0.000 associated with the beta coefficient of the interaction term between the composite of performance management initiatives under study and work environment. Since the beta coefficient (0.056) associated with the interaction term was positive, it was inferred that changes in work environment strengthened the relationship between performance management initiatives and the performance of public secondary school teachers in Kenya. The study therefore rejected the null hypothesis that work environment has no significant moderating effect on the relationship between performance management initiatives and performance of public secondary school teachers in Kenya.

### **Conclusions**

The study concluded that work environment enhanced the influence that performance management initiatives had on the performance of public secondary school teachers in Kenya. Therefore, when the different work environment priority areas in the schools were addressed, it was likely that the effectiveness of different performance management initiatives in yielding better the performance of teachers in these schools would be realized.

## **Recommendations.**

The study recommends that the Ministry of Education should design frameworks and offer in kind assistance required by secondary schools to set up efficient work environment in schools, such as installation of wifi, and other ICT infrastructure enable teachers work efficiently and effectively to improve their subject performance. The ministry, for instance, can provide guiding school safety plans that can be easily adopted by management of schools and fitted to suit the particular needs of a school. For public schools, the ministry could increase the budgetary allocations needed to improve the infrastructure and installations of equipped healthcare as well as sanitation facilities.

The study recommends that MOE should champion for more budgetary allocations from the treasury in order to increase funding required for infrastructure development in the schools. The ministry in its budgetary plans should aim to make sure that schools at all levels have the basic infrastructure such as science laboratories that are a necessity when students are preparing for examinations.

The study calls for the mobilization of resources by schools to expand the housing facilities for their staff. The schools should set up organized school safety and security teams to oversee all safety and security related issues in the schools. This will ensure that there are individuals who can constantly champion and be held accountable for the security and safety of teaching staff at all times. By having such a team, strategies that can be used to marshal the required resources to guarantee the security and safety of teaching staff can be adequately formulated and executed.

## **Suggestions for Further Research**

This study only focused on four performance management initiatives and since there are many other performance management initiatives which are likely to affect the performance of public secondary schools, a similar study can be undertaken to capture their effect.

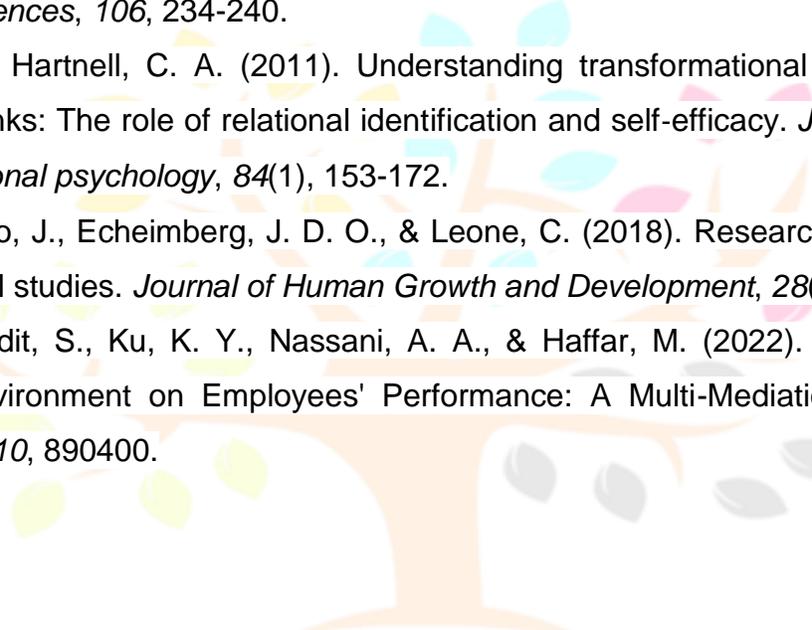
Similar studies can be replicated in public primary school teachers in Kenya for comparative purposes. The study further recommends for more in-depth studies that explore the various performance management initiatives and policies that are particular to the education sector and any emerging differences in their application in as far as the private and public sector is concerned. Studies that compare the application of performance management initiatives across different sectors can also be conducted so that different sectorial policies in this regard can be enhanced.

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