EFFECT OF TEACHERS' ACHIEVEMENT IN PERFORMANCE CONTRACTING ON PUPILS' LEARNING OUTCOMES IN PUBLIC PRIMARY SCHOOLS IN KAKAMEGA COUNTY, KENYA

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DECLARATION AND APPROVAL

Declaration

This thesis is my original work prepared with no other sources than the indicated sources and support and has not been submitted for the award of a degree or any other award.

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(EPM/H/01/2016)

Supervisors' Approval

The undersigned certify that they have read and hereby recommend for acceptance of Masinde Muliro University of Science and Technology a thesis entitled 'Effect of teachers' achievement in performance contract targets on pupils learning outcomes in public primary schools in Kakamega County, Kenya'

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ABSTRACT

Globally, teachers' performance appraisals have been used for enhancing the quality of education and providing quality learning experiences. For a long time, the teaching service in Kenya was under a closed performance appraisal system, where the school head appraised the teacher confidentially. In the year 2012, the Teachers Service Commission (TSC) launched the Performance Contract (PC) policy in response to reports of failure of the Ministry of Education in meeting some of the targets outlined in the Kenya Education Sector Support Project (KESSP) of 2005-2010. PC is an open appraisal system with negotiated targets. PC is evaluated through regular teacher appraisals on their effectiveness, which is guided by predetermined targets from the Teacher Professional and Development (TPAD) tool. Despite PC having been in place for the last thirteen years, its effect on pupil learning outcomes in Kakamega County Public primary schools is still not clear. The purpose of this study was to establish the effect of teachers' achievement in Performance Contracting (PC) targets on pupils' learning outcomes in public primary schools in Kakamega County. The specific objectives centered on the effect of teachers' PC targets achievement on pupils' learning outcomes. The study was guided by the New Public Management (NPM) theory. A correlational research design with a mixed methods approach was adopted for the study. Eighty-Two (82) schools were selected from 12 sub-counties of Kakamega County using a multistage random sampling. Structured questionnaires were used to collect data on target achievement and learning outcomes from 2017 to 2023. Four Key informants were involved in PC appraisals, including the county TSC director, two Curriculum Support Officers, and one Sub-County TSC Director, were purposefully selected and interviewed. The quantitative data collected was analyzed using descriptive statistics of means, modes and standard deviations and inferential statistics of Pearson's Correlation and multiple linear regression. Qualitative data was analysed using content analysis. The results are presented in the form of narratives and tables. The results showed that only the teacher conduct & professionalism target scores were positively associated with the academic achievement of KCPE performance (OR= 2.429; C.I., 0.876-6.733, p = 0.048). The themes derived from Key informant interviews were poor attitude towards the PC by teachers, heavy teachers' workloads, financial constraints both at the County and school level, and time constraints in school, which affect PC implementation and achievement in the set PC targets. The study concluded that apart from the teacher conduct & professionalism target, achievement in other PC targets had no effect on pupil learning outcomes. The study recommends that TSC should provide adequate staff to reduce the workload for teachers to have time to effectively implement PC. The government should provide adequate finance for the effective implementation of PC. Policy on PC should be reviewed by TSC on the criteria used in PC targets appraisals to ensure they are aligned with actual teaching practices and learning outcomes. The government should avail resources for effective implementation of PC. The study recommends further research to explore the effect of teacher achievement in PC targets on other learning outcomes such as communication skills, creativity, problem-solving and critical thinking skills.

DEDICATION

This thesis is dedicated to my beloved family, whose unwavering support and encouragement have been my greatest source of strength.

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LIST OF ABBREVIATION AND ACRONYMS

CFS	Child Friendly Schools
COCE	Code of Conduct and Ethics
CORT	Code of Regulation for Teachers
CSO	Curriculum Support Officers
FGDS	Focus Group Discussions
GOK	Government of Kenya
KCDS	Kakamega County Data Sheets
KCP	Kenya County profiles
KESSP	Kenya Education Sector Support Program
KICD	Kenya Institute of Curriculum Development
KNBS	Kenya National Bureau of Statistics
KNEC	Kenya National Examinations Council
NESP	National Education Sector Plan
NGOs	Non-Governmental Organizations
OECD	Organization for Economic Co-operation and Development

PC	Performance Contract
SDGs	Sustainable Development Goals
TPAD	Teachers Performance Appraisal Development
TSC	Teachers Service Commission
UNESCO	United Nations Educational Scientific and Cultural Organization
UNICEF	United Nations Children Emergency Fund
USA	United States of America

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Performance contracting (PC) is a management tool used in the public and private sectors to enhance efficiency, accountability, and service delivery by setting clear, measurable targets and expectations for individuals or institutions over a specific period. It involves an agreement between a government or employer and an employee or institution, outlining responsibilities, performance indicators, and outcomes to be achieved, with regular monitoring and evaluation to assess progress and results. (Wesonga & Van Der Westhuizen, 2023; Kiche et al., 2024).

Globally, PC is used as a component of a broader set of public-sector management tools aimed at increasing efficiency and effectiveness in service delivery. Once the targets are set, employees then direct their efforts toward achieving the targets (Koppenjan et al., 2022). According to Koppenjan et al. (2022), performance appraisals are used as supervisory tools to monitor employees' and departments' efforts in achieving the set targets. Performance contracting in the teaching service was introduced as a strategy to improve teacher performance to provision of quality education. However, since its adoption in the teaching service in 2012, there have been conflicting reports regarding the effectiveness of the targets' achievement in enhancing the quality of education (Camileri,2021; Darling Hammond et al., 2020; Jensen, 2011; Hallinger et al., 2014).

France is often credited as the birthplace of modern Performance Contracting (PC), tracing its roots to the late 1960s. It began as a tool for reforming the public sector by

establishing clear performance expectations for public institutions and agencies, mainly to improve efficiency and accountability. The primary driver was the need to manage government operations using private-sector techniques and results-based management (Forson et al., 2021). In this context, PCs were introduced as agreements between the state and public enterprises or service units to define objectives, allocate resources, and evaluate outcomes.

The French PC model focused heavily on performance indicators such as cost reduction, service quality, and productivity. The government used these contracts to delegate autonomy while retaining control through periodic performance reviews. Ministries and local government units were encouraged to outline clear deliverables and timelines, which gradually transformed bureaucratic culture into one that emphasized accountability and transparency (Boureti et al., 2021). This shift was significant in public sector modernization efforts during the post-industrial era.

By the 1990s, the use of PCs had expanded to cover social services, including education and healthcare. These contracts incorporated complex multi-stakeholder objectives and required more comprehensive evaluation mechanisms, especially as education outcomes became a key metric of national competitiveness. The integration of PCs into France’s education system marked a shift from input-based to output-based management, targeting teacher performance and school effectiveness (Camilleri, 2021).

Japan's approach to performance management in the public sector is rooted in its administrative reform agenda that began in the late 1990s. While Japan does not use the term "Performance Contracting" in a strict sense, it employs performance-based

management systems (PBMS), particularly in public agencies and educational institutions. The Japanese government introduced the Policy Evaluation Law in 2001 to institutionalize performance-based evaluation and accountability across ministries. Under this system, specific performance targets were introduced for public organizations, which formed the backbone of service delivery reforms (OECD, 2023).

In the education sector, Japan implemented outcome-based management tools to assess school effectiveness, teacher accountability, and learning achievements. The Ministry of Education, Culture, Sports, Science and Technology (MEXT) required schools to prepare School Management Plans and Self-Evaluation Reports, which are aligned with performance indicators and goals. These tools serve a function similar to performance contracts, as school principals and teachers are expected to meet predefined goals related to teaching quality, student achievement, and innovation (Tsuneyoshi, 2021). While not labeled "PCs," these mechanisms create a contractual-like obligation to deliver measurable outcomes.

The United States of America (USA) has one of the most advanced and formalized systems of performance-based accountability in education, deeply rooted in the No Child Left Behind Act (NCLB) of 2001, later revised under the Every Student Succeeds Act (ESSA) of 2015. The USA version of PC in education involves states signing agreements with school districts to meet performance targets, particularly in reading and math proficiency, graduation rates, and teacher effectiveness. Federal funding is often tied to meeting these targets, effectively creating a contract-like obligation (Darling-Hammond et al., 2023).

In the US, teacher evaluation systems have evolved to include student growth metrics, classroom observations, and adherence to teaching standards. These systems are overseen by state departments and local school boards and are often supported by digital data platforms. The evaluation outcomes influence professional development, retention, and promotion decisions. Notably, programs such as Race to the Top and Teacher Incentive Fund linked federal support to measurable teacher and school performance, reflecting a results-based contracting framework (Kraft & Christian, 2022).

Finland, widely acclaimed for its high-performing education system, offers a contrasting perspective on performance management. Unlike countries that implement top-down PC systems, Finland emphasizes trust-based professionalism rather than rigid contracts. There is no formal Performance Contracting in the education sector; instead, teacher autonomy, collaborative planning, and self-evaluation are central to school and teacher accountability. Finland's philosophy is that well-educated and motivated teachers will naturally strive to deliver quality education without the need for punitive or reward-based contracts (Sahlberg, 2021).

Teachers in Finland undergo rigorous training, usually earning a master's degree before entering the classroom. Once employed, they are entrusted to design curricula, assess students, and manage classrooms with minimal external interference. Instead of individual performance targets, the system promotes collective responsibility through school development plans and municipal education strategies. Evaluation focuses on systemic improvement rather than individual fault-finding (Antinluoma et al., 2021).

The adoption of performance contracting in Ghana began in the early 2000s, influenced by the need for greater efficiency in public service delivery. The move was part of broader public sector reforms under the New Public Management (NPM) paradigm, driven by international development partners such as the World Bank and IMF. The country introduced PCs to ensure that public agencies had clearly defined deliverables, responsibilities, and performance benchmarks (Forson et al., 2021).

Ghana's Ministry of Education adopted PCs as part of its strategic planning processes, especially for headteachers and education officers. The contracts aimed to improve teacher accountability, student performance, and resource management. However, the implementation was met with various challenges, including limited training on PC procedures and resistance from public servants unfamiliar with result-based management practices (Koppenjan et al., 2022).

Despite these challenges, Ghana continued to institutionalize PC frameworks across multiple sectors. The Public Services Commission was tasked with developing tools and monitoring mechanisms for performance evaluation. By 2015, PCs were mandatory for all heads of public institutions, and education sector reforms emphasized teacher evaluation, learning outcomes, and timely curriculum implementation (Darling-Hammond et al., 2023).

Nigeria introduced Performance Contracting in 2005 as part of its public service reform initiative under the National Strategy for Public Service Reform (NSPSR). The country’s motivation was to curb inefficiency, corruption, and poor accountability in the public sector. The federal government viewed PCs as a tool to enhance service

delivery and ensure value for money in education, health, and infrastructure (Boureti et al., 2021).

In the education sector, PCs were first implemented at the federal level, targeting principals and zonal directors to achieve specific milestones, such as school enrollment, teacher deployment, and student performance. However, the diversity of Nigeria's federal system made it difficult to ensure uniform implementation across states. Some states embraced the PC model more readily than others, resulting in uneven improvements in learning outcomes (Ojokuku, 2015).

The Nigerian Teachers' Registration Council incorporated PC elements into teacher appraisal systems, emphasizing target setting, continuous improvement, and appraisal-based promotion. Despite this, critics argue that inadequate funding, political interference, and poor monitoring have limited the effectiveness of PC in schools (Robert, 2014). Furthermore, teacher unions have expressed concerns that performance-based evaluations may not adequately capture the contextual challenges teachers face in underserved areas.

Kenya formally introduced Performance Contracting in the public sector in 2005 as part of the Economic Recovery Strategy for Wealth and Employment Creation. Initially applied in ministries and state corporations, the PC model was later extended to the education sector. In 2012, the Teachers Service Commission (TSC) institutionalized PCs to address inefficiencies in teacher performance and low learning outcomes, especially following concerns raised in the Kenya Education Sector Support Programme (KESSP) 2005–2010 (GOK, 2012).

The TSC launched the TPAD tool in 2016 as a mechanism to operationalize PC targets. Teachers are evaluated on five performance areas: professional knowledge, learning environment, professional development, conduct and professionalism, and participation in professional learning communities (TSC, 2017). The initiative aimed to shift from confidential and subjective evaluations to transparent and outcome-based assessments.

However, implementation challenges have emerged. Teachers' unions resisted the initiative, citing heavy workloads, limited ICT capacity, and unrealistic targets. Other issues include underfunding, lack of training, and teacher demotivation, which hinder the PC system's impact on learning outcomes. Despite these hurdles, Kenya's PC framework for teachers has institutional backing under the TSC Act and remains a critical part of the country's education quality improvement strategy. Ongoing policy revisions, investments in ICT, and stakeholder engagement are necessary to make performance contracts more responsive and impactful for teachers and learners (Wesonga & Van Der Westhuizen, 2023).

Teacher efficiency in service delivery has been and is still largely measured through teacher appraisals (Odhiambo, 2015). PC in the teaching service in Kenya is a new concept, having started a decade ago. Long before PCs were formally introduced in public service, teacher appraisals were already in place. Teacher appraisals were carried out through inspection, with regular evaluations of schools and teachers by school inspectors. A confidential report would then be sent to TSC by the school's head teacher along with a teacher evaluation. Teachers were not given any specific PC targets back then. Although the use of PC was hailed as an effective and promising strategy to

improve teacher's performance, teachers' trade unions reacted negatively, preferring the previous methods of teacher supervision (Boureti et al,2021).

Performance in the education sector in Kenya had declined by the year 2003 because of management systems that prioritized process compliance over results (Nyongesa et al, 2023). This, along with the lack of precise, well-defined objectives, made evaluation of institutions and teachers difficult (Wesonga and Van Der Westhuizen, 2023). Performance contracting was then introduced as a component of larger educational reforms meant to enhance the effectiveness and efficiency of teaching in public schools (GOK, 2012). However, gaps were still noticed in teacher service delivery, teacher efficiency, and effectiveness. The current PC for teachers was initiated in the year 2012 in response to several reports indicating failure of the Ministry of Education to meet some of the targets outlined in the Kenya Education Sector Support Project- KESSP 2005-2010 report (GOK, 2012). This project aimed to improve the country's quality of education. The KESSP (2005-2010) assessment report revealed several problems affecting teachers, including poor governance, poor learning outcomes, a lack of teacher professionalism, gaps in service delivery, and unacceptable levels of teacher absenteeism (GOK, 2012).

The framework for PC in the teaching service is anchored in Section 11 (c) and (f) of the Teachers Service Commission Act (2012), which makes provisions for monitoring teacher conduct and performance in public learning institutions (GOK, 2012). Unlike previous school inspections, performance targets and evaluation standards are established in a participatory and democratic manner between the supervisor and the teacher. In the year 2016, TSC introduced the 'Teacher Performance Appraisal and Development (TPAD) tool to evaluate teacher performance in primary and secondary

schools (APPENDIX IV). On the TPAD tool, teachers are evaluated on five set PC targets of professional knowledge and practice, comprehensive learning environment, professional development, teacher conduct and professionalism and participation in professional learning community (TSC, 2017).

The PC professional knowledge and practice target is evaluated using the criteria of mastery of the subject content and use appropriate instructional methods, effective utilization of teaching/ learning resource's ability to carry out learner assessment, feedback and reporting on learners'learning and ability to access, retrieve and integrate (ICT) in teaching and learning. The other criteria include preparation of schemes of work and lesson plans, lesson attendance, observation in class and effective use of time in class, preparation and maintenance of learners' progress records, and whether teachers follow the laid down syllabus. Under the Comprehensive Learning Environment, the target seeks to evaluate teachers' ability to create child-friendly school/class environment through planned activities to demonstrate respect, equity, inclusion, and moral values, and ability of the teacher to manage learners' conduct and behavior. The professional development target seeks to identify teacher professional gaps and to establish if the teacher engages in continuous and relevant career growth and development activities. The PC target on teacher conduct and professionalism aims at evaluating teachers' ability to act in the best interest of the learner and maintain high standards of ethics and professional requirements within and outside the institution, compliance with the professional requirements in teaching and learning, and timely syllabus coverage.

Finally, teachers are evaluated on participation in the professional learning community target. In this target, teachers are assessed on collaborations with colleagues, parents, stakeholders, and professional bodies like the KNEC and the Kenya Institute of

Curriculum Development (KICD). Collaboration with stakeholders aims to foster inclusiveness to instill sufficient trust among stakeholders in school systems for better school performance in the provision of quality education (TSC, 2015). All the target areas evaluated are scored and scores posted by the head teacher on the TSC portal termly. The head teachers also calculate the annual mean score for each target and post the scores to the TSC portal.

This study sought to investigate how teacher achievement in set PC targets influences pupil learning outcomes in Kakamega County public primary schools. Teacher PC serves as a framework for evaluating teacher performance based on measurable outcomes, which include learning outcomes. The periodic appraisal of target achievement allows TSC to assess individual teacher contributions towards the broader goal of quality education. Initially, teachers all over the country had resisted PC through the teachers' unions. Even then, the adoption of PC in the teaching service still appears to be inconsequential in National Examination Tests of Kenya Certificate of Primary Examinations (KCPE) performance and teacher discipline in Kakamega County, as seen in Tables 1.1 and 1.2.

Table 1.1: Learning Outcomes of Kakamega County Public Primary Schools over the Period 2018-2023

Year	2018	2019	2020	2021	2022	2023
KCPE Mean Score (out of 500 Marks)	248	249.6	264	255.7	261.2	257.8
Pupil Retention Rates (%)	75.2	81.4	83.6	81.4	83.3	82.7
Pupil Completion Rates (%)	82.6	84.5	81.4	84.6	83.2	84.1

Source: Kakamega County Education Office (2023)

Table 1.1 shows that the means of the learning outcomes have remained relatively constant over the last five-year period 2018-2023

Table 1.2: Number of Primary School Teacher Discipline Cases Reported Over the Period 2018-2023 in Kakamega County

Discipline Case	Year					
	2018	2019	2020	2021	2022	2023
Desertion of duty	32	30	10	27	26	29
Absenteeism	15	13	17	18	27	21
Alcohol abuse	15	18	-	18	18	16
Insubordination	23	18	-	16	12	24
Sexual Molestation of Learners	59	64	32	57	46	49
Others	13	9	-	10	-	13
Totals	**157**	**152**	**59**	**146**	**129**	**152**

Source: Kakamega County TSC Unit (2023)

Table 1.2 show that the number of teacher discipline cases in Kakamega county over the last five-year period (2018-2023) has remained high despite the PC target of professionalism and professional teacher conduct being in place. Kakamega County was ranked as the county with the highest number of teacher discipline cases in the country over the period 2018-2021(TSC, 2023)

1.2 Statement of the Problem

The Kenyan education sector is guided by various policies and plans aimed at improving learning outcomes, such as the Competency-Based Curriculum (CBC) framework (2017), the National Curriculum Policy (2019), and the Basic Education Act (2013). A key government strategy to enhance education quality and teacher performance is the TSC's Performance Contract (PC) policy, launched in 2012 following reports from the Kenya Education Sector Support Project (KESSP). This policy, supported by the TSC Act (2012) and the Teacher Performance Appraisal and Development (TPAD) tool introduced in 2016, aims to review teaching standards, evaluate performance, and promote professional development. Further plans include the National Education Sector Strategic Plan (NESSP) (2018-2022), which seeks to improve learning outcomes, access, affordability, and service delivery, focusing on enhancing teaching quality and teacher management. Despite these efforts, challenges persist, particularly concerning learning outcomes.

In Kakamega County, pupil learning outcomes have shown stagnation or slight fluctuations over recent years. For instance, the mean Kenya Certificate of Primary Education (KCPE) scores in Kakamega County public primary schools have hovered around 250, with 251.27 in 2018 and 250.04 in 2023. Similarly, pupil retention rates remained around 88% (e.g., 87.6% in 2018 and 88.2% in 2023), and completion rates around 91% (e.g., 91.2% in 2018 and 91.3% in 2023). This indicates that the effect of PC on learning outcomes in Kakamega County is not yet clear, and performance in the education sector has notably declined.

Teacher Performance Contracts involve evaluating teachers across five areas: professional knowledge, learning environment, professional development, conduct and professionalism, and participation in professional learning communities. This study is important as it provides valuable insights to the TSC by examining the actual effectiveness of PC on pupils' learning outcomes. The study aimed to identify existing gaps in target achievement and learning outcomes, proposing strategies to improve PC as a tool for ensuring quality education.

1.3 Purpose of study

The purpose of the study was to establish the effect of teachers' achievement in Performance Contracting (PC) targets on pupils' learning outcomes in public primary schools in Kakamega County, Kenya.

1.4 Specific objectives

i. To determine the effect of teachers' achievement in professional knowledge and practice PC target on pupils' learning outcomes.
ii. To establish the effect of teachers' achievement in the comprehensive learning environment PC target on pupils' learning outcomes.
iii. To determine the effect of teachers' achievement in teacher professional development PC target on pupils' learning outcomes.
iv. To establish the effect of teachers' achievement in teacher conduct & professionalism PC target on pupils' learning outcomes.
v. To determine the effect of teachers' achievement in participation in the professional learning community PC target on pupils' learning outcomes.

1.5 Research Hypotheses

Sequel to the above objectives, the following null hypotheses were formulated for further analyses:

H_{O1} There is no statistically significant effect of teachers' achievement in professional knowledge and practice PC target on pupils' learning outcomes.

H_{O2}: There is no statistically significant effect of teachers' achievement in the Comprehensive Learning Environment PC target on pupils' learning outcomes.

H_{O3}: There is no statistically significant effect of teachers' achievement in Professional Development PC on pupils' learning outcomes.

H_{O4}: There is no statistically significant effect of teachers' achievement in Teacher Conduct & Professionalism PC target on pupils' learning outcomes

H_{O5}: There is no statistically significant effect of teachers' achievement in Participation in Professional Learning Community PC target on pupils' learning outcomes.

1.6 Justification

After the attainment of significant progress in access to education, focus has now turned to the quality of education offered to learners (UNESCO, 2021). The United Nations General Assembly in 2015 identified quality education as one of the Sustainable Development Goals (SDGs) 2015 in SDG-4 (UN, 2015). SDG 4 calls on UN member states to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (UNESCO, 2017), with a thrust on teacher performance,

which is the focus of this study. This study also supports Kenya's efforts to achieve quality education to propel the attainment of its aspirations for 'Vision 2030' (GOK, 2007). The goal of Vision 2030 is to provide globally competitive quality education, training, and research for development.

Since the use of TPAD focuses on the effects of the PC intervention, it is part of a larger PC evaluation exercise that looks at a broader range of aspects of the PC process, such as the suitability of PC, the effectiveness, relevance, and efficiency of the intervention, its intended effects, and how to use the experience from this intervention to improve future PC appraisal interventions. Analysis of whether pupils meet learning outcomes will be useful to educators to refine their teaching methods and curricular content over time. Even as the teachers embrace PC, the study findings are useful in establishing effective student support and engagement strategies. The strategies are useful to ensure the PC programs are successful in helping students meet their learning outcomes.

Besides learning outcomes, PC is crucial for teacher motivation through achieving set targets and goals. Boruett et al (2021) affirm that appraisal and feedback can impact classroom instruction, instructor motivation and attitudes, and student performance. Teacher job fulfillment and self-efficacy can also be influenced by appraisal and feedback in PC. Teacher-solicited feedback is generally regarded as the most effective source of information for improving education, even though some teachers believe student ratings are of little value to them (Darling-Hammond, 2023; UNESCO, 2021). If the implementation of PC enables teachers to view appraisal of target achievement as a first step toward enhanced practice,

regardless of their current performance level, then PC will significantly benefit student learning outcomes and the quality of education.

The Kenyan government, through the TSC, has made huge investments in the PC program to improve the quality of education. Kenya is estimated to have received a US$88.4 million grant from GPE to develop a PC tool that monitors teacher attendance and syllabus coverage, classroom performance, proficiency, and innovation, creativity, and ICT integration to embrace 21st-century technology. Over the last seven years, there has also been intense supervision of PC implementation in the teaching service. Credible data on observed changes, successes, and failures are therefore required to influence national policy and local responsibility regarding PC in the teaching service. This makes evaluating teachers or departments' performance against predetermined goals and targets critical to PC's success in the teaching service.

Attaining set teacher PC targets is essential because it ensures that teachers are aligned with TSC organizational goals, accountable for their performance, and motivated to achieve their best. Attaining PC targets leads to better resource utilization, continuous improvement, and ultimately, improved learning outcomes, the quality of education given to learners in schools. Data that is gathered by the study, therefore, will aid in the identification of gaps in the achievement of set targets and pupil learning outcomes, as well as strategies that can be used to improve and make PC a tool to improve the quality of education.

1.7 Significance

Given the ever-increasing emphasis on enhancing the quality of education, addressing the issue of teacher achievement of PC targets on pupils' learning outcomes, as well as

whether target achievement is consistent with the anticipated purpose of attaining quality education, is timely. The current study is valuable to the TSC since it examines the effectiveness of PC in connection with pupils' learning outcomes in public primary schools. This study may be a significant contribution to the government's ongoing endeavour to implement the CBC, in which quality of education is a pillar, by identifying gaps in the actual connection between PC set targets and actual teacher performance in the five set PC targets of professional knowledge and practice, comprehensive learning environment, professional development, teacher conduct and professionalism and participation in professional learning community. To achieve quality education, policymakers may have a better understanding of approaches for appraising the achievement of PC targets. The findings of this study may enlighten policymakers on how to improve teacher performance contracts target setting to attain the required learning outcomes.

Most of the teacher performance contracting research have been conducted in secondary schools, higher education institutions, and Technical and Vocational Training institutions (Ojokuku, 2015; Nganyi et al., 2014; Musomi et al., 2014). The implications of reaching performance targets on pupils' learning outcomes in Kenyan primary schools are largely unexplored. Therefore, findings of this study provide insight into the current practice and limitations of teacher PCs, as well as important information that could help PC succeed in primary schools in the country. The study's findings will contribute to the body of existing literature on PC target achievement and the overall performance of teachers.

1.8 Scope of the Study

This study was carried out on Head teachers (Schools), Teachers, TSC Sub County Directors, Curriculum Support Officers, and the Kakamega County TSC director. The study aimed to examine how well PC targets are achieved and the effect on pupils' learning outcomes in Kakamega County's public primary schools. This was achieved by determining the association between achievement in set PC targets and Pupils' learning outcomes in Public Primary Schools in Kakamega County using statistical techniques. Secondary data for the study was collected over the five years (2018-2024).

1.9 Limitations of the Study

Although the multi-stage sampling strategy to be adopted in this study was a flexible method, it has a weakness in the decision processes involved in choosing groups or study participants by the researcher because of subjectivity. Because multi-stage sampling cuts out portions of the population from the study, the study's findings can never be 100 percent representative of the population (Mishra and Allock, 2022). Even though the theory of multi-stage sampling is to focus on the within-group variance and de-emphasize the between-group variance (which should be minimized), it is difficult to know if the demographics cut from the study could have provided any useful information about PC target achievement to the researcher. Thus, there is always a likely question as to whether the chosen groups are optimal representatives of the true study population. The study selected two Sub-Counties to minimize this error.

The results of the year 2020 were not complete because of the Covid 19 epidemic in the year 2020. The results were for only two terms; however, the results were

averaged to minimize errors. Some of the learning outcomes were not collected in school. These included the retention and school completion rates. Schools don't keep this data. Instead, they report the number of pupils at the end of the year to the education office. The researcher relied on the records given at the County education office.

1.10Assumptions of the Study

The study assumed that teachers have sufficient knowledge about their TSC PC's implementation and activities, and that all public primary schools in Kakamega County were implementing TSC PC as required. It was also assumed that when responding to the questionnaires and interviews, the study participants provided independent and honest opinions. The study relied on the assumption that adequate and readily available resources are available for implementing PC in public primary schools.

1.11 Theoretical Framework

Performance contracting is an application of various bodies of knowledge to improve organizational performance. As a result, many theories from different disciplines have been advanced to support and explain the performance contracting paradigm.

This study was guided by the New Public Management (NPM) theory. According to Hood (2008), NPM is a series of themes relating to reforming the public sector's organization and procedures to make it more competitive and efficient in resource use and service delivery. NPM is associated with the various reforms initiated in the public sector to improve accountability and maximize the use of scarce resources in the provision of public goods and services. There is agreement among scholars who have studied performance contracting that PC is one of the reforms that have been initiated

under NPM, whose main focus is making the government more efficient by using less to produce more (Obong'o, 2009, Mutahaba, 2011; Larbi, 2014).

In the context of the current study, TSC has created a New Public Management movement of PC to make the teaching service more efficient. Though many theories have been used to explain performance management, the researcher is convinced that the NPM mentioned above adequately covers the concepts in teacher performance contracting. Performance contracting practices and innovations are routine activities used by institutions to achieve set Visions, Missions, objectives, and targets. In the case of this study, teacher achievement of set targets and students' learning outcomes are all about actions, beliefs and attitudes, which can change when resources are available. To accomplish the set targets, there must be guided implementation programs that incorporate implementation strategies and practices by the principal aimed at attaining the objectives and targets. The guided implementation programs and practices that incorporate implementation strategies are provided in PC by TSC to teachers. All of these practices are geared toward achieving quality service delivery, as in the NPM. Achieving targets may result in institutional development, client satisfaction in terms of service delivery, and teacher job satisfaction as goals and objectives are met. All of these can result in improved learning outcomes and quality education, which was the primary aim of this research.

However, although the theory is useful for this study, it has some limitations. The theory cannot be used to explain all possible situations that may arise in Public primary schools in Kakamega County. The theory assumes a uniform and smooth implementation of rules and procedures in institutions. Changes in government policies, changes in TSC policies such as changes in evaluation target areas, teacher

appointments and transfers, and other factors may affect PC implementation and affect teacher performance. TSC has already admitted that some unforeseen circumstances, such as teacher transfers, ICT illiteracy among some head teachers, and some headteachers losing/forgetting TSC access passwords have affected the implementation of PC (TSC, 2017). The formal structures of legitimacy (such as record-keeping, spending time on classroom observation, uploading the scores digitally) can reduce efficiency and impede an institution's competitive position in its endeavor to fulfil PC obligations. Additionally, the theory assumes that institutional structure will make it easier for employees to carry out their responsibilities to the best of their abilities. This may not be true particularly for schools with varied infrastructure and resources in Kakamega County. Formal structures of legitimacy, on the other hand, can reduce efficiency and impede an organization's competitive performance. For instance, teachers may fill out the PC records as a requirement to avoid losing their jobs or legal action. Some authors like Scott (2001) argue that some organizations maintain external (and internal) confidence of such formal structures by reducing their 'actual' adoption or making evaluation/appraisals ceremonial, but neglect program implementation procedures.

The theory also assumes that the institutional guidelines, such as those from TSC, are fully accepted solemnly; however, in many cases, such guidelines are usually adopted in public service for an organization to gain or maintain legitimacy in the institutional environment (Butler 2012). Organizations will therefore normally adopt structural vocabularies, such as job titles, procedures, and organizational roles that are acceptable to the authorities or policy formulators. Adoption and prominent display of these institutionally acceptable vocabularies of legitimacy help to maintain an aura of 'good

faith' organizational action. Organizational survival is shielded by legitimacy in the institutional environment, which may not necessarily translate into efficient service delivery or performance. In the case of the current study, PC in the teaching service was fashioned on a top-down basis with some coercion by TSC, and many schools could be merely adopting the guidelines to maintain legitimacy in the institutional (employers) environment. The teacher unions resisted PC and argued that teachers were already being appraised through regular school inspections.

1.12 Conceptual Framework

This study was guided by a conceptual framework developed by the researcher (Figure 1). The study used the NPM theory to guide and present the study's main argument, that teacher achievement in PC targets would influence pupil learning outcomes in primary schools in Kakamega County. The framework of this theory clarifies that theoretically, procedures established by institutions such as the Government and TSC, in the form of PC, are to guide staff behaviour to achieve set targets and objectives of any organisation including the primary schools. High achievement of the set five PC targets (independent variables) by teachers is presumed to positively influence learning outcomes (dependent variable) in this framework. The outcome of these interrelationships is one of the measures of quality education, envisioned by the TSC.

Figure 1 conceptualizes how achieving set teacher performance contracting targets can lead to a strategic shift in primary schools, as well as how these shifts can affect the quality of education through pupils' learning outcomes. From this framework, it is observed that there can be a positive relationship between teacher PC target achievement (the independent variable) and pupils' learning outcomes (the dependent

variable). The scores achieved in PC targets in the set targets of Professional Knowledge and Practice, Comprehensive Learning Environment, Teacher Professional Development, Teacher Conduct & Professionalism and Participation in Professional Learning Community were used to assess the strength of relationship with pupils' learning outcomes, measured as a scores of KCPE examination, pupil retention rates and pupils completion rates.

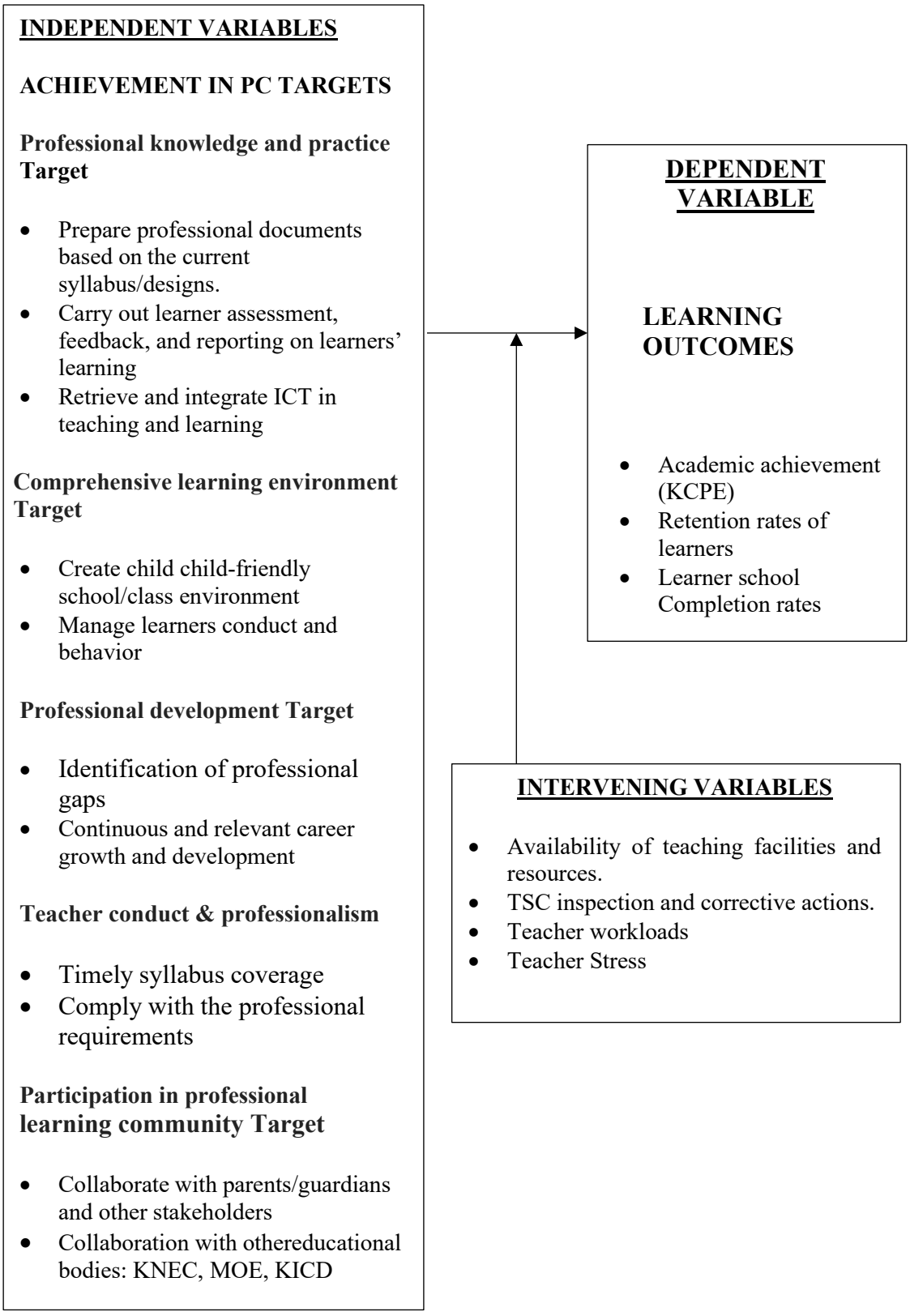

Figure 1: The Conceptual Framework

(Source: Developed by the researcher, 2024)

The framework postulates that achievements in targets set by teachers, schools, counties, and the TSC as independent variables, acting either singly or in combination, are capable of positively influencing pupils' learning outcomes. High achievement of the set targets can lead to improved learning outcomes for pupils. Improved learning outcomes by pupils is viewed as a dependent variable was the main goal of launching PC for teachers (TSC,2012). This concept is consistent with NPM and principal-agent theories, which assert that the attainment of targets by institutions in the public sector influences the performance outcomes. When institutions develop appropriate strategies for PCs, they can influence the outcomes. Thus, from the framework, the TSC as an institution fosters an environment in which PC is freely negotiated and has developed strategies of appraisals for PC target achievement to influence the attainment of quality education through improvement on pupil learning outcomes.

Other factors, such as teacher commitment, workloads, stress level, job satisfaction, teacher motivation, stakeholder satisfaction, availability of learning resources, a high-ranking in-PC evaluation, and general institutional and infrastructural development, could, however, have an impact on the achievement of set targets, thus affecting pupils' learning outcomes. These are the intervening variables.

1.13 Operational Definitions of Key Terms

Achievement: Refers to scores attained in the set PC targets by teachers and the attained KCPE scores by pupils.

Appraisal: Refers to the process of teacher assessment to determine whether or not teachers have achieved preset PC targets.

Comprehensive Learning Environment: Provision of both classroom and environmental conditions that support the physical, emotional, and intellectual development of students in school

Performance Appraisal: Refers to how well teachers carry out their duties compared to a set PC target and the communication of that information to the TSC and the teachers.

Performance Contract: Refers to the agreement between the Teachers Service Commission and the teachers to provide effective teaching services through meeting the set targets.

Professional Community Learning: a strategy of learning, collaborative discussions, sharing of pedagogical strategies, and review student performance by teachers.

Pupil learning outcomes: Pupil learning outcomes refer to knowledge, skills, attitudes, and competencies that pupils are expected to achieve by the end of the primary school learning

experience. In the case of this study, they include educational achievement, pupil retention rates, and pupil completion rates.

Teacher conduct: refers to the behaviours and attitudes in the classroom and their interactions with students and classroom management

Teacher professional development: An approach to improving teachers' skills, knowledge, and practices to enhance student learning.

Teaching practice: refers to how this knowledge is applied in the classroom, including instructional strategies, assessment methods, and classroom interaction.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter examines literature on teacher achievement in Performance Contract (PC) targets and expected learning outcomes. The targets were sourced from professional knowledge and practice, a comprehensive learning environment, professional development, teacher conduct and professionalism, and participation in professional learning communities as were initiated by TSC. The purpose of the review was for the researcher to evaluate and understand current research in the field of performance contracting, to identify gaps and conflicts in previous studies, and to raise questions for future research on PC in the teaching service.

2.2 Professional Knowledge and Practice

Professional knowledge and practice of teachers are useful in shaping the learning experiences of learners and influence their academic achievement. Teacher professional knowledge covers a wide area, including subject matter expertise, pedagogical content knowledge, classroom management skills, and understanding of students' needs and developmental stages (Nguyen and Thai,2023). Teaching practice, refers to how this knowledge is applied in the classroom, including instructional strategies, assessment methods, and classroom interaction (Nguyen and Thai,2023). It is possible to have teachers with only a few aspects of the professional knowledge.

Globally, in countries with strong educational systems, such as Finland and Singapore, teacher professionalism is a key component of their success. Studies by Hollweck (2021) and Lofthouse (2012) noted that Finland and Singapore prioritize teacher professionalism and maintain high standards for teacher recruitment, fostering an environment where teachers are well-prepared and supported. These countries, according to the researchers, have also well-developed infrastructure and have invested a lot of resources in teacher training. Findings of the two studies showed that the impact of teacher professionalism on student learning outcomes is often constrained by factors such as limited resources, overcrowded classrooms, and insufficient professional development opportunities. However, studies like those by Chirwa et al. (2019) have demonstrated that when teachers receive proper training and support, even in resource-poor settings, student performance improves. The study by Chirwa et al. (2019) also concluded that teachers who engage in reflective practices and implement evidence-based teaching strategies tend to yield better results, even in challenging environments. The current study has delved deeper to examine the effect of the TPAD target scores on learning outcomes. Multiple linear regression was used to estimate the effect of each of the targets on pupils' learning outcomes.

The relationship between the teachers' professional knowledge and learning outcomes is a critical area of educational research that continues to shape effective teaching practices. Professionalism in teaching as a concept can be viewed as a set of qualities, habits, and attributes that characterize a qualified and efficient teacher (Nguyen et al.,2024). Teacher professionalism is usually looked at about several aspects which include; subject knowledge which refers to the level of understanding that a teacher has on the content that he or she is expected to teach, pedagogical skills which include the

ability to employ many teaching techniques and to handle the needs of different learners, ethical practices which encompass professional conduct, commitment towards students and other members of the educational society and lastly professional development which involves self-enhancement activities that are geared towards improving on the teaching profession (Kraft et al,2024). Few researchers have tried to explore how the various aspects of teachers' professionalism affect the learning process and learning outcomes (Nguyen et al.,2024), a gap filled by the current study.

Professionalism is grounded in many theories and philosophies that have shaped the development of many careers. These theories stress the need for competence in undertaking tasks promptly as a feature of professionalism. These are in line with the PC requirements for all career professions. One such theory is the self-efficacy theory, defined by psychologist Albert Bandura (1995), as a crucial part of any career (Bandura, 1995). Self-efficacy is the belief in one's ability to complete tasks under specific circumstances. In the teaching service, self-efficacy alludes to a teacher's belief that he or she can have a meaningful impact on students' learning outcomes regardless of difficulties.

Teacher professionalism is, however, not clearly defined (Nguyen and Thai, 2023). Teacher professionalism varies by country and economy, both in terms of overall levels of professionalism within the educational system and the areas a country/economy prioritizes. Several countries have established teaching councils, which provide a venue for policy creation as well as a method for setting professional standards; generally, the councils consider quality assurance in teacher education, induction process for new teachers, teacher performance, and career development for teachers (Wininger and Birkholz, 2013). When examined carefully, these organizations tend to focus on

providing teaching, autonomy, and public responsibility that other professions, such as medicine, engineering, and law, have long enjoyed (Wininger and Birkholz, 2013; Al Yahmadi, 2023; Antinluoma et al,2021). These are, however, much more than what is envisaged by the TSC on the TPAD tool.

Research has shown that teachers' understanding of the pedagogical content knowledge is essential for effective teaching and learning (Förtsch et al. 2018; Bachtiar, 2021). Teachers who possess strong pedagogical content knowledge are better equipped to manage their teaching activities and provide high-quality instruction (Bachtiar, 2021). One of the key findings has been that teachers' professional knowledge is not just about knowing the subject matter, but also about knowing how to teach it effectively (Bachtiar, 2021). This includes understanding how students learn, how to design engaging lessons, and how to assess student progress. Teachers who have a deep understanding of their subject matter and how to teach it are more likely to have a positive impact on their students' learning outcomes (Förtsch et al., 2018; Bachtiar, 2021).

Moreover, Förtsch et al (2018) research has highlighted the importance of teachers' professional practice of using teaching aids, including the use of three-dimensional physical models in instruction. When teachers use three-dimensional physical models elaborately in their learning, students can develop a high-level understanding of models and modelling in science, thereby attaining higher achievement (Förtsch et al. 2018). Additionally, teachers' professional practice, such as their ability to create meaningful learning activities, has been shown to be positively correlated with students' achievement (Bachtiar. 2021). Although these findings are true, the situation in

Kakamega County primary schools might be different since it may be limited depending on the subject matter, availability of resources, and the large class sizes.

Empirical studies on teacher professional competence are still in their early stages (Nguyen and Thai,2023). Teacher professional competence is also influenced by psychological factors such as beliefs, motivation, and self-regulation. Preparing professional documents based on the current syllabus/designs as required by the TPAD tool in the TSC PC requirements is only a small part of professional competency. The TPAD tool lacks sections to measure such factors. The key question about teacher professionalism is: to what extent does teacher professionalism as envisioned on the TSC TPAD tool translate into teacher competence (better teaching, better learning outcomes for students, and, ultimately, quality education? Research studies reveal that pedagogical knowledge is an important component of teacher professional competence, but knowledge alone is insufficient to make teachers competent (Kunter, 2013).

The TPAD appraisal process may be ignored or perceived with mistrust or indifference by the teachers being evaluated due to subjectivity in PC appraisals. According to Omondi and Robert, three major areas of concern deeply affect PC in Kenya's teaching force: variations and problems in quality of measurement of teacher performance, a lack of information about the goals, and low worker motivation (Omondi, 2015; Robert, 2014). Omondi (2015) identified major impediments to teacher professionalism as teacher inadequate knowledge of the Performance Contract, inadequate resources (both human and learning), divergent opinions by many teacher unions, and implementation challenges. The question of limited resources, particularly human resources or teacher shortages in Kenya is particularly grave if TSC has to achieve its PC goal of quality

education. This was common in the study area where pupils lacked some essential resources, such as desks to sit on, teachers, and other instructional materials.

Teachers are expected to incorporate ICTs into their professional practices as well as stay current on ICT developments and applications (TSC, 2019). Technology enables teachers and students to gain access to specialized materials that go beyond textbooks, in a variety of formats, and with few time or space constraints. It provides innovative platforms for collaborative knowledge creation, allowing teachers to share and improve teaching materials. Perhaps most importantly, with tools for inquiry-based pedagogies and collaborative workspaces, technology can support new pedagogies that focus on learners as active participants. Technology, for example, can improve experiential learning and foster project-based and inquiry-based teaching. It can also provide new tools to learning and teaching communities, such as remote and virtual labs, interactive, non-linear courseware based on cutting-edge instructional design, sophisticated software for experimentation and simulation, social media, and serious games.

Although TSC has the global technological change in mind for quality education, the implementation of TPAD necessitates a new educational infrastructure and professional leadership. The infrastructure in many Public primary schools in Kenya is not conducive to promoting high-quality teacher professional development. In one study of Narok County primary schools, Mainai (2016) established that Narok County primary school head teachers lacked the ICT proficiency needed to supervise TPAD execution. Moreover, teachers were also found to spend a lot of time in cybercafés waiting for the owners to help upload TPAD data to the TSC TPAD portal (Mainai, 2016). Headteachers and principals are e-administrators; however, the area of concern

is that most of them also lack ICT e-learning integration skills, as technology leaders (Schiller, 2003).

While the link between teacher professionalism and pupil learning outcomes is well-supported in the literature, several challenges, particularly in Kenyan primary schools, including the study area, are notable. There is a lack of adequate resources, and teachers face significant constraints that limit their ability to maintain high levels of professionalism. The demanding nature of the teaching profession, without adequate support or recognition, can lead to burnout, which negatively impacts pupil learning outcomes. In several cases, teachers have very large classes, with an enrollment of more than 60 learners per class. The effectiveness of teacher professionalism may also vary based on cultural norms, educational policies, and contextual factors such as socioeconomic status. The level of teacher professional knowledge and practice among teachers also varies individually and widely, and teachers may require targeted support and training to improve specific aspects of their teaching. Additionally, although teacher knowledge and practice are crucial, student factors such as socio-economic status, motivation, and home support also significantly impact learning outcomes.

2.3 Teacher Achievement in Comprehensive Learning Environment TPAD target

The guidelines for the target of a comprehensive learning environment aim to create child-friendly environments (Schools) or learner-friendly environments (TSC,2017). The Child-Friendly School concept establishes a standard for measuring and assuring quality in all learning institutions. The Child Friendly Schools (CFS) concept is not new; it addresses every child's right to a high-quality education (Dewi et al,2024). It also addresses all children's learning needs, regardless of their vulnerabilities. The five

dimensions of a learner-friendly school are used to define quality (UNICEF, 2013; Dewi et al,2024). The Child-friendly school concept seeks an inclusive, effective, healthy, safe, and protective school environment that emphasizes gender responsiveness and active participation of all stakeholders in the school and community. The underlying principle of a child-friendly school is that teachers' supportive behaviours, such as emotional support, professional support, social support, and instrumental support, can make the instructional process easy, adaptable, and useful (Sija, 2024). This concept is being implemented as part of the Child-Friendly Schools (CFS) initiative in countries around the world, including Kenya.

A comprehensive learning environment refers to a holistic approach to classroom conditions that support the physical, emotional, and intellectual development of students. The TSC TPAD tool target on a child friendly environment seeks to evaluate teachers on ‘ability to create child friendly school/class environment through planned activities to demonstrate respect, equity, inclusion and moral values’, ‘ability to create child friendly school/class environment through planned activities to demonstrate respect, equity, inclusion and moral values’, ‘ability to ensure safety of learners’ and ‘ability to manage learners conduct and behaviour. Some aspects of a comprehensive learning environment like emotional development are not easily measurable and are missing on the TPAD tool.

In the comprehensive learning environment target, TSC and society now expect teachers to effectively engage with students from diverse backgrounds and to be sensitive to cultural and gender issues, promote tolerance and social cohesion, work with disadvantaged students and those who have learning or behavioral problems, utilize new technologies, and keep pace with rapidly evolving fields of knowledge and

approaches to student assessment (UNICEF, 2013; Perry et al., 2021). In several countries, providing stimulating learning environments and helping students develop problem-solving skills while monitoring and directing their own learning have become core responsibilities of teachers (Perry et al., 2021). School systems are increasingly offering integrated education for students with disabilities and learning difficulties, and teachers are expected to enhance their knowledge of special education, appropriate teaching and management processes, and collaboration with support personnel. Some school systems have introduced courses in areas such as citizenship education, which cover community involvement and social and moral responsibility, taught either separately or integrated across the school curriculum (Haug, 2017). When compared to other countries like Finland, the TSC TPAD tool addresses only a few aspects of child-friendly schools.

Studies have established core principles that underpin the learning environments and help to develop these kinds of knowledge and skills (UNESCO, 2020; OECD, 2015). These principles include making learning central, encouraging engagement, ensuring that learning is social and collaborative, ensuring the safety of learners, and being sensitive to individual differences and learners' motivations and attitudes (OECD, 2015). They also demand that each learner without overload; using assessments to measure students' progress towards these goals, with emphasis on formative feedback; and promoting connections across learning activities and subjects, both in and outside of school. These will create a conducive learning environment. A study by Beckton (2017) concluded that a comprehensive learning environment creates a productive learning environment for students' academic, emotional, and social success in school. According to Xu et al. (2024), a comprehensive learning environment leads to teachers'

positive interactions with students, exhibiting positive behaviours, and exchanging thoughts and ideas. In Kenya, these are captured in the Basic Education Act of 2013, but tend to prioritize learner safety.

In Kenya, the learner protection, safety, and teacher discipline guidelines are about the provision of safe, stimulating, and innovative learning places of modern pedagogy for all learners (GOK, 2012). NESP sets out goals and objectives for the fair provision of infrastructural, teaching, and learning resources and support systems to benefit all learners. The key NESP goal is that by 2030, there should be a schooling system that delivers the compulsory core curriculum in a safe, secure, and enjoyable environment (GOK, 2012). However, a scrutiny of the NESP goal puts the government more to task to provide the necessary infrastructure for a child-friendly environment rather than on the teachers.

To improve the learning environment in schools, which is a critical determinant in the experience of learning, the Ministry of Education has developed several standards, such as the School Safety Manual for schools, the Comprehensive School Health Policy, among other standards (GOK,2013). These are supposed to be enforced by TSC. Further to that, the Government has embraced UNICEF's Child Friendly School (CFS) model, which provides the most appropriate vehicle for improvement of the quality of education in Kenya today. The Government is supposed to foster whole-school improvement to enhance the attainment of the Education for All (EFA) and Education-related Sustainable Development Goals (SDGs) commitments. The Child Friendly Schools (CFS) was an initiative by the Basic Education Act (2013) to address quality issues in education. However, a careful examination shows that the Ministry of

Education was ill-prepared to implement child-friendly schools through the Teachers Service Commission.

In Conclusion, although there is evidence supporting the link between child-friendly learning environments and pupil learning outcomes is strong, there are several challenges in Kenya, and more so in Kakamega County. The major challenge is resource constraints, including human resource constraints. Implementing and maintaining CLEs requires significant financial, human, and infrastructural resources. In low-income countries or underfunded schools, creating such environments may be impractical or unsustainable (UNESCO, 2021). In many low-income or under-resourced schools, creating a child-friendly learning environment is challenging due to a lack of funding for infrastructure, training, and materials. Already, the situation in Kakamega County, as in many other counties, is one of teacher shortage leading to understaffing (TSC, 2019).

Additionally, even within CLEs, disparities can persist. For example, pupils from disadvantaged backgrounds may still face barriers to accessing resources or support, undermining the inclusivity goals of CLEs (OECD, 2020). This is true for Kakamega County, where the poverty index is high. Some pupils may come to school without having had basic commodities like food. This, even with the best comprehensive learning environment, will affect pupil learning outcomes and is beyond the issue of target achievement by teachers.

Moreover, while CLEs aim to support teachers, the demands of creating and managing such environments can lead to increased workload and burnout, particularly in teacher under-staffed areas like those of Kakamega County settings (Skaalvik & Skaalvik,

2020). But even then, other than high workloads, teachers in many public schools in Kakamega County may not have the training or resources to implement child-friendly practices effectively, particularly in diverse or challenging classroom settings. Additionally, what is considered child-friendly may vary across cultures, and a lack of context-specific understanding may limit the effectiveness of certain practices. CLEs often emphasize flexibility and personalization, which can conflict with standardized testing and rigid curricula. The society still values performance in National Examinations. This pressure on performance in standardized examinations such as KCPE may limit their effectiveness in systems that prioritize measurable outcomes (Hollweck and Lofthouse, 2021; O'Connor, 2020). Efforts to create Child-Friendly Schools (CFS) are ongoing. However, the effect of the Child Friendly Schools (CFS) on pupil learning outcomes remains unclear.

2.4 The Teacher Professional Development Target

Teacher conduct and professionalism are key factors influencing the learning environment and, subsequently, pupil learning outcomes. Teacher conduct refers to the behaviours and attitudes teachers exhibit in the classroom, including their interactions with students, instructional strategies, and classroom management (Beckton, 2017). An important aspect of professionalism in any field is continuous professional development. Continuous professional development for teachers is widely regarded as essential for improving teacher performance and effectiveness, as well as increasing their commitment to their jobs globally (Beckton,2017; UNICEF,2013). Regular teacher evaluation as part of PC is most often associated with professional development activities or plans. It has a systematic influence on professional development in Australia, Korea, Mexico, and Northern Ireland (United Kingdom), and it is

expected/intended to have a similar impact in Austria, the Flemish Community of Belgium, some provinces/territories in Canada, France, Israel, the Netherlands, New Zealand, and Slovenia (Hill et al, 2018). According to a study by Beckton (2017), Continuous professional development for teachers has the potential to improve professionalism in the teaching service but may not necessarily improve teacher performance.

Professional development is delivered in many forms, including workshops, coaching, collaborative learning communities, and formal coursework (Desimone, 2009). The rationale for investing in Professional development is rooted in the belief that effective teaching is paramount for student success, as teachers are the most significant school-related factor influencing student achievement (Darling-Hammond, 2000). Target three of the teachers' PC TPAD tool requires teachers to prepare a self-Professional Development Support Plan, identify professional gaps and engage in continuous and relevant career growth and development activities (TSC,2017).

Studies have found that teachers' professionalism is closely linked to student achievement, where teachers who are more professional and dedicated tend to have higher-achieving students (Haris et al. 2022; Masrur, 2020; Damanik et al. 2024). For example, one study found that teachers who were more dedicated and enthusiastic in their official tasks performed better and had a greater interest in guaranteeing pupils' academic achievement (Masrur, 2020). Another study by Damanik et al. (2024) found that teachers who were more professional and had higher levels of digital literacy, grit, and instructional quality tended to have higher-achieving students. Moreover, research by Herpriyanti et al. (2021) has highlighted has also the importance of teachers' pedagogical competence in determining student achievement. In all these studies, the

conclusion has been that Teachers who have a deeper understanding of their students' characteristics, needs, and backgrounds tend to have a more positive impact on learning outcomes. Additionally, the studies also point out that teachers who can design and implement effective lesson plans, use technology effectively, and create a positive classroom environment tend to have higher-achieving students (Haris et al. 2022; Masrur, 2020; Herpriyanti et al. 2021). This underscores the need for teachers to continuously undertake professional development courses.

Other than the pedagogy, teachers' personality and social competencies are also useful in the teaching service. Research has found that these factors also play a crucial role in determining learner achievement. Teachers who are good role models, have a positive attitude towards teaching, and can build strong relationships with their students tend to have higher-achieving students (Masrur, 2020; Herpriyanti et al., 2021). However, such aspects of professional development are difficult to measure and very subjective. These aspects are captured only as knowledge of the teacher's code of conduct, various school policies, and the Basic Education Act in the TPAD tool (TSC,2017).

TSC does not give a clear definition of teacher professionalism required on the TPAD tool. What the TPAD tool aspires to get is a good teacher, one who will deliver in class. A good teacher is only a small part of professionalism (Emmer and Sabornie,2015). An important research and policy question should therefore be: what distinguishes professionalism in teaching from simply good teaching? And, in the absence of professionalism, can good teaching lead to quality education? One line of inquiry seeks to identify the characteristics of professional teachers. Hattie (2003), for example, drew on a thorough review of research to identify five essential skills that distinguish professional teachers. Professional teachers, according to him, are those who can:

identify essential representations of their subject based on how they organize and use their content knowledge; guide learning through classroom interactions by creating optimal classroom environments; and monitor student performance. monitor and provide feedback on student learning; promote effective outcomes through their care of students and their enthusiasm for teaching and learning; and influence student outcomes by engaging students, providing challenging tasks and goals, and enhancing 'deep' learning or understanding. Good teaching has a lot to do with ensuring that the learner understands the subject matter and, as a result, performs well in exams. A careful look at the appraisal tool (TPAD) shows that most of these attributes are those that TSC is looking for. Based on these two arguments, TSC may be looking for good teachers rather than professional teachers.

Much of the teacher professional development in Kenya, including Kakamega County, takes place at the school level, with staff developers identifying teaching-related issues and introducing new practices. Apprenticeship, mentoring, and collaborative learning environments, for example, are used to define teacher professional development in Singapore (TSC,2017). High-performing education systems in Europe and North America, such as Australia, Canada, Finland, the Netherlands, and Sweden, have long been lauded for their strong teacher professionalization practices and the freedom given to teachers to tailor their instruction (OECD, 2013). In the Canadian province of Ontario, for example, there are two components to the Teacher Performance Appraisal system: one for 'new' teachers and one for 'experienced' teachers. Experienced teachers are subjected to a comprehensive performance appraisal conducted by the principal, during which they are evaluated based on 16 competencies that define the skills, knowledge, and attitudes required for effective teaching (OECD, 2013). Every five

years, experienced teachers are evaluated. They also set goals for continuous learning and improvement by completing an Annual Learning Plan each year. New teacher evaluations concentrate on eight of the sixteen competencies. In the first 12 months of teaching, new teachers must be evaluated at least twice. The Ontario College of Teachers notes new teachers who receive two satisfactory ratings during their first teaching period on their certificate of qualification (OECD, 2013). This aspect is seen in the appraisal of teachers by the Heads of Departments (HODs) and the school heads in the TSC appraisal system, but has few items to define the skills, knowledge, and attitudes required for effective teaching, as in developed nations.

Schools and teachers in Singapore have access to a world-class, research-based set of competencies that are linked to the achievement of outcome goals (Walter & Briggs, 2012). There is an aspect of teacher empowerment and autonomy. If the Kenyan government invests in education and adopts Singapore's teacher empowerment and competency-based evaluation system, it will be a success. Tennessee state in the United States, is doing the same thing. In the United States, the state of Tennessee has embraced successful teacher professional development elements such as concrete and classroom-based mentoring, coaching, and supporting roles, collaborative continuing professional development, teachers choosing their own CPD activities, pedagogical leadership, sourcing outside-the-school expertise, and long-term professional development (Walter & Briggs, 2012).

In Kenya, the Basic Education Act aims to institutionalize teacher ongoing professional development, address teacher absenteeism and failure to complete curriculum on time, and enhance efficiency in the use of human, financial, and capital resources in the education sector (GOK, 2012). In the act, teacher professionalism appears to have been

also delegated to the TSC. The TSC Act (2012) requires the Commission to improve professionalism and quality standards in Teacher Management activities by increasing efficiency and effectiveness. To address professionalism concerns, a sufficient and qualified teaching force for public education institutions must be provided through national equity in teacher distribution and optimal utilization. However, the TSC admits in its report that it is still short of up to 70,000 teachers (TSC, 2016). Instead, TSC sought to improve the registration process for all qualified teachers who enter the teaching service and to deploy appropriately in sufficient numbers based on cost-effective staffing norms to meet the agreed-upon.

The TSC has engaged teachers in non-school embedded traditional professional development activities, such as conferences, workshops, in-service training, and qualification programs, in which teachers have long participated. There is a scarcity of school-based activities that are more closely aligned with professional development literature, indicating that ongoing, intensive, and collaborative activities have a greater impact on teaching practice. Professional development that focuses on clearly articulated priorities, provides ongoing school-based support to classroom teachers, addresses subject-matter content as well as instructional strategies and classroom management are the most effective (Buttler, 2013). Participating in professional development networks, conducting collaborative research on practice problems, peer observation, and coaching are examples of these types of activities. These critical pedagogical aspects for professional development are missing from the TSC PC tool's appraisal guidelines. While teachers may gain new knowledge and skills through professional development activities, whether or not they apply what they learn in their classrooms is still dependent on their own beliefs and the school environment.

In conclusion, although TSC provides guidelines for assessing teacher professionalism in the PC, many, if not all, of the key attributes and skills of professional teachers are shared by all teachers. Formal, measurable skills of professionalism, such as preparation of schemes of work, lesson plans, are necessary but insufficient to improve learning outcomes; they must be supplemented by intangible, difficult-to-quantify qualities such as motivation of teachers, attitude, personality, social competencies, and self-efficacy.

Additionally, while teachers' Professional Development is positively correlated with changes in teachers' classroom practice, only small positive effects on students' achievement is reported (Fischer et al., 2018). A particular criticism of the professional development for teachers as envisaged by TSC is the prevalence of single-shot, one-day workshops that often make teacher professional development superficial, disconnected from deep issues of curriculum and learning, fragmented, and noncumulative. Many programs are short-term, lack follow-up, and are not aligned with teachers' needs or classroom realities. Such PD programs are ineffective in improving learning outcomes (Desimone, 2019).

There are also systemic barriers in education. Teacher professional development alone cannot address systemic issues such as inadequate funding, large class sizes, and a lack of resources. In many low-income countries, even well-trained teachers struggle to deliver quality education due to these challenges (Tatto, 2021). High-quality Teacher professional development requires sustained investment and support. In resource-constrained settings, maintaining effective TPD programs can be difficult, limiting their scalability and long-term impact (UNESCO, 2020).

2.5 Teacher Conduct & Professionalism Target

Teacher achievement of the Teacher Conduct & Professionalism target and pupils' learning Outcomes target is about teachers' conduct. Teachers are expected to be professional. The target evaluates teachers on their ability to act in the best interest of the learner and maintain high standardsof ethics and professional requirements within and outside the institution. Teachers are also expected to demonstrate legal requirements in education as well as to be conversant with the teachers Code of Regulations. In a nutshell, the target is meant to exercise control over the teachers conduct.

Teacher conduct and professionalism are widely recognized as critical factors in shaping pupil learning outcomes. Recent studies have emphasized the multifaceted role of teachers in fostering academic success, emotional well-being, and social-emotional development among students. This review synthesizes findings from recent research to highlight the impact of teacher professionalism, ethical behaviour, and classroom practices on student achievement.

A study by Kraft et al. (2020) found that teachers who exhibit high levels of professionalism, including competence, dedication, and ethical behavior, significantly improve student academic performance. The research highlighted that teachers' ability to manage classrooms effectively and build positive relationships with students creates an environment conducive to learning. Similarly, a meta-analysis by Stronge et al. (2021) demonstrated that teacher professionalism, particularly in terms of classroom management and instructional strategies, has a direct and positive correlation with student engagement and achievement.

The TSC has employed the PC approach in creating awareness of the provisions among teachers to help them internalize professionalism. The current efforts through PC are meant to reduce disciplinary cases by teachers being made aware of the code of conduct. Teachers who violate the provisions are subjected to corrective measures to ensure justice for both teachers and the learners. Teachers found guilty of transgressing this provision against learners, presenting fake academic or professional certificates and those convicted of criminal offences are dismissed from service and removed from the TSC register.

Teachers who exhibit high levels of professionalism and ethical conduct are more likely to create positive learning environments that foster student achievement. A study by Hattie (2020) found that teacher professionalism, including clarity, enthusiasm, and fairness, significantly influences student learning outcomes. Professional conduct by teachers contributes to a respectful and inclusive school culture. A study by Bryk et al. (2019) demonstrated that schools with high levels of teacher professionalism report fewer disciplinary issues and higher levels of student engagement. Additionally, teachers who demonstrate professionalism are more likely to build positive relationships with parents and the community, which supports student learning (Epstein, 2019). Furthermore, professional teachers are more likely to embrace new teaching methods, technologies, and curricula, ensuring that education remains relevant and effective. Darling-Hammond et al. (2020) found that professionalism is linked to teachers' willingness to innovate and adapt to changing educational needs.

While the research indicates a strong link between teacher professionalism, conduct, and student outcomes, several challenges exist. High levels of stress and burnout can negatively affect teacher conduct and professionalism, which in turn impacts students' learning experiences. Teachers facing burnout may struggle to maintain positive relationships with students or effectively manage their classrooms. This is common in Kakamega County where teachers have heavy workloads and large classes. Additionally, in resource-limited settings, like those in Kakamega County, even highly professional and committed teachers may face constraints that hinder their ability to create optimal learning environments for students. And finally, relying too heavily on teacher conduct and professionalism can shift the burden of educational quality onto individual teachers, ignoring the role of policymakers, administrators, and other stakeholders in creating supportive environments (Ball, 2018).

2.6 Teacher Professional Learning Community Target

Professional Learning Communities (PLCs) are collaborative groups of educators that meet regularly to share knowledge, engage in joint problem-solving, and reflect on teaching practices. The idea is that when teachers participate in ongoing, collective learning experiences, it enhances their teaching skills and knowledge, which in turn positively influences student outcomes.

PLCs have emerged as a powerful strategy for improving teacher practices and, consequently, pupil learning outcomes. Recent studies have explored the impact of teacher participation in PLCs on student achievement, engagement, and overall educational quality. The role of PLCs in fostering a culture of collaboration and shared responsibility has also been emphasized in recent research. Darling-Hammond et al.

(2020) highlighted that PLCs create opportunities for teachers to engage in meaningful dialogue, co-plan lessons, and address challenges collectively. This collaborative environment not only enhances teacher morale but also translates into more effective classroom practices, ultimately benefiting students. PLCs provide opportunities for teachers to share best practices, reflect on their teaching, and learn from one another. A study by Vescio et al. (2018) found that teachers in effective PLCs were more likely to adopt evidence-based instructional strategies, leading to improved classroom practices.

Moreover, PLCs have been shown to positively impact teacher retention and professional growth, which indirectly benefits pupil learning outcomes. A study by Ronfeldt et al. (2022) found that teachers who participate in PLCs report higher job satisfaction and a stronger sense of professional efficacy. This, in turn, reduces turnover rates and ensures continuity in instruction, creating a stable learning environment for students. Additionally, PLCs provide a platform for ongoing professional development, enabling teachers to stay updated with the latest pedagogical trends and technologies.

Participation in professional learning communities (PLCs) can have a positive impact on pupils' learning outcomes. Research has shown that teachers' participation in PLCs can lead to improved student achievement, increased teacher motivation, and enhanced teacher collaboration (Sturm et al., 2020; Desimone, 2019). Studies have found that teachers who participate in PLCs tend to have higher levels of student achievement, particularly in reading and science (Sturm et al., 2020). PLCs also foster a culture of collaboration and trust among teachers, which enhances collective efficacy and school improvement. A study by Bryk et al. (2019) demonstrated that schools with high levels of teacher collaboration reported fewer disciplinary issues and higher levels of student

engagement. This is because PLCs provide teachers with opportunities to collaborate, share best practices, and develop new strategies for teaching and learning. By working together, teachers can create a more supportive and inclusive learning environment that benefits all students (Sturm et al. 2020).

In addition to improving student achievement, PLCs can also have a positive impact on teacher motivation and job satisfaction. When teachers feel supported and valued, they are more likely to be motivated to improve their teaching practices and take on new challenges (Sturm et al. 2020). This, in turn, can lead to increased job satisfaction and reduced turnover rates (Sturm et al. 2020).

Furthermore, PLCs can provide teachers with opportunities to develop their professional knowledge and skills, which can also have a positive impact on pupils' learning outcomes. By engaging in collaborative learning and professional development, teachers can stay up-to-date with the latest research and best practices in their subject area and develop the skills they need to support their students' learning (Sturm et al. 2020).

Teacher achievement in participation in Professional Learning Community targets seeks collaboration with the community, parents, guardians, and other stakeholders. The target also seeks collaboration with other educational bodies such as the Kenya National Examination Council (KNEC), the Ministry of Education (MOE), Kenya Institute of Curriculum Development (KICD) (TSC,2017). There are a lot of stakeholders in education who have a vested interest in maintaining the status quo. Even small reforms like the introduction of PC can involve massive reallocations of resources and touch the lives of millions on both the client and provider sides (OECD,

2015). Several policy lessons have emerged from OECD countries that have implemented reforms in education.

In most countries, including Kenya, decision-making in schools has become more decentralized in recent years, especially regarding the organization of instruction (OECD, 2015). An increase in the number and range of decisions taken at the school level has led to new managerial tasks for teachers, and in some countries, stakeholders are expected to participate in and contribute to school leadership.

School systems increasingly emphasize the importance of close co-operation between schools, parents, and other stakeholders. Consequently, teachers need to know how and when to communicate with stakeholders. To gain additional support and offer broader learning experiences, schools in some countries are expected to build partnerships with community institutions and members, such as libraries, museums, and employers (Hollweck and Lofthouse, 2021; Shirley, 2012). Teachers need to have the skills to make and maintain professional connections and communication

There is broad agreement in the literature that the involvement of stakeholders in education policy development cultivates a sense of joint ownership over policies, and hence helps build consensus over both the need and the relevance of reforms (Finlay *et al.*., 1998; OECD, 2007). Policies promoting consensus build trust between the various stakeholder groups and policy makers. Keating (2011) analysed how various school districts in the United States developed and implemented new school-principal appraisal systems. In most school districts, collaboration between different stakeholders (e.g., unions, teachers, school leaders, and community representatives) played a key role in the design and implementation stages. The setting of shared

priorities, negotiation, consensus building, and transparency often resulted in greater ownership and acceptance among stakeholders.

Whereas this is true, the public may be unprepared for some reforms, resulting in a lack of social acceptance for policy innovations. This might be exacerbated by an underdeveloped capacity for evaluation in education (Clifford and Ross, 2011). Thus, it is important to make the evidence underlying the policy proposals available to the relevant stakeholders to help convince educators and society at large. The objective is to raise awareness of problematic issues, enhance the national debate, and disseminate evidence on the effectiveness and impact of different policy alternatives, and hence to find a consensus on evaluation policy.

The NESP describes the social circumstances and barriers to learning that present challenges to implementation planning. Greater inclusiveness and sustainability of development outcomes and impacts require stakeholders to learn systemically and adapt responsibly in complex environments, thus understanding broader influences and individual and collective responsibilities (Bawden, 2010). In a recent study on 'Influence of Teacher Performance Appraisal on Effectiveness in Curriculum Evaluation in Kenyan Public Secondary Schools', Aloo *et al.* (2017) reported that inclusiveness as in collaboration with communities had difficulties in Prioritization of objectives, Setting of Performance targets in line with Ministry of education objectives and Performance monitoring and evaluation.

Following important lessons learnt from the KESSP (2005-2010) and other projects, education sector planning and budgeting sought to continue within a sector-wide

approach (planning) framework so that all activities across the sector are harmonized, prioritized, and appropriately budgeted for (GOK, 2012). This was meant to help increase accountability and transparency and avoid leakage of resources, and increase quality service delivery. This planning process has informed the development of NESP, with improvements expected in its implementation. These are strong governance issues that influence all players, including local stakeholders and Development Partners, and strengthening the partnership between communities and Institutions in improving institutional standards.

While PLCs are widely advocated for their potential to foster professional growth and improve education quality, their effectiveness and limitations have been the subject of extensive research. The effectiveness of PLCs depends on certain enabling factors, such as supportive leadership, adequate time for collaboration, and access to resources. A study by Hord and Tobia (2021) emphasized that school leaders play a critical role in fostering a culture of collaboration and providing the necessary infrastructure for PLCs to thrive. Without these conditions, the potential benefits of PLCs may not be fully realized.

PLCs designed in one context may not be applicable or effective in another. For example, PLCs based on Western educational models may not address the specific needs of teachers in developing countries (Tatto, 2021; UNESCO, 2020). Additionally, the varying levels of commitment among teachers can pose challenges to the success of PLCs. Research by Skaalvik and Skaalvik (2020) highlights the importance of a shared vision and collective commitment among educators for the success of PLCs. When some teachers are less engaged or resistant to collaboration, it can undermine the collective efficacy of the group and limit the potential for meaningful change

(Tatto,2021). Unfortunately, some of these aspects are hard to measure and are absent on the TPAD tool.

2.7: Learning Outcomes

Learning outcomes are descriptions of the specific knowledge, skills, or expertise that the learner will get from a learning activity. They are measurable achievements that the learner will be able to understand after the learning is complete, which helps learners understand the importance of the information and what they will gain from their engagement with the learning activity. Learning Outcomes focus on the specific knowledge, skills, or attitudes students should demonstrate as a result of their educational experience. Unlike learning objectives, which reflect what instructors intend to cover. Learning outcomes are learner-centered and emphasize what students actually achieve and can apply in real-world contexts (Antinluoma, 2021; Beach et al, 2021).

There are many learning outcomes including problem solving skills, creativity, communication skills, appreciation of art, academic achievement, school completion, school retention among others. In many educational programmes, Academic Achievement, School Completion Rates, and School Retention Rates are the most focused on learning outcomes. These outcomes are most emphasized because they serve as tangible, quantifiable indicators of educational effectiveness and student success (Darling-Hammond,2023). Academic Achievement measured mainly as grades and test scores provide direct evidence of what students have learned and their mastery of curriculum content. This data is essential for evaluating the effectiveness of teaching practices, curricula, and educational policies. School Completion Rates often

measured as percentage of students who graduate or complete their educational programs is a key indicator of how well a school supports students through to the end of their intended educational cycle. High completion rates are associated with better school management and accountability. School Retention Rates reflect the percentage of students who continue their studies from one year to the next. High retention rates suggest that students are being adequately supported, engaged, and motivated to persist in their education

This study went out to examine the effect of PC on the three main learning outcomes of academic achievement, school completion and school retention. While learning outcomes include a wide range of skills and competencies (social-emotional growth and critical thinking, creativity), academic achievement, completion, and retention remain central because they are easily measured, widely understood, and closely linked to broader educational and societal goals.

2.8 Summary of Literature Review

The demands on student learning in the 21st century have profound implications for teachers and teaching. In addition to continuously updating their knowledge of the subjects they teach, teachers are expected to work with multicultural classes, integrate students with special needs, be 'assessment literate', work and plan in teams, assume some leadership roles, and provide professional advice to parents, among other tasks. All these facets are what PC presumes to seek to use to achieve quality education. These are reforms aimed at improving service delivery (effectiveness of teachers) and learning outcomes of pupils.

However, reforms need to consider the idea of ownership, the respective responsibilities of different actors. In the case of the teachers and the Teachers Service Commission (TSC), the introduction of PC was met with a lot of resistance from the teachers through their trade unions. This is common with new policies. As Finlay *et al.*., (1998) put it, when new policies for reforms are introduced, a combination of top-down and bottom-up initiatives should be used generally to foster consensus. For instance, a study of evidence-informed policy making underlines how the involvement of practitioners – teachers, other education staff and their unions in producing, interpreting and translating research evidence into policy gives these practitioners a strong sense of ownership and strengthens their confidence in the reform process (OECD, 2015). PC in the teaching service was mainly top-down. PC started on a suspicious note between the teacher's unions and the employer (TSC). This also hurt the implementation of PC and the expected results from PC.

Finally, most of the targets in the PC tool are universal in the education sector worldwide. Most of the research study results are from developed countries. From the literature reviewed, it's clear that limited research has been carried out on Performance contracting, particularly in Public primary schools in Kenya. Most of the research has been on explaining the effects of performance contracting on performance effectiveness, concentrating on organizational productivity, organizational culture, organizational effectiveness, and employees' motivation. The true association between the set targets and the learning outcomes of pupils is still unexplored. The setting and achievement of targets by teachers is a new concept, envisioned as a strategy to improve the quality of education. It is also not clear if all the targets have the same effect on pupil learning outcomes. Some targets may have stronger relationships and therefore

be predictive to learning outcomes. Such targets could be explored further for manipulation to attain better learning outcomes and quality education. Some scholars like Robins & Judge (2013) have argued that performance contracting may have just played a role in influencing employees' behaviour towards expected or pattern. It is on this basis that this study was premised to investigate achievement in PC targets on improving Pupils' learning outcomes through set targets in Public primary schools in Kakamega County.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the design and methods that were used to acquire relevant data for the study. The chapter describes the procedures used in determining the sample, the data collection process, and how the data collected was analysed to establish the findings of the research study.

3.2 Research Design

The study employed a correlational research design with a mixed-methods approach. This design was preferred because it was best suited for establishing the relationship between the two primary variables: the teacher's achievement in the PC targets and the pupil learning outcomes. The mixed methods approach is essential when the nature of the investigation requires both quantitative and qualitative data sources to adequately address the specific objectives. This approach proved beneficial for hypothesis testing, as it combined the statistical rigor of quantitative methods with the contextual depth of qualitative methods.

3.3 Study Location

The study was conducted in Kakamega County, which is located in Western Kenya. Kakamega County has 899 public primary schools and 10,145 public primary school teachers employed by TSC (Kakamega County TSC Unit, 2019). Some of the learning outcomes of primary school pupils in Kakamega County, such as KCPE performance,

Pupil retention rates and pupil completion rates have remained relatively constant over the past eleven years, despite PC having been in place for a long time.

3.4 Study Population

The target population involves teachers employed by the TSC, teaching in public primary schools in Kakamega County; the Sub County TSC Directors and Curriculum Support Officers. It is teachers employed by TSC who are subjected directly to PC. All TSC teachers are trained and registered, and sign performance contracts in conformance with TSC regulations. The TSC sub-county Directors and Curriculum Support Officers are involved in routine supervision of PC implementation through regular appraisals of teachers. Kakamega County has One County TSC Director, 13 TSC Sub County Directors, 27 Curriculum Support Officers and 10,145 TSC-employed teachers in Public Primary schools were targeted for the study (Kakamega County TSC Unit, 2022).

Kakamega County has 899 primary schools spread over an area of 3033.8 km^2 (KCP,2019). Though, teachers' list existed at the TSC County Directors' office, it was also difficult to randomly select and find 80 teachers from a pool of 10,000 teachers, widely spread across the County. Multi-stage sampling gave the researcher a suitable and scientific method to sample from such populations. This sampling procedure, in essence, was a way to reduce the population by cutting it up into smaller groups, which were then the subject of random sampling. The work carried out by the teachers in achievement of the set PC targets is the same (Homogeneous), although the infrastructure and resources may vary. Additionally, there are no restrictions on how the researcher divides the population into groups. This allows many possibilities for

methods of maximization or minimization of variance or interpretability (Creswell, 2020).

The required data was provided by the head teachers and teachers in selected public primary schools. The PC evaluation guidelines are digitized. The TPAD tool used to appraise teachers was the key tool for reference in data collection. Head teachers usually calculate PC scores for each target on a termly basis, and the results are added up to create the annual appraisal score report. The head teachers post the scores on the TSC portal. Average scores for each target for a school were accessed from the TSC portal by the head teachers.

To ensure that teachers follow PC guidelines, 48 Curriculum Support Officers and thirteen (13) TSC Sub County supervise PC implementation. These officers are also directly involved in the TPD process for Kakamega County's Headteachers and Deputy Headteachers. The head teachers asses the other teachers, keep record of the scores, analyze and post to the TSC website the scores attained by the school in PC.

Table 3.1: Distribution of Public Primary Schools in Sub-counties of Kakamega County

S/NO	**Sub County**	**Number of Public Primary Schools**
1	Kakamega Central	64
2	Navakholo	61
3	Kakamega North	116
4	Matete	45
5	Butere	80
6	Khwisero	61
7	Kakamega East	100
8	Kakamega South	80
9	Lugari	56
10	Likuyani	66
11	Matungu	68
12	Mumias West	53
13	Mumias East	49
	Total	**899**

(Source: Kakamega County TSC Unit, 2023)

3.5 Sample Size and Sampling Procedure

The Sample size for this study was determined using the Cochran formula. The formula has a precision, level of confidence, and the degree of variability for the attributes being measured (Gupta, 2008). The attributes were the varied PC targets of professional knowledge and practice, comprehensive learning environment, professional development, teacher conduct and professionalism and participation in professional learning community In this case, the sampling error or level of precision was at + or - 0.5% (95 % confidence levels), because of the little variability of PC implementation in Public primary schools.

Cochran's formulae for population

$$n_0 = \frac{z^2 pq}{e^2}$$

Where n_0 is a sample size required

Z is the value found on the confidence interval table at 95% confidence level (1.96)

P estimated proportion of attribute present in the population, PC implementation as 0.95 (95%)- (Although the implementation of the PC process is supposed to be 100%, several problems including loss of passwords by head teachers, has lowered the implementation process to an estimated 95% success (TSC,2017).

Q is 1-P or 0.05

e is the error margin of 0.05

$$n_0 = \frac{(1.96^2)(0.95)(0.05)}{0.05^2}$$

$$n_0 = 72.9904$$

Or 73 schools

Thus, the minimum required sample size was 73 schools. However, for this study, 11% (9 schools) was added to cater for non-responses, attrition, and spoilage of instruments (Mishra and Alok, 2022; Serem et al., 2013)

Therefore, based on the calculation from the above-mentioned Cochran formula, 82 schools were selected for the study through multistage random sampling. Multi-stage sampling was used to avoid the difficulties of randomly sampling from a large population that covers a larger area than the researcher's resource ability to handle

(Creswell, 2020). In the case of the current study, the first stage of Multistage sampling involved randomly selecting sub-counties in Kakamega County. To obtain a wider representation of the schools in the county, 4 sub-counties from the 12 out of the 13 sub-counties of Kakamega County were randomly selected (One Sub County, Lugari Sub County was omitted because it had been used in the piloting of the research instruments) used. The sub-counties selected included Mumias East, Navakholo, Kakamega North, and Kakamega South. The second stage involved the selection of schools for the study. Systematic random sampling was used to select 20 schools from each of the 4 selected sub-counties using lists of schools at the Sub-County TSC offices. In the selected schools, the head teacher and one TSC teacher were also selected randomly for the study.

For each of the selected schools, the researcher obtained data on the annual average achievement of each target posted on the TSC portal over the last five years. (The head teachers have access to this PC data for their schools on the TSC portal through a password provided by TSC.) Schools did not have two important aspects of data for this study: the pupil retention rates and pupil completion rates. The study, therefore, used data from the TSC County directors' office.

The TSC County director, one TSC Sub County director, and 2 Curriculum Support Officers were also purposely selected for the study as Key informants. These TSC officers know teacher appraisals in teacher PC and are involved in supervision, guiding, and carrying out regular teacher appraisals, particularly to head teachers and their deputies.

3.6 Data Collection Procedure

Before proceeding to the field to carry out the study, the researcher sought authorization from the Masinde Muliro University of Science and Technology's Department of Education Planning and Management, a research license from the National Commission for Science, Technology and Innovation (NACOSTI)- License No: NACOSTI/P/23/28363, and authority from the County Director of Education (Kakamega County). This research study was therefore carried out following properly laid-down ethical standards. Non-intrusive methods of various levels with questions that could embarrass the respondents were checked during the pretest study and avoided.

After collecting the required data sets, the data was converted to soft copy and saved on a computer with a password known only to the researcher. Hard copies of information provided by respondents to the researcher were kept in a lockable desk. All materials cited in the study are acknowledged on the reference list.

Before actual data collection, four research assistants were trained on both quantitative and qualitative data collection techniques. Primary data was collected using semi-structured questionnaires. Questionnaires were distributed to head teachers of selected public primary schools, filled out, and collected by research assistants. Individual participation was required to maintain confidentiality. Questionnaires were preferred because they provide a quick, efficient, and cost-effective way of gathering large amounts of the required information from a large sample of headteachers over a short period. The questionnaire responses were also preferred because they could also be

analyzed more scientifically and objectively than other forms of data collection (Serem et al., 2013).

Data from key informants were collected using interview guides. Interview questions were utilized to obtain in-depth information to better understand and analyze the key informants' opinions and experiences regarding teacher performance contracts in the teaching profession and learning outcomes. The researcher personally interviewed the key informants to gain an in-depth view of PC target achievement by teachers and its impact on pupil learning outcomes.

Secondary data was collected using document analysis and observation checklists. Reports and statistics on school performances in academics and pupil completion rates were obtained from the County TSC director, Sub-County Directors, and other TSC publications. Document analysis sheets were used to establish the accuracy of KCPE scores, institutional performance in co-curricular activities, gaps, and omissions during data collection in the study.

3.7 Piloting

A pretest study was used to enhance the validity and reliability of the data collection instruments. The pretest study was conducted in Lugari Subcounty, which was later omitted during the actual study. The instruments and procedures, such as language clarity, were corrected with the help of the study's supervisors before the actual study commenced.

3.8 Validity and Reliability of Research Instruments

The researcher validated the instruments to enhance their accuracy in generating desired data sets. Content validity, which refers to the extent to which a measurement reflects the specific intended domain of content, was established (Mishra and Alok, 2022). Content validity encompasses how accurately an assessment or measurement tool addresses various aspects of the construct in question (Dubey and Kothari, 2022; Mishra and Alok, 2022). Content validity was used to ensure that the study instruments comprehensively covered all relevant aspects of the constructs being studied, without omitting important components. The instruments used for data collection during the pretest study were reviewed for content by professionals in the Department of Education planning, particularly supervisors and peers, to pinpoint flaws such as incorrect questions and other inconsistencies. The deficiencies and inconsistencies identified were addressed by revising the instruments before proceeding with the main study. The researcher also used the pretest study to ensure that the research instruments produce consistent data. In the pretest study, the researcher used the split-half technique to test the reliability of the instruments. The split-half method was preferred because this technique also assists in ensuring content validity rather than reliability of the instruments alone. The split-half technique assesses the internal consistency of a test and how well different items on the same test measure the same construct. Splitting the test or questionnaire into two equivalent halves and correlating the scores, the split-half method verifies that both halves measure the same underlying construct—here, aspects of teacher professionalism or learning outcomes

In the pretest study, 24 (30%) of the sample size schools in Lugari Subcounty were subjected to the data collection instruments (Mishra and Alok,2022). The questions on

the research instrument were divided into odd and even numbers. One group was given the odd-numbered questions while the other group was given the even-numbered questions. The scores for the responses to the research instruments' questions were determined and correlated. The scores from the pilot study were used to calculate the Cronbach's coefficient.

The reliability coefficient was computed from the formula;

$$\alpha = KR20 = k\ (S^2 - \Sigma s^2)$$

$$S^2\ (k-1)$$

Where k =number of items in the instrument

S^2=variance of all scores

s^2=variance of individual items

The results from the pilot study calculation gave a (α) Cronbach's Coefficient value of 0.812, above the recommended threshold of 0.70 (Dubey and Kothari, 2022), and therefore, the instruments were adopted as reliable for the study.

The trustworthiness of qualitative data instruments was checked by respondent validation and the stability of responses from multiple sources of data. This technique involved triangulation of results with participants and publications to establish their dependence. Qualitative data collection instruments were also modified to allow for multiple sources and triangulation of data sources from respondents to ensure that collected data was credible and dependable.

3.9 Ethical Considerations

Human subjects' research raises unique and complex ethical, legal, social, and political issues. This study was non-interventional, and the researcher did not anticipate any adverse consequences for participants. However, the researcher ensured that all ethical regulations were adhered to.

To ensure prudent ethics of research processes, the researcher adhered to all codes of ethics and applied to the latter, the three principles of research ethics: beneficence, respect, and justice as prescribed in the Belmont Report, to the fullest extent possible (Dubey and Kothari,2022; Teddlie & Tashakkorri, 2010). The researcher allowed the respondents to make their own informed decisions about whether to participate in the research. To ensure justice in the research study, recruitment and selection of participants were done in a fair and equal manner. The respondents were also provided with complete information about a study and decided on their own to enrol in the study. The researcher also informed respondents about voluntary participation, and those participants had the option of omitting certain questions. The researcher assured the respondents of anonymity and maintained the confidentiality of the information they provided during the study. Respondents to the study were not required to give their names.

3.9 Data Analysis Techniques

The data was analyzed per the study objectives. The first step in carrying out the data analysis involved determining average scores achieved in specific PC targets as well as the average of the learning outcomes in each of the schools in the sample over the past five years (2018-2023).

The data collected was coded and analysed using the Statistical Package for Social Sciences (SPSS) version 29. The variability between teachers' achievement in PC targets and learning outcomes was determined using spread measures (range, variance, and standard deviation). Pearsons's correlation and Multilinear regression was used to determine statistically significant associations between PC targets and pupils' learning

outcomes. The qualitative data from key informant interviews were examined for emerging themes and patterns before being analyzed using content analysis. Data collected per study objective was analyzed using the methods summarized in Table 3.2.

Table 3.2: A Summary of the Methods of Data Analysis

Specific Objective	Scales of Measurement	Methods of Analysis
i. Determine the effect of teachers' achievement in professional knowledge and practice PC target on pupils' learning outcomes in public primary schools in Kakamega County, Kenya	Interval	Descriptive statistics, Pearson r, multiple linear regression analysis, and thematic analysis.
ii. Establish the effect of teachers' achievement in a comprehensive learning environment PC target on pupils' learning outcomes in public primary schools in Kakamega County, Kenya.	Interval	Descriptive statistics, multiple linear regression, and Thematic analysis
iii. Determine the effect of teachers' achievement in teacher professional development PC target on pupils' learning outcomes in public primary schools in Kakamega County, Kenya.	Interval	Descriptive statistics, multiple linear regression analysis, and thematic analysis.
iv. Establish the effect of teachers' achievement in teacher conduct & professionalism PC target on pupils' learning outcomes in public primary schools in Kakamega County, Kenya.	Interval	Descriptive statistics, multiple linear regression analysis, and thematic analysis.
v. Determine the effect of teachers' achievement in participation in professional learning community PC target on pupils' learning outcomes in Public primary schools in Kakamega County, Kenya.	Interval	Descriptive statistics, multiple linear regression analysis and thematic analysis.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.0 Introduction

This chapter presents the results of the study. The first section presents the sociodemographic characteristics of the respondents (head teachers, teachers, and the key informants).

4.1 Sociodemographic Factors

The sociodemographic characteristics of the head teachers are summarised in Table 4.1

Table 4.1: Headteachers' Sociodemographic Characteristics

	Variable	Count	Frequency
Type of school heading	Day	81	98.8%
	Boarding	1	1.2%
	Total	**82**	**100%**
Headteachers' gender	Male	61	74.4%
	Female	21	25.6%
	Total	**82**	**100%**
Age category	30-40 Years	8	9.8%
	41-50years	41	50.0%
	Above 50 years	33	40.2%
	Total	**82**	**100%**
Teaching experience	1-5 years	21	25.6%
	6-10 years	34	41.5%
	11-15 years	21	25.6%
	Above 16 years	6	7.3%
	Total	**82**	**100%**
School Category	Mixed	81	98.8
	Girls	1	1.2
	Total	**82**	**100%**
Years that schools sat for KCPE	5-9years	1	1.2%
	10-14 years	17	20.7%
	15-20 years	63	57.7%
	Above 20 years	1	1.2%
	Total	**82**	**100%**
Staffing level	3-5 Teachers	54	65.9%
	More than 5 teachers	28	34.1%
	Total	**82**	**100%**

Table 4.1 shows that the majority (81), 98.8%, of the public primary schools in the study were day schools. Most (61), 74.4%, of the head teachers were male. The ages of the head teachers ranged from 36 to 59 years, with a mean of 47.84 years and a standard deviation of ±5.821. A majority (61), 74.3%, of the head teachers had more than five years of experience. Additionally, a majority (81), 98.8%, of the sampled public schools were mixed primary schools (the learners were both boys and girls), with a majority (81), 98.8%, having administered KCPE examinations for over 10 years.

The number of male teaching staff in the schools ranged from 6 to 16, with a mean of 10. The number of female teaching staff in the schools ranged from 5 to 13, with a mean of 8. The total number of TSC teaching staff per school ranged from 14 to 27, with a mean of 18. Most (54) 65.9% of the schools were understaffed, lacking up to 5 teachers as per the Curriculum Based Establishment (CBE).

4.2 Teachers' Sociodemographic Characteristics

The sociodemographic characteristics of the teachers are summarised in Table 4.2

Table 4.2: Teachers' Sociodemographic Characteristics

	Variable	Count	Frequency
Type of school	Day	81	98.8%
	Boarding	1	1.2%
	Total	**82**	**100%**
Sex of the teacher	Male	50	61%
	Female	32	39%
	Total	**82**	**100%**
Age category	30-40 Years	8	9.8%
	41-50years	41	50.0%
	Above 50 years	33	40.2%
	Total	**82**	**100%**
Experience as a teacher	1-5 years	6	7.3%
	6-10 years	19	23.2%
	11-15 years	9	10.9%
	Above 16 years	48	58.5%
	Total	**82**	**100%**

It was observed from Table 4.2 that most (50), 61% of the teachers were male. The age of the teachers ranged from 28 years to 56 years, with a mean of 42.65 years and a standard deviation of ±8.298. The teacher's experience ranged from 4 years to 32 years

with a mean of 16 years. More than half (48), 58.5% of the teachers had more than 16 years of experience in the teaching service.

4.3: Sociodemographic Characteristics of the Key Informants

Four Key informants participated in the study. They included the Kakamega County TSC director, one Sub-County TSC Director, and two Curriculum Support Officers (CSOs). The age of the Key informants ranged from 41 years to 54 years. All the Key informants were male and had over 6 years' experience in their duties of teacher management. They were selected for the study because of their knowledge and experience on the requirements of teachers PC and also because they are involved in regular teacher PC appraisals. Data from the Key informants has been triangulated with quantitative data from the headteachers and teachers to arrive at the findings of this study.

4.4 Results of Target Scores

The results of the means of the target scores achieved by teachers in the selected primary schools are presented in Table 4.3.

Table 4.3: Teachers' Performance Contract Target Mean Scores Achieved from 2018 to 2023

Year	Professional knowledge and practice PC target mean score	Comprehensive learning environment PC target mean score	Professional development PC target mean score	Teacher conduct and professionalism PC target mean score	Teacher participation in the professional learning community PC target mean score
2018	74.49	72.78	73.78	73.77	73.24
2019	73.24	73.61	75.66	73.76	73.38
2020	75.90	76.78	72.61	73.91	73.72
2021	72.78	75.93	73.35	73.38	74.30
2022	75.38	74.79	74.23	73.23	72.71
2023	75.00	73.59	73.89	73.07	73.56

The lowest mean score achieved by the selected schools was 72.71 in Teacher participation in professional learning community PC target in the year 2022, while the highest mean score achieved by the selected schools was 76.78 in the Comprehensive learning environment PC target in the year 2020. The year 2020 was interrupted by the Covid pandemic and the scores appearing are mean scores for two school terms; the other years presented the means for three school terms.

4.5 Results of Learning Outcomes

The results of the means of the pupils' learning outcomes are presented in Table 4.4

Table 4.4: A summary of Learning Outcome Scores Over the Years 2018-2023

Year	KCPE Mean scores	Pupil Retention rates	Pupil Completion rates
2018	263.87	75.20	82.60
2019	272.62	81.40	84.50
2020	275.58	83.60	81.40
2021	281.09	81.40	84.60
2022	283.83	83.30	83.20
2023	288.70	82.70	84.10

The KCPE mean scores were obtained from the selected schools. The pupil retention and completion rates were obtained from the County Education office. The highest KCPE mean score was obtained in the year 2020 (288.70). The highest pupil retention rates were also recorded in the year 2020 (83.60); while the highest completion rates were recorded in the year 2021 (84.60).

4.6 Categorisation of Achieved PC Target Scores

To analyse the effect of Teachers achieved PC target scores on learning outcomes over the period 2018-2023 in schools, the target scores were first categorised into good and poor. The categorisation was necessary to attain a cut-off score/point required for regression analysis. The categorisation analysis was carried out using descriptive statistics. The results are presented in Table 4.5.

Table 4.5: Analysis of Achieved School PC Target Scores

N	82
Mean	74.476
Std. Error of Mean	.1618
Std. Deviation	1.4650
Range	8.5
Minimum	69.8
Maximum	78.3

The mean score of all the target scores achieved by teachers over the period 2018 -2023 was 74.476 with a standard deviation of ±1.4650. Based on this finding, a cut-off point was therefore placed at 75.0% for all the PC target scores. Scores above 75 were regarded as good in regression analysis references.

4.7 Effect of Teachers' Achievement in Professional Knowledge and Practice PC Target on Pupils' Learning Outcomes

The first objective of the study sought to determine the effect of teachers' achievement in professional knowledge and practice PC target on pupils' learning outcomes in public primary schools in Kakamega County. Table 4.6 shows a summary of an analysis of means of professional knowledge and practice target scores achieved by teachers in the selected schools over the period 2018 -2023.

Table 4.6: Analysis of Means of Professional Knowledge and Practice Target Achievement Scores Over the Period 2018 -2023 (N=82)

		Prof. knowledge **(2018)**	Prof. knowledge **(2019)**	Prof. knowledge **(2020)**	Prof. knowledge **(2021)**	Prof. knowledge **(2022)**	Prof. knowledge **(2023)**	Prof. knowledge (**Average**)
N	Valid	82	82	82	82	82	82	82
	Missing	0	0	0	0	0	0	0
Mean		74.49	73.24	75.90	72.84	75.38	75.00	74.476
Std. Error of Mean		.424	.274	.525	.415	.381	.399	.1618
Median		75.50	73.00	76.00	72.00	75.00	76.00	74.300
Std. Deviation		3.840	2.482	4.752	3.756	3.452	3.611	1.4650
Range		23	10	25	20	17	16	8.5
Minimum		60	70	64	69	69	67	69.8
Maximum		83	80	89	89	86	83	78.3

It was observed from Table 4.6 the highest scores of professional knowledge and practice over the period 2018 -2023 was in the years 2020 and 2021 at 89% while lowest score was in 2018 at 60%. The highest score in the means was 75.90 in the year 2020, while the lowest score in the means was 72.84 in the year 2021.

Further analysis was carried out using ANOVA to establish if the scores of the teachers' professional knowledge and practice targets in different years were significantly different. The results are presented in Table 4.7.

Table 4.7: Comparisons of Achieved Professional Knowledge and Practice Target Score Means (2018-2023)

Professional Knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	599.659	5	119.932	8.716	<.001
Within Groups	6687.049	486	13.759		
Total	7286.707	491			

Tukey B[a]

		Subset for alpha = 0.05		
Year	N	1	2	3
2021	82	72.84		
2019	82	73.24	73.24	
2018	82		74.49	74.49
2023	82			75.00
2022	82			75.38
2020	82			75.90

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size (N) = 82.000.

The results of these tables show that the means are significantly different (F=8.716, p-value <0.001). The results suggest that there have been measurable changes in teachers' professional knowledge and practice achievement over the years 2018 to 2023. This

finding highlights potential impacts of interventions or contextual factors influencing teacher performance over those years**.** The year 2021 had the lowest professional knowledge and practice target scores the over target scores while 2020 had the highest target scores.

4.7.1: Categorisation of the Professional Knowledge and Practice Target Scores

The Professional knowledge and practice target scores were put into categories using 75% as a cut-off point. The results are presented in Table 4.8.

Table 4.8: Categories of Achieved Professional Knowledge and Practice Target Scores (N=82)

Category	Frequency	Percent
Poor	50	61.0
	32	39.0
Good	82	100.0
Total		

It was observed from Table 4.8 that only 39% of the scores were in the good category.

4.7.2 Effect of Professional Knowledge and Practice Target Achievement on Academic Achievement

The study sought to establish the association between teachers' Professional knowledge and practice PC target achievement and academic learning outcome using Pearsons Correlation. The result is summarised in Table 4.9

Table 4.9: Association between teachers' Professional knowledge and practice target achievement and KCPE performance (2018-2023)

	Professional Knowledge and practice Target	KCPE Performance
Pearson Correlation	1	.159
Sig. (2-tailed)	-	.764
N	6	6

N= 6- (Number of years, 2018-2023)

From table 4.9, it is observed that the Pearson correlation coefficient is 0.159. This indicates a very weak positive correlation between professional knowledge/practice target achievement and KCPE performance. The p-value is 0.764, which is much higher than 0.05. This suggests that there is no statistically significant association between professional knowledge/practice target achievement and KCPE performance. Achievement in the professional knowledge/practice target was not correlated to Pupils' learning outcomes of KCPE performance.

Multiple Linear Regression Analysis on the effect of Professional Knowledge and practice on KCPE performance as shown in Table 4.10 below

Table 4.10 Model Summary

Statistic	Value
R	.159
R-squared	.025
Adjusted R-squared	-0.208
Standard Error Estimate	—
Sig. (p-value)	.764

A multiple linear regression analysis was conducted to determine whether achievement in the Professional Knowledge and Practice PC target significantly influenced KCPE performance. The analysis revealed a very weak, statistically insignificant relationship ($\beta = 0.159$, $p = 0.764$). These results suggest that teachers' achievement in the professional knowledge and practice target did not significantly predict learners' KCPE performance. This aligns with qualitative feedback indicating that the current appraisal approach might not adequately capture practices that directly impact learner achievement. Only 2.5% of the variance in KCPE performance can be explained by variations in Professional Knowledge and Practice scores (R-squared 0.025). This is extremely low and suggests a poor fit of the model. Adjusted R-squared (-0.208) implies that the model does not improve prediction beyond the mean. Therefore, the regression model is not statistically significant, and professional knowledge and practice scores do not meaningfully predict KCPE performance among the sample schools.

4.7.3 Effect of Professional Knowledge and Practice Target Achievement on Retention Rates

The study sought to establish the association between teachers' Professional knowledge and practice target achievement and the learning outcome of retention rates using Pearson (r). The result is summarised in Table 4.11.

Table 4.11: Association between teachers' Professional knowledge and practice target achievement and pupil retention rates (2018-2023)

	Professional Knowledge and Practice Target	Pupil retention rates
Pearson Correlation	1	.285
Sig. (2-tailed)	-	.585
N	6	6

N= 6- (Number of years, 2018-2023)

From Table 4.11, it was observed a Pearson correlation coefficient of 0.285 suggesting a weak positive correlation; however, the high p-value of 0.585 indicates a non-significant association. This implies that no meaningful association exists between Professional knowledge and practice target achievement and pupil retention rates.

Multiple linear regression between Professional Knowledge and practice Target, and retention rates was conducted. The results are as shown in Table 4.12 below.

Table 4.12 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.285	0.081	-0.138	3.69

A multiple linear regression was conducted to examine whether teachers' achievement in the Professional Knowledge and Practice (PKP) target significantly predicts pupil retention rates. The regression model was not statistically significant, $F(1,4) = 0.597$, $p = .585$, and explained only 8.1% of the variance in retention rates ($R^2 = .081$; Adjusted $R^2 = -0.138$). The coefficient for PKP score was not significant ($\beta = .285$, $p = .585$),

indicating that variations in PKP scores do not meaningfully predict changes in pupil retention. These results suggest that other factors may have stronger influence on pupil retention outcomes than PKP target achievement alone.

4.7.4 Effect of Professional Knowledge and Practice Target Achievement on Completion Rates

The study sought to establish the association between teachers' Professional knowledge and practice target achievement and the learning outcome of pupil completion rates using bivariate analysis. The result is summarised in Table 4.13.

Table 4.13: Association between teachers' Professional knowledge and practice target achievement and pupil completion rates (2018-2023)

	Professional Knowledge and practice Target	Pupil completion rates
Pearson Correlation	1	-.079
Sig. (2-tailed)	-	.061
N	6	6

N= 6- (Number of years, 2018-2023)

From table 4.13, it was observed a Pearson correlation coefficient of -0.079 suggesting a weak negative correlation; however, the high p-value of 0.061 indicates non-significance. This implies that no meaningful association exists between the two variables.

Multiple linear regression between Professional Knowledge and practice Target, and completion rates was conducted. The results are as shown in Table 4.14 below.

Table 4.14: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-0.079	.006	-0.243	2.41

A multiple linear regression was conducted to evaluate whether teachers' achievement in the Professional Knowledge and Practice (PKP) performance contract target significantly predicts pupil school completion rates. The results indicated a very weak, negative, and statistically non-significant relationship between the variables ($R = -0.079$, $R^2 = 0.006$, $p = .719$). The model explained only 0.6% of the variance in completion rates and did not significantly improve predictive capability over the mean.

These results suggest that teacher achievement in PKP targets has no meaningful influence on pupil completion rates, pointing to the likelihood that other factors may play a more substantial role in determining completion outcomes.

4.7.5 Qualitative Results

When the Key informants (Curriculum Support Officers, Sub County TSC Directors, and the County TSC Director) were asked to comment on the effect of the professional knowledge and practice PC target achievement and pupil learning outcomes, they had mixed views. They felt that the questions used in appraisal were inadequate and, in some cases, irrelevant. One CSO Said this:

'*The questions asked during appraisal are the same every time we visit the schools to appraise teachers. Teachers already know the questions and prepare for appraisal just*

as a formality. The problem lies in the translation of the scores they get into teaching activities' (CSO,2023).

This sentiment was supported by the Sub-County TSC director.

The headteachers also mentioned that the major problem was the attitude towards PC. Many teachers were said to be poorly prepared for the teaching practice. One Head Teacher had this to say:

*'The kind of preparation the teachers have is just for scoring marks during the appraisal. It is true that in many cases, the resources are inadequate but the teachers also complain of overworking and that the whole PC process is a waste of their time' (*Head Teacher in one of the selected schools, 2023).

The Subcounty Director of TSC felt that training and workshops would assist teachers to achieve higher scores in the professional knowledge and practice PC target. However, this is limited by the availability of financial resources and time. One Sub-County TSC Director had this to say:

'There is a need to carry out many trainings through seminars and workshops to help teachers achieve better scores for better pupil learning outcomes one would ask for example why certain years' experience better scores. Is it that the teachers received better teacher training programs? Are there external factors affecting teacher performance? or are there systemic issues causing inconsistencies? Unfortunately, there are financial and time constraints for organizing such valuable trainings- Sub County TSC director, 2023.

4.7.6 Discussion of Objective One Findings

Teacher professional knowledge covers a wide area, including subject matter expertise, pedagogical content knowledge, classroom management skills, and understanding of students' needs and developmental stages (Kutaka et al, 2017). Teaching practice, refers to how this knowledge is applied in the classroom, including instructional strategies, assessment methods, and classroom interaction (TSC 2017). Professional knowledge and practice of teachers is useful in shaping the learning experiences of learners and positively influences learner academic achievement. Thus, the PC target on Professional knowledge and practice for teachers sought to improve learning outcomes mainly through pedagogy and instructional strategies.

In the current study, the association between teachers' achievement in professional knowledge and practice PC targets on pupils' Pupils learning outcomes showed no significant relationship. The study found no significant correlation between teachers' achievement in professional knowledge and practice PC target with pupils' KCPE examination results, with a Pearson correlation coefficient of r=0.295, which was not statistically significant (P>0.05). Similarly, there was no significant association between teachers' achievement in the professional knowledge and practice PC targets with pupils' retention rates (Pearson correlation coefficient of r=0.159; P>0.05). The correlation between teachers' achievement in professional knowledge and practice PC targets with pupils' completion rates was weakly positive (r=0.285) but was also not statistically significant (P>0.05). Data analysis of the teachers' achievement in professional knowledge and practice PC target scores achieved showed that only 39% of the teachers scores were in the category of good. It is possible that the poor scores

in the PC target could have affected the association between professional knowledge and practice PC target scores and learning outcomes.

Generally, the findings of this study align with existing literature that suggests varying impacts of teacher performance characteristics on learning outcomes. However, findings of this study differ from those of Marika et al (2021) in which they found that there was a strong positive correlation between teacher professionalism and academic achievement in secondary schools in Kitui County, Kenya. Marikas study however, dwelt mainly on professional knowledge and academic achievement and missed out on the issue of teaching practice, as well as other learning outcomes. The area of teacher practice has a lot of bearing with pedagogy which is important in imparting knowledge and skills for better learning outcomes.

Several other studies have reported a positive relationship between teacher professionalism and learning outcomes (Sturm et al. 2020; Perry et al. 2021; Beach et al. 2021). The argument in these studies is that teacher professionalism and practice influences teachers' performance in the classroom by providing teachers with new information, techniques, tools, and instructional strategies that they can use to connect with and engage their students. However, these studies also assert that the Knowledge and instructions need to be relevant to the expected learning outcomes. A study Kutaka et al (2017) concluded that while professional knowledge can lead to improved learning outcomes, the effectiveness often depends on the relevance and application of the training received by teachers.

In the current study, the Curriculum support officers and the Sub County officers who are the supervisors of the teachers, admitted that the current appraisal system appeared

outdated. They argued that the same questions are asked to the teachers during appraisals and some have little relevance to learning outcomes. A high score in the appraisal system therefore would not necessarily transform into better learning outcomes. Furthermore, other research studies have also indicated that teacher preparedness and professional attitudes can also significantly influence learner performance, though these relationships may not always manifest uniformly across different metrics of academic success. In this study, the Key informants admitted that the level of teacher preparedness for teaching was poor. The attitude towards PC was poor with many teachers complaining of heavy workloads. The teachers filled appraisal documents not to prepare for teaching but to be seen to be obeying the requirement of fulfilling the teachers PC requirements.

The findings of this study corroborate with the Teachers Service Commission report of 2016, in the newsletter, where it was observed that the average score of 80% achieved in most targets by teachers should arguably translate to good examination scores (TSC,2017). The TSC report pointed out that in many schools with high PC scores in the professional and teaching practice target, the performance in Kenya Certificate of Secondary Education (KCSE) national examinations was still poor (TSC 2017). In another study, Morara (2019) reported that most schools in Kieni West (Nyeri County, Kenya), the teachers score in the appraisals do not measure up with the learners' secondary school Kenya Certificate of Secondary Education (KCSE) examination scores. Similarly, Morara (2019) examined dependability of student learning outcomes on performance appraisal for teachers in public secondary schools in Kisii County. The study looked at appraisal variants of teacher qualifications, professional development, appraisal ratings, student survey ratings with student learning achievement. The study

established that TPAD minimally contributed to student achievement in public secondary schools in Kisii County, Kenya. All these studies seemed to cast doubt on the appraisal scores in relation to learning outcomes, particularly academic achievement. However, a study by Aloo et al. (2017), using a correlation study design in Public Secondary schools in Kisii County (Kenya) found that PC had a significant positive effect on timeliness in curriculum implementation ($r=.604$; $p< .05$). Aloo's study did not examine how PC targets influenced learning outcomes.

In Conclusion, while the association between teacher professionalism and learning outcomes is well-documented in research (Desimone *et al*,2019; García and Weiss, 2020; Harris and Jones2021), there are notable challenges, especially in the educational systems in developing countries including Kenya. Many educational systems suffer from insufficient resources, and teachers encounter significant limitations that hinder their capacity to uphold high professional standards. The pressures on the teaching profession to produce good mean scores in national examinations including KCPE, compounded by a lack of support or acknowledgment, can result in burnout, which adversely affects learning outcomes. In many instances in the study area, teachers are tasked with managing very large classes, often with enrolments exceeding 60 pupils per class. Thus, while the professionalism of teachers is necessary to influence student learning outcomes, it is important to tackle issues like insufficient resources teacher burnout and pedagogy to guarantee that every student receives the full advantages of teacher professionalism.

Moreover, research has highlighted the importance of teachers' pedagogical competence in determining student achievement (Herpriyanti et al. 2021). Teachers who have a deeper understanding of their students' characteristics, needs, and

backgrounds tend to have a more positive impact on learning outcomes (Herpriyanti et al. 2021). Additionally, teachers who are able to design and implement effective lesson plans, use technology effectively, and create a positive classroom environment tend to have higher-achieving students (Haris et al. 2022; Masrur. 2020; Herpriyanti et al. 2021). Aspects of pedagogy are missing on the TPAD evaluation tool for appraisal of teacher professionalism and practice. Thus, while the teachers may score well on the appraisal tool on the professionalism and practice PC target tool, the translation of the scores into actual teaching practice may still be deficient.

4.8 Objective Two: Effect of Comprehensive Learning Environment PC Target on Pupils' Learning Outcomes

The second objective sought to establish the effect of teachers' achievement in a comprehensive learning environment PC target on pupils' learning outcomes in public primary schools in Kakamega County. Table 4.15 shows a summary of the analysis of teachers' achievement in the comprehensive learning environment PC target data over the period 2018 -2023.

Table 4.15: Analysis of Comprehensive Learning Environment Target Scores Achievement by Teachers Over the Period 2018 -2023 (N=82)

	Comprehensive learning **(2018)**	Comprehensive learning **(2019)**	Comprehensive learning **(2020)**	Comprehensive learning **(2021)**	Comprehensive learning **(2022)**	Comprehensive learning **(2023)**	Comprehensive learning **average**
N	82	82	82	82	82	82	82
Valid							
Missing	0	0	0	0	0	0	0
Mean	72.78	73.61	76.78	75.93	74.79	73.52	74.568
Std. Error of Mean	.426	.433	.655	.511	.447	.347	.1919
Std. Deviation	3.862	3.921	5.930	4.632	4.051	3.144	1.7373
Range	20	17	29	25	19	15	7.8
Minimum	65	66	60	64	67	67	70.7
Maximum	85	83	89	89	86	82	78.5

It was observed from Table 4.15 that the Comprehensive Learning Environment target achievement score was the lowest in the year 2018 (65%) while the year 2020 had the highest score (89%).

Further analysis was carried out to establish if the means of the Comprehensive Learning Environment target scores were significantly different using ANOVA. The results are presented in Table 4.16.

Table 4.16: Comparison of the Comprehensive Learning Environment Target Achievement Mean Scores (2018-2023)

Comprehensive learning

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	983.553	5	196.711	10.426	**<.001**
Within Groups	9169.098	486	18.866		
Total	10152.650	491			

Tukey B[a]

		Subset for alpha = 0.05			
Year	N	1	2	3	4
2018	82	72.78			
2023	82	73.52	73.52		
2019	82	73.61	73.61		
2022	82		74.79	74.79	
2021	82			75.93	75.93
2020	82				76.78

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size (N) = 82.000.

It was observed from Table 4.16 that the means of scores achieved by teachers in the Comprehensive Learning Environment target were significantly different (F=10.426, p-value <0.001). The years 2019 and 2023 have closely related means but are grouped separately from those with higher means. The grouping suggests that as time progresses from 2018 to 2020, there is an observable improvement in performance or increase in scores among teachers regarding achievement in comprehensive learning targets.

To further evaluate the effect of headteacher factors on attainment of Comprehensive Learning Environment target scores over the period 2018 -2023 in schools, the target scores were categorised into good and poor (Table 4.17). The categorisation was to attain a cut-off score for regression analysis.

Table 4.17: Comprehensive learning target scores in categories (N=82)

Category	Frequency	Percent
Poor	47	57.3
Good	35	42.7
Total	82	100.0

It was observed from Table 4.16 that more than half (53.7%) of the comprehensive learning environment target scores were in the category of poor.

4.8.1 Comprehensive Learning Environment and Learning Outcomes (2018-2023)

Pearson's correlation was used to establish the association between teachers' achievement in the PC Comprehensive learning environment target and learning outcomes. The mean scores of annual achievements in the comprehensive learning environment and the scores in learning outcomes of academic achievement, completion rates, and retention rates over the six years (2018-2023) were first computed. The results are summarized in Table 4.18.

Table 4.18: Teachers' Comprehensive Learning Environment Annual Scores and Learning Outcome Scores

Year	The Annual Comprehensive learning environment PC target score means	Learning Outcomes		
		KCPE scores	Retention Rates	Completion rates
2018	72.78	263.87	75.20	82.60
2019	73.61	272.62	81.40	84.50
2020	76.78	275.58	83.60	81.40
2021	75.93	281.09	81.40	84.60
2022	74.79	283.83	83.30	83.20
2023	73.59	288.70	82.70	84.10

It was observed from Table 4.18 that the highest scores comprehensive learning environment were in the year 2020 (76.78%) and the lowest score was in the year 2018 (72.78%).

4.8.2: Comprehensive Learning Environment and KCPE Performance

The study sought to establish the association between a Comprehensive learning environment and KCPE performance. The results are presented in Table 4.19.

Table 4.19: Association between the Comprehensive learning environment and KCPE performance

Statistic	Comprehensive learning environment PC	KCPE Performance
Pearson Correlation	1	.295
Sig. (2-tailed)	-	.540
N	6	6

N= 6- (Number of years, 2018-2023)

Table 4.19 shows that there was a weak positive correlation between teachers' comprehensive learning target achievement and KCPE performance (r = 0.295), this relationship is not statistically significant (p = 0.540).

Multiple linear regression between Comprehensive Learning environment and KCPE performance was conducted. The results are as shown in Table 4.20 below.

Table 4.20: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.295	0.087	-0.131	7.78

A multiple linear regression analysis was performed to determine whether teachers' achievement in the Comprehensive Learning Environment (CLE) PC target significantly predicted KCPE performance in public primary schools. The regression model was not statistically significant, F (1,4) = 0.707, p = .540, and explained only 8.7% of the variance in KCPE performance (R^2 = .087; Adjusted R^2 = -0.131).

The coefficient for CLE target achievement was not significant (β = .295, p = .540). This indicates that while a positive relationship exists, it is weak and lacks statistical significance, suggesting that other factors outside CLE target scores may more strongly influence learners' KCPE outcomes.

4.8.3 Comprehensive Learning Environment and Retention Rates

The study sought to establish the association between a Comprehensive learning environment and retention rates. The results are presented in Table 4.21.

Table 4.21: Association between Comprehensive learning environment and Pupil retention rates

	Comprehensive learning environment PC	**Retention rates**
Pearson Correlation	1	.630
Sig. (2-tailed)	-	.180
N	6	6

N= 6- (Number of years, 2018-2023)

Table 4.21 shows that there is a moderate positive relationship between teachers' comprehensive learning target achievement and pupil retention rates (r=0.630); however, this relationship was not statistically significant (p=0.180).

Multiple linear regression between the Comprehensive Learning environment and retention rates was conducted. The results are as shown in Table 4.22 below.

Table 4.22: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.630	0.397	0.247	2.942

A multiple linear regression was conducted to examine whether teachers' achievement in the Comprehensive Learning Environment (CLE) performance contract target significantly predicts pupil retention rates. The analysis showed a moderate positive relationship, with $R = .630$ and $R^2 = .397$, suggesting that 39.7% of the variability in retention rates could be explained by CLE scores. However, the model was not statistically significant, $F(1,4) = 4.216$, $p = .180$, and the CLE score was not a significant predictor ($\beta = .630$, $p = .180$). These results imply that while there is a moderate relationship between CLE target achievement and pupil retention, other factors (such as staffing levels, school resources, or home environment) may play a more critical role in influencing retention outcomes.

4.8.4 Comprehensive Learning Environment and Pupil Completion Rates

The study sought to establish the association between a Comprehensive learning environment and school completion rates. The results are presented in Table 4.23

Table 4.23: Association between Comprehensive learning environment and Pupil completion rates

	Comprehensive learning environment PC	Completion rates
Pearson Correlation	1	.326
Sig. (2-tailed)	-	.528
N	6	6

N= 6- (Number of years, 2018-2023)

From Table 4.23, it was observed that there is a low degree of positive association between teachers achieving their comprehensive learning targets and pupil completion rates (r=.326); however, the high p-value (0.528) indicates that this observed association is not statistically significant.

Multiple linear regression between the Comprehensive Learning environment and pupils' completion rates was conducted. The results are as shown in Table 4.24 below.

Table 4.24: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.326	0.106	-0.110	1.89

A multiple linear regression was conducted to examine whether teachers' achievement in the Comprehensive Learning Environment (CLE) PC target predicts pupil completion rates. The results showed a weak positive association ($R = .326$, $R^2 = .106$), with CLE scores explaining only 10.6% of the variance in completion rates. The model

was not statistically significant, $F(1,4) = 0.994$, $p = .528$, and the CLE target score was not a significant predictor ($\beta = .326$, $p = .528$).

These findings indicate that CLE target achievement alone does not meaningfully predict school completion rates. As suggested in the qualitative data, challenges such as large class sizes, understaffing, and limited capacity to evaluate holistic learner needs may explain this weak relationship.

4.8.5 Qualitative Findings

The key informants in this study explained that it was difficult to attain an optimum comprehensive learning environment in schools due to many factors. The County Director of TSC had this to say:

Attaining a comprehensive learning environment in the primary schools in Kakamega county is a big challenge because of understaffing. With the current shortages of teachers, the teachers are overworked and may not fulfil the different aspects of the comprehensive learning environment. Some aspects like the psychological care of learners are difficult to attain in such circumstances- (TSC County Director,2023).

The Curriculum Support Officers and some Head teachers said it was difficult to evaluate some aspects of the comprehensive learning environment. One Curriculum Support officer said this:

It may not be possible to evaluate the holistic approach to learning as aspired by the TPAD tool. Some aspects, such as pupils' emotional well-being, are missing from the evaluation tool. Some aspects would require that all teachers be trained to help pupils

learn well' (Curriculum Support Officer, 2023). Head teachers supported this observation.

4.8.6 Discussion of the Findings

The second objective of study sought to establish the effect of Teachers' achievement in Comprehensive learning environment PC target on pupils' learning outcomes. A comprehensive learning environment refers to a holistic approach to classroom conditions that support the physical, emotional, and intellectual development of students. This objective sought to establish the association between teachers' achievement of a comprehensive learning environment and the subsequent effect on pupil learning outcomes.

After examining the association between teachers' achievement in Comprehensive Learning Environment performance contract targets and pupils' learning outcomes, the study found no significant correlations with key indicators of learning outcomes. The findings indicated a Pearson correlation coefficient of r=0.295 for KCPE examination performance, r=0.630 for retention rates, and r=0.326 for completion rates, none of which were statistically significant.

The absence of a significant correlation between teachers' achievements in comprehensive learning environment targets and pupils' KCPE examination performance suggests that other factors may play a more critical role in influencing academic achievement. These findings differ from findings of a study by Kamoet and Mbirithi (2024) in which they found that the learning environment improved the Kenya Certificate of Secondary Examinations (KCSE) performance in Mombasa County in Kenya. However, Kamoet and Mbirithi study looked at a small part of the learning

environment, the classroom environment. The findings of this study corroborate with findings from related studies that emphasize the complexity of educational success. For example, research has shown that while teacher qualifications and training are important, the direct impact on student achievement can be moderated by classroom dynamics, teaching methods, and student engagement levels.

The correlation of $r=0.630$ for retention rates, despite being higher than other correlations, still did not reach significance. This indicates that while there is some relationship, it is not strong enough to assert a definitive association. Studies have highlighted that pupil retention is influenced by various factors beyond teacher provision of a comprehensive learning environment, including home environment and school resources. There is a strong association between a comprehensive learning environment and pupil retention rates in schools. Elements such as pupil engagement (cognitive, emotional, behavioural), teacher-pupil relationships, peer interactions, physical classroom design, and support for emotional well-being all contribute significantly to whether students choose to remain enrolled or drop out. A study by Qvortrup and Lykkegaard (2022) focusing on the learning environment found that supportive and engaging classroom settings foster greater student participation and commitment, which are essential for retention and completion rates. Qvortrup and Lykkegaard (2022) research concluded that effective teaching practices, such as interactive and student-centered approaches, contribute to higher levels of student engagement and satisfaction. These practices not only improve academic performance but also encourage students to stay enrolled and to complete their studies.

While research suggests a strong link between comprehensive learning environments, and pupil learning outcomes, there are several challenges. Teachers in the current study

often face time limitations and insufficient resources to fully implement effective teaching strategies or create comprehensive learning environment. In the current study, teachers in most primary schools were handling more than 60 learners in a class. Almost all the teachers had heavy teaching loads of lessons because of understaffing in most schools. High levels of workload and lack of support can lead to teacher burnout, negatively affecting teaching quality and, subsequently, pupil learning outcomes.

The appraisal tool that is being used to assess the achievement in the comprehensive learning environment is also deficient. The Key elements in the comprehensive learning environment include physical safety, inclusivity, emotional support, teacher-student relationships, and active learning approaches which are all crucial in creating an environment that fosters student success (Kamoet and Mbirithi,2024). Besides, the success of teachers in achieving comprehensive learning environments and professional competency targets depends on strong school leadership, which may not always be present. The TPAD tool for appraisal of teachers on the comprehensive learning environment lacks aspects of emotional support, teacher-student relationships, and active learning approaches.

4.9 Objective Three: Teacher Professional Development PC Target Effect on Pupils' Learning Outcomes

The third objective of the study sought to determine the effect of teachers' achievement in teacher professional development PC target on pupils' learning outcomes in public primary schools in Kakamega County, Kenya. The study first analysed the scores achieved by the teacher professional development PC target. The results are summarised in Table 4.25.

Table 4.25: Comparison of Means of Achievement in Teacher Professional Development PC Target Scores Data Over the Period 2018 -2023

		Teacher Prof. Development (2018)	Teacher Prof. Development (2019)	Teacher Prof. Development (2020)	Teacher Prof. Development (2021)	Teacher Prof. Development (2022)	Teacher Prof. Development (2023)	Teacher Prof. Development average
N	Valid	82	82	70	82	82	82	82
	Missing	0	0	12	0	0	0	0
Mean		73.88	75.66	72.61	73.35	74.23	73.89	73.988
Std. Error of Mean		.430	.456	.407	.458	.397	.501	.1728
Median		74.00	76.00	72.00	72.00	74.00	72.00	74.000
Std. Deviation		3.892	4.125	3.402	4.147	3.595	4.532	1.5649
Range		16	22	21	22	15	22	6.9
Minimum		67	67	65	65	67	67	70.3
Maximum		83	89	86	87	82	89	77.2

It was observed from Table 4.25 that the minimum score was 65% while the highest score was 89%. Further analysis was carried out to establish if the means of professional development PC target achievement scores were significantly different using ANOVA. The results are presented in table 4.26.

Table 4.26: Comparison of the professional development PC target mean scores (2018-2023)

Teachers' professional development

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	400.433	5	80.087	5.057	**<.001**
Within Groups	7507.159	474	15.838		
Total	7907.592	479			

Tukey B[a,b]

		Subset for alpha = 0.05	
Year	N	1	2
2020	70	72.61	
2021	82	73.35	
2018	82	73.88	
2023	82	73.89	
2022	82	74.23	74.23
2019	82		75.66

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size (N) = 79.722.
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

The results in Table 4.26 showed that the means of PC Professional development target scores were significantly different (F=5.057, p-value <0.001). The year 2020 had the lowest score (72.61) while the year 2019 had the highest score (75.66). To further evaluate the effect of headteacher factors on attainment of PC Professional development target scores over the period 2018 -2023 in schools, the target scores were categorised into good and poor. The categorisation was to attain a cut off score for regression analysis. The results are presented in Table 4.26

Table 4.27: Teachers' PC professional development scores categorization (N=82)

Category	Frequency	Percent
Poor	58	70.7
Good	24	29.3
Total	82	100.0

It was observed from Table 4.27 that only 29.3% of the Teachers' PC professional development scores were categorised as good.

4.9.1 Effect of Achievement in Professional Development PC Target on KCPE performance

The study sought to establish the association between Professional development PC target, and KCPE performance. The results are presented in Table 4.28.

Table 4.28: Association between Professional development PC target achievement scores and KCPE performance

		Teacher Professional Development	KCPE Performance
Teacher Professional Development	Pearson Correlation	1	-.100
	Sig. (2-tailed)		.851
	N	6	6

N= 6- (Number of years, 2018-2023)

From Table 4.28, given the Pearson correlation r = -0.100 indicates a negligible negative correlation, and that value p = 0.851 shows a lack of statistical significance. This result means that there is no meaningful association between teachers' achievement in professional development, performance contracts, achievement scores, and pupils' KCPE examination performance.

A Multiple linear regression between Professional PC targets and KCPE performance was conducted. The results are as shown in Table 4.29 below.

Table 4.29: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.100	0.010	-0.237	7.82

A multiple linear regression analysis was conducted to determine whether teachers' achievement in the Professional Development PC target significantly predicts KCPE performance. The results indicated a very weak negative relationship ($R = 0.100$), and the model explained only 1% of the variance in KCPE scores ($R^2 = 0.010$). However, the model was not statistically significant, $F(1,4) = 0.080$, $p = .851$, and the PD score was not a significant predictor of KCPE outcomes ($\beta = -.100$, $p = .851$).

These findings suggest that teachers' professional development scores do not significantly influence KCPE performance in the sampled schools.

4.9.2 Effect of Achievement in Professional development PC target and Pupil Retention rates

The study sought to establish the association between teachers' achievement in Professional Development PC target and pupil retention rates. The results are presented in Table 4.30.

Table 4.30: Association between Professional development PC target achievement scores and Pupil retention rates

			Teacher Professional Development	Retention Rates
Teacher Development	Professional	Pearson Correlation	1	-.092
		Sig. (2-tailed)		.862
		N	6	6

N= 6- (Number of years, 2018-2023)

It is observed from Table 4.30 that the Pearson's correlation r = -.092 indicating a negligible negative correlation, and that value p = 0.862, showing a lack of statistical significance. This result means that there is no meaningful association between teachers' achievement in professional development performance contracts and pupil retention rates.

A Multiple linear regression between Professional PC targets and pupil retention rates was conducted. The results are as shown in Table 4.31 below.

Table 4.31: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.092	0.008	-0.240	3.85

A multiple linear regression analysis was conducted to determine whether teachers' achievement in the Professional Development PC target significantly predicts pupil retention rates. The model revealed a very weak negative relationship (R = 0.092), explaining less than 1% of the variation in retention rates (R^2 = 0.008). The regression

was not statistically significant, $F(1,4) = 0.070$, $p = .862$, and the Professional Development PC target score was not a significant predictor ($\beta = -.092$, $p = .862$).

These results confirm that teacher achievement in the Professional Development target has no meaningful effect on pupil retention, which may reflect challenges in translating training into effective classroom practices, as echoed in qualitative insights from your study.

4.9.3 Achievement in Professional Development PC Target and Pupil School Completion Rates

The study sought to establish the association between teachers' achievement in Professional Development PC target and pupil school completion rates. The results are presented in Table 4.32.

Table 4.32: Association between Professional development PC Target Achievement Scores and Pupil School Completion Rates

		Teacher Professional Development	**Completion Rates**
Teacher Professional Development	Pearson Correlation	1	.609
	Sig. (2-tailed)		.199
	N	6	6

N= 6- (Number of years, 2018-2023)

It was observed from the table 4.32 that while there is a moderate positive correlation ($r = 0.609$) suggesting that higher teacher achievement in professional development was positive associated with better pupil completion rates; the value ($p = 0.199$) implies that association was not significant.

A multiple linear regression analysis was conducted to examine the influence of teachers' achievement in the Professional Development Performance Contract (PC) target on pupil completion rates. The results were are summarized in the table 4.33 below.

Table 4.32: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.609	0.371	0.214	2.19

The results yielded an R value of 0.609, indicating a moderate positive relationship. The model explained 37.1% of the variance in completion rates ($R^2 = 0.371$), and the adjusted R^2 of 0.214 suggested a modest model fit. However, the relationship was not statistically significant ($F(1,4) = 1.702$, $p = .199$), meaning that while there appears to be a trend linking higher professional development achievement to improved completion rates, this association is not strong enough to rule out chance. These findings imply that professional development alone does not significantly predict pupil completion rates, and other contextual or institutional factors may play a more decisive role.

4.9.4 Qualitative Insights

The Key informants said that the teachers often get professional development through workshops and seminars organised by the Ministry of Education in conjunction with the Teachers Service Commission. However, they also agreed that there was limited feedback on the training needs for teachers' professional development. The TSC county Director had this to say:

Most of the training workshops are arranged for by the Ministry of Education. They occur whenever the Ministry sees need for training. The most recent workshops were on the current trends in the Competency Based Curriculum (CBC) where the ministry saw need to train teachers on instructional methods in the new curriculum. Only a few teachers are normally trained in the hope that they will train the other teachers. The problem has been that the ministry fails sometimes to get feedback on the professional aspects that teachers need – (County TSC Director, 2003).

The head teachers felt that the training workshops and seminars were expensive and in certain times, they fail to send teachers to attend the seminars or workshops. One Headteacher in the selected schools had this to say:

'Sometimes particularly towards the end of the terms when there is no money in school, we fail to send teachers to attend seminars and workshops meant for teacher training. In other cases, we may send few teachers, for instance, if the requirement is four teachers, we may send only one or two teachers'- (Headteacher, 2023).

Another Key issue raised by the Key informants was the scope and relevance of the topics which teachers are trained on. The Curriculum support officers felt that the time available is usually limited and most of the time the teachers are given pamphlets to go and read. Usually, the time allocated for the workshops or seminars is not adequate to cover the required work by teachers. The teachers also mentioned that barriers to professional development include inconvenient timing of courses, monotonous content, ineffective trainers, financial constraints, and lack of institutional support. The result is that the trainings usually give outlines on required content. One Curriculum Support Officer had this to say:

'The time allocated for training is limited. How can you expect for example to train teachers on use of Information Communication and Technology in instructional methods in one day? In some cases, the facilitators have to come from far places like Nairobi. This means that teachers get only tips on expected training (Curriculum Support Officer, 2023).

4.9.4 Discussion of the Findings

The third objective of the study examined the association between Teachers' achievement in Professional development (PD) PC target and. pupils' learning outcomes. Teacher professional development is defined as a systematic approach to improving teachers' skills, knowledge, and practices to enhance student learning (Hill et al,2018). According to Hill et al (2018), effective PD characterized by content focus, active learning, coherence, duration, and collective participation has the potential to enhance teaching practices and improve student learning outcomes. Professional Competency (PC) targets focus on the knowledge, skills, and attitudes that teachers are expected to achieve to improve teaching effectiveness. The achievement of Professional development PC targets often includes proficiency in instructional strategies, classroom management, student engagement, and assessment practices. Professional development also encourages teachers to adopt technology as part of teaching methods (Oksanen et al, 2023). Teachers' abilities and skills directly influence the effectiveness of the learning process.

The findings of this study indicated a negative correlation between teachers' achievement in professional development PC target with pupils' KCPE examination performance ($r=-0.100$, $p = 0.851$), a similarly negative correlation with pupils'

retention rates ($r=-0.092$, $p = 0.862$), and a positive correlation with pupils' completion rates ($r=0.60$, $p = 0.199$).

The negative correlation between teachers' achievement in professional knowledge and practice with pupils' KCPE examination performance suggests that higher teacher achievement in these areas does not necessarily translate into better learner academic achievement. These findings are similar to study findings by Qvortrup and Lykkegaard (2022) where they examined the impact of teacher participation in a mathematics specialist program called Primarily Math. The study found that participation in the program led to better teacher performance and had a positive impact on student outcomes when learning maths. In another study, Reddy et al, (2021) looked at the impact of teacher professional development on students and teachers in inner city schools. The researchers found that teachers who participated gave students more support both academically and emotionally. Teachers who participated were also more likely to use evidence-based practices in the classroom. Students whose teachers participated were more engaged and experienced significant improvements in academic functioning and outcomes. The current study results are similar because only 29.3% (Table 4.20) could be categorised as having achieved good scores in the professional development PC target. These findings may also mean that teachers may be excelling in theoretical knowledge without effectively applying that knowledge in the classroom context, which is crucial for improving learning outcomes.

The negative correlation between teachers' achievement in professional knowledge with retention rates suggests that as teachers achieve more in their professional development, pupil retention does not improve significantly. The findings of this study

are similar to those found by Dewi et al (2024). Dewi et al (2024) found that there existed a positive relationship between teacher professional development and pupil retention rates. In the current study, the poor scores achieved by the teachers in the Professional development PC target could be the cause of the low corelations. However, it is possible that teachers may not be implementing engaging practices learned through professional development, leading to lower learner motivation and subsequent retention. The high teaching loads caused by understaffing may be responsible for the teacher's failure in engaging practices learned through professional development.

A positive correlation of between teachers' achievement in professional knowledge with Pupil completion rates was established. These study finding are similar to study by Dewi et al (2024) in which he explored relationship between teacher professional development and student Learning Outcomes. Teachers who excel in their professional development may adopt more effective instructional strategies that support student persistence. Dewi et al (2024) asserts that where teacher professional development program is well-aligned with the curriculum, it can enhance teachers' ability to guide students through their learning journey effectively. However, the admission by the Key informants in this study that the limited content focus, active learning, coherence, duration could be an obstacle to the true effect of teachers' achievement in professional development PC target on pupil learning outcomes

4.10 Objective Four: Effect of teachers' achievement in teacher conduct & professionalism PC target on pupils' learning outcomes

The fourth objective of the study sought to establish the effect of teachers' achievement in teacher conduct & professionalism PC target on pupils' learning outcomes in public primary schools in Kakamega County, Kenya. The study first analysed the scores achieved by teacher conduct and professionalism PC target. The results are summarised in Table 4.33

Table 4.33: Comparison of means of achievement in teacher conduct and professionalism PC target scores data over the period 2018 -2023

		Teacher Conduct and Prof. **(2018)**	Teacher Conduct and Prof. **(2019)**	Teacher Conduct and Prof. **(2020)**	Teacher Conduct and Prof. **(2021)**	Teacher Conduct and Prof. **(2022)**	Teacher Conduct and Prof. **(2023)**	Teacher Conduct and Prof. **Average**
N	Valid	82	82	82	82	82	82	82
	Missing	0	0	0	0	0	0	0
Mean		73.77	73.76	73.91	73.38	73.23	73.07	73.520
Std. Error of Mean		.421	.476	.427	.399	.446	.366	.1872
Std. Deviation		3.815	4.311	3.862	3.609	4.041	3.314	1.6950
Range		20	22	20	18	22	15	7.5
Minimum		67	65	67	67	65	67	69.5
Maximum		87	87	87	85	87	82	77.0

From Table 4.33, it was observed that the lowest score of achievement in teacher conduct and professionalism PC target scores was 65% while the highest was 87%. The scores for this PC target were lower than those of other PC targets under study.

Further analysis sought to establish if the means of the scores achieved in the teacher conduct and professionalism PC target were significantly different. The comparison was carried out using ANOVA. The results are presented in table 4.34.

Table 4.34: Comparison of the means of scores in the teacher conduct and professionalism PC target (2018-2023)

Teacher conduct and professionalism

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	47.236	5	9.447	.641	.668
Within Groups	7159.561	486	14.732		
Total	7206.797	491			

Tukey B[a]

		Subset for alpha = 0.05
Year	N	1
2023	82	73.07
2022	82	73.23
2021	82	73.38
2019	82	73.76
2018	82	73.77
2020	82	73.91

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size (N) = 82.000.

The results in Table 4.34 show that means of scores in the teacher conduct and professionalism PC target (2018-2023) not significantly different (F=0.641, p-value = 0.668).

4.10.1 Teacher Conduct and Professionalism Categorization

To further analyse the scores in the Teacher conduct and professionalism, the scores were categorized into good and poor. The results are summarised in Table 4.35.

Table 4.35: Categories of scores of the teacher conduct and professionalism PC Target

Category	Frequency	Percent
Poor	67	81.7
Good	15	18.3
Total	82	100.0

The results of Table 4.35 show that only 18.3% were in the category of good.

4.10.6 Teacher conduct and professionalism target achievement and KCPE performance

The study sought to establish the association between Teacher conduct and professionalism, target achievement, and KCPE performance using correlation analysis. The results are presented in Table 4.36.

Table 4.36: Teacher Conduct and Professionalism Target Achievement and Pupil KCPE performance

		Teacher Conduct and Professional Development	KCPE Performance
	Pearson Correlation	1	.844*
	Sig. (2-tailed)		.034

From Table 4.36, it was observed that the Pearson correlation coefficient reported 0.844 suggesting a strong positive correlation between Teacher Conduct and Professional Development and KCPE performance. This means that as teacher conduct improves, KCPE performance tends to improve as well. Since the P value (0.034) is less than 0.05, there is a statistically significant association between Teacher Conduct and Professional Development and KCPE performance.

A multiple linear regression was conducted to further analyse the effect of teacher conduct and professionalism target scores on pupils' KCPE performance. The results are as presented in Table 4.37 below.

Table 4.37: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.844	.712	.640	—

The analysis revealed a strong positive relationship (R = 0.844), with the model explaining 71.2% of the variance in KCPE performance ($R^2 = 0.712$). The regression coefficient was statistically significant (p = .048), indicating that teachers categorized as having poor conduct were 2.429 times more likely to have lower KCPE outcomes compared to those in the good category. This suggests that improvements in teacher conduct and professional behaviour are strongly associated with higher pupil academic performance. These findings support the assertion that professional ethics, classroom management, and positive teacher-student interactions significantly influence learner outcomes in public primary schools.

4.10.2 Teacher Conduct and Professionalism Target Achievement and Pupil Retention Rates

The study sought to establish the association between Teacher conduct and professionalism target and the learning outcome of pupil retention rates. The results are presented in Table 4.38.

Table 4.38: Association between Teacher conduct and professionalism target scores and Pupil retention rates

Statistic	Teacher Conduct and Professional Development	Retention Rates
Pearson Correlation	1	0.345
Sig. (2-tailed)		.503
N	6	6

N= 6- (Number of years, 2018-2023)

The results of the correlation in Table 4.38 showed a Pearson correlation coefficient of r =0.345. This suggests a weak positive correlation between Teacher conduct and professionalism target scores and the learning outcome of pupil retention rates. The p-value of 0.503, shows that the correlation is not statistically significant.

A multiple linear regression was conducted to further analyse the effect of teacher conduct and professionalism target scores on pupils' retention rates. The results are as presented Table 4.39 below.

Table 4.39: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.345	0.119	-0.123	—

The model showed a weak positive relationship (R = 0.345), with 11.9% of the variation in pupil retention rates being explained by the predictor. However, the result was not statistically significant (p = .503), indicating that while there is a slight trend suggesting better teacher conduct may relate to higher pupil retention, this association is weak and likely due to chance. Therefore, teacher conduct and professionalism do not significantly influence pupil retention in this study, and other factors such as school

environment, parental engagement, or socio-economic conditions may have a stronger effect.

4.10.3 Teacher Conduct and Professionalism Target Achievement and Pupil Completion Rates

The study sought to establish the association between Teacher conduct and professionalism target and the learning outcome of pupil completion rates. The results are presented in Table 4.40.

Table 4.40: Association between Teacher conduct and professionalism target scores and Pupil completion rates

Statistic.	Teacher Conduct and Professional Development.	Completion Rates.
Pearson Correlation	1	.536
Sig. (2-tailed)		.272
N	6	6

N= 6- (Number of years, 2018-2023)

From Table 4.40, it was observed that there was a moderate positive correlation between with Pearson correlation coefficient between Teacher Conduct and Professional Development, with a Pearson correlation is 0.536; however, the results were not statistically significant (p=.272).

A multiple linear regression was conducted to determine whether teachers' achievement in the Teacher Conduct and Professionalism performance contract target significantly predicts pupil completion rates. The results are as presented in table 4.41 below.

Table 4.42: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.536	.287	.084	—

The analysis revealed a moderate positive relationship (R = 0.536), with the model explaining 28.7% of the variance in pupil completion rates. However, the association was not statistically significant (p = .272), suggesting that while there is some evidence that improved teacher conduct may relate to better pupil completion, the effect is not strong or consistent enough in this sample to be conclusive.

4.10. 4 Qualitative Insights

The Key informants thought that teachers were more sensitive to the teacher conduct and professional development target indicators than any other targets on the PC tool. The County TSC Director had this to say:

'Teachers are more sensitive to the teacher conduct target indicators because these are the questions that are often asked in the promotion interviews. In fact, many teachers have booklets on TSC act, Teacher conduct, Teachers code of conduct, past commission reports, the rights of teachers etc. Therefore, the scores in this target have often been higher; however, although the teachers score highly, it appears the translation of the acquired knowledge is just for preparedness for interviews. (County TSC Director,2023).

The CSO's and Headteachers confirmed this assertion. According to the Headteachers, the target of teacher conducts and professionalism target is usually a routine check. One Head teacher had this to say:

'If there is anything the teachers are keen about, it is the issues related to teacher's code of conduct. Virtually all teachers have purchased the teachers code of ethics and conduct document from TSC. This is the same document that teachers use for revisions for promotion interviews and to defend themselves in case they fall in problems' (Head teacher, 2023).

The CSOs confirmed this assertion. They said the teachers are involved in many discipline cases, but since they have read the code of ethics and conduct, they will almost always win in cases if they are involved in any discipline cases.

4.10.9 Discussion of Objective Four Findings

The fourth objective of the study sought to establish the effect of teachers' achievement in teacher conduct & professionalism PC target on pupils' learning outcomes in public primary schools in Kakamega County. Teacher conduct refers to the behaviours and attitudes teachers exhibit in the classroom, including their interactions with students, instructional strategies, and classroom management (Reddy et al, 2021). Teacher conduct includes aspect of Classroom management, teacher-student interactions and Pedagogical approaches (Dewi et al, 2024; Reddy et al, 2021).

The findings of this study indicated the correlation between Teacher Conduct and Professional Development and KCPE performance as ($r=0.8$, $p = 0.034$); correlation with pupils' retention rates ($r=-0.092$, $p = 0.862$); correlation with pupils' completion

rates (r=0.609*r*=0.609, p = 0.199). There was a statistically significant positive relationship between Teacher Conduct and both Professional Development performance contract target achievement scores and KCPE performance. Specifically, improved teacher conduct correlates with increased odds of achieving desired educational outcomes.

The findings of this study corroborate with findings of similar studies by Kraft et al (2020) and Stronge et al. (2021). A study by Kraft et al. (2020) found that teachers who exhibit high levels of professionalism, including competence, dedication, and ethical behaviour, significantly improve student academic performance. The research highlighted that teachers' ability to manage classrooms effectively and build positive relationships with students creates an environment conducive to learning. Similarly, a meta-analysis by Stronge et al. (2021) demonstrated that teacher professionalism, particularly in terms of classroom management and instructional strategies, has a direct and positive correlation with student engagement and achievement.

The role of teacher-student relationships resulting from teacher conduct and professionalism in enhancing learning outcomes has also been a focus of recent research. Quin (2019) found that teachers who demonstrate empathy, respect, and fairness in their interactions with students foster a sense of belonging and motivation, which in turn boosts academic performance. Similarly, Roorda et al. (2021), in a longitudinal study revealed that positive teacher-student relationships are strongly associated with improved social-emotional development and reduced behavioural issues among pupils.

In the current study, it was established that the scores on teacher conduct and professionalism target by teachers were usually high. The Key informants including the County director of TSC, the Curriculum support officers and the head teachers revealed that the teachers were conversant with items such as the code of ethics, the TSC Act, the past commission functions and other professional documents. The teachers constantly read these documents in readiness for interviews when advertisements for promotions come up. Moreover, the Key informants said the same questions and items are normally. These aspects could also have influenced the results, particularly the associations observed.

The conduct and professionalism of teachers are vital in influencing student learning outcomes. Educators who exhibit competence, dedication, ethical conduct, effective classroom management, and strong teacher-student relationships establish environments that promote both academic achievement and emotional well-being. Studies indicate that teachers' behaviors, attitudes, and professionalism have a direct effect on students' academic performance, engagement, and social-emotional growth Kraft et al, 2021). Even in the face of challenges like burnout and limited resources, prioritizing teacher professionalism and conduct is crucial for enhancing educational results.

Recent studies have emphasized the multifaceted role teacher professionalism, ethical behaviour, and classroom practices on student achievement. However, existing challenges observed in the current study such as heavy workloads and resource limitations can hinder the effectiveness of teacher conduct and professionalism. A study by García and Weiss (2020) highlighted that high levels of stress and inadequate

support systems can negatively impact teachers' ability to maintain professionalism and deliver quality instruction.

4.11 Objective Five: Effect of Teachers' Achievement in Teacher Participation in the Professional Learning Community PC Target on Pupils' Learning Outcomes

The fifth objective of the study sought to establish the effect of teachers' achievement in in professional learning community PC target on pupils' learning outcomes in public primary schools in Kakamega County. The study first analysed the scores achieved in the professional learning community PC target. The results are summarised in Table 4.43

Table 4.43: Analysis of the professional learning community PC target scores

		Participation in prof. learning **(2018)**	Participation in professional learning **(2019)**	Participation in professional learning **(2020)**	Participation in professional learning **(2021)**	Participation in professional learning **(2022)**	Participation in professional learning **(2023)**	Participation in professional learning **average**
N	Valid	82	82	82	82	82	82	82
	Missing	0	0	0	0	0	0	0
Mean		73.24	73.38	73.72	74.30	72.71	73.56	73.487
Std. Error of Mean		.442	.443	.474	.471	.366	.441	.1858
Median		72.00	73.50	72.00	74.00	72.00	73.50	73.400
Std. Deviation		4.005	4.014	4.295	4.265	3.313	3.991	1.6829
Range		22	22	20	20	21	22	8.8
Minimum		65	65	67	67	65	65	69.7
Maximum		87	87	87	87	86	87	78.5

The results of table 4.43 show that the minimum score of the professional learning community PC target scores was 65% while the highest scores was 87%. These scores were slightly lower than the targets of professional knowledge and practice and

comprehensive learning environment, but were higher than the scores of the teacher professional conduct target.

Further analysis of the professional learning community PC target scores sought to establish if the means of the scores achieved in the teacher conduct and professionalism PC target were significantly different. The analysis was carried out using ANOVA. The results are presented in table 4.44.

Table 4.44: Comparison of the means of professional learning community PC target scores (2018-2023)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	115.400	5	23.080	1.447	.206
Within Groups	7751.500	486	15.950		
Total	7866.900	491			

Tukey B[a]

		Subset for alpha = 0.05
Year	N	1
2022	82	72.71
2018	82	73.24
2019	82	73.38
2023	82	73.56
2020	82	73.72
2021	82	74.30

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size (N) = 82.0.

The results of the comparison of means in Table 4.44 on professional learning community PC target scores showed that the scores were not significantly different (F=1.447, p-value = 0.206).

4.11.1 Categorization of the Scores of Participation in the Learning Community PC Target

To further analyse the scores of participation in the learning community PC target, the scores were categorized into good and poor. The results are summarised in Table 4.45.

Table 4.45: Categories of participation in learning community PC target scores (N=82)

Category	Frequency	Percent
Poor	67	81.7
Good	15	18.3
Total	82	100.0

From Table 4.45, it was observed that only 18.3% were in the category of good.

4.11.2 Teachers' PC Professional learning community target achievement and KCPE performance

The study sought to establish the association between Teachers' PC professional Learning community target and the learning outcome of KCPE performance. The results are presented in Table 4.46.

Table 4.46: Association between teachers achievement in professional Learning community PC target score with KCPE performance

Statistic	Teacher Participation in Professional learning community	KCPE Performance
Pearson Correlation	1	.097
Sig. (2-tailed)		.855
N	6	6

N= 6- (Number of years, 2018-2023)

The results in Table 4.46 showed that there was a very weak positive correlation (.097) between teachers' professional learning community performance contract targets and KCPE performance. The results also show that there was no statistically significant association between teachers' professional learning community performance contract targets and pupils' KCPE performance learning outcomes.

A multiple linear regression was conducted to determine whether teachers' achievement in the Professional Learning Community (PLC) PC target significantly predicts KCPE performance. The results are as shown in Table 4.47 below.

Table 4.47: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.097	.009	-0.239	—

The results showed a very weak and statistically insignificant relationship ($R = 0.097$, $R^2 = 0.009$, Adjusted $R^2 = -0.239$, $p = .855$), meaning that PLC achievement explains less than 1% of the variance in KCPE outcomes. This suggests that teacher participation in professional learning communities does not meaningfully impact pupil academic achievement as measured by KCPE performance.

4.11.3 Effect of Teachers' Professional learning Community PC Target Achievement on Pupil Retention Rates

The study sought to establish the association between Teachers' participation in a professional Learning community PC target achievement and the learning outcome of pupil retention rates. The results are presented in Table 4.52.

Table 4.48: Association between professional Learning community PC target score and pupil retention rates

Statistic	Teacher Participation in Professional learning	Retention Rates
Pearson Correlation	1	.080
Sig. (2-tailed)		.880
N	6	6

N= 6- (Number of years, 2018-2023)

The results in Table 4.48 show that there was a very weak positive correlation (0.080) between Teachers' participation in professional Learning community PC target achievement and the learning outcome of pupil retention rates. The results further indicate observed correlation is not statistically significant (p=0.880).

A multiple linear regression was conducted to determine whether teachers' achievement in the Professional Learning Community (PLC) performance contract target significantly predicts pupil retention rates. The results are as shown in Table 4.49 below.

Table 4.49 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.080	0.006	-0.243	—

The model revealed a very weak relationship (R = 0.080), with only 0.6% of the variation in retention rates explained by PLC target achievement (R^2 = 0.006; Adjusted R^2 = -0.243). The association was not statistically significant (p = .880), indicating that participation in PLC activities had no meaningful predictive power on retention outcomes.

4.11.4 Teachers' Professional Learning Community Target Achievement and Pupils' Completion Rates

The study sought to establish the association between participation in a professional learning community PC target and the learning outcome of pupil completion rates. The results are presented in Table 4.50.

Table 4.50: Association between professional Learning community PC target score and completion rates

Statistic	Teacher Participation in Professional learning	Completion Rates
Pearson Correlation	1	.241
Sig. (2-tailed)	-	.646
N	6	6

N= 6- (Number of years, 2018-2023)

The results in Table 4.50 show that there was a positive correlation (0.241) between professional Learning community PC target and the learning outcome of pupil completion rates. This result was, however, not statistically significant (p= 0.646).

A multiple linear regression was conducted to determine whether teachers' achievement in the Professional Learning Community (PLC) PC target significantly predicts pupil completion rates. The results are as shown in table 4.51 below.

Table 4.51: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.241	.058	-0.220	—

The analysis revealed a weak positive correlation (R = .241), with only 5.8% of the variation in completion rates explained by the predictor (R^2 = .058). However, the model was not statistically significant (p = .646), indicating that PLC target achievement does not meaningfully predict pupil completion outcomes.

4.11.5 Qualitative Insights

When the Key informants were asked about the effect of the in professional Learning community PC target on pupil learning outcomes, they had mixed views. The County TSC director said that the Ministry of education had encouraged teachers to collaborate and learn from each other to improve their professional performance. However, the main constraint for teachers' participation in professional learning community was cited as limited time. The County Director of TSC had this to say:

'*One significant barrier is the lack of time allocated for collaborative activities. Many teachers report feeling overwhelmed by their existing responsibilities, leaving little time for meaningful engagement in Professional Learning Community'* (County Director TSC, 2023).

This observation was also echoed by the Curriculum support officers (CSOs). One CSO had this to say:

'*Because of inadequate time for collaboration, the effectiveness of Professional Learning Community has not been felt limiting their potential impact on pupil learning'* (CSO, 2023).

The head teachers also pointed at limited time for engagement in meaningful Professional Learning Community. They also said the Professional Learning Community program suffered two major setbacks including limited resources (time and finance) as well as teachers attitude towards Professional Learning Community programs. One head teacher had this to say:

'Some teachers are less engaged or resistant to collaboration, and this undermines the collective efficacy of the group and limits the potential for meaningful change to learning outcomes' (Head teacher, 2023).

4.11.6 Discussion of Objective Five Findings

The fifth objective of the study sought to determine the effect of teachers' achievement in participation in the professional learning community (PLC) PC target on pupils' learning outcomes in Public primary schools in Kakamega County. The study found

that there was no association between teachers' achievement in participation in professional learning community (PLC) PC target and pupils' learning outcomes.

The findings of this study differ from this study differ with findings of other studies by Vescio et al. (2021) and Lomos et al. (2022). A study by Vescio et al. (2021) found that teachers who actively participate in PLCs demonstrate improved instructional practices, which directly correlated with enhanced student achievement. The collaborative nature of PLCs allowed teachers to share expertise, reflect on their teaching methods, and adopt evidence-based strategies tailored to their students' needs. Similarly, a meta-analysis by Lomos et al. (2022) revealed that schools with strong PLCs consistently report higher student performance in standardized tests, attributing this success to the collective focus on data-driven decision-making and continuous improvement.

Teachers who actively engage in collaborative discussions, share pedagogical strategies, and review student performance data demonstrate significant improvements in their instructional efficacy, which directly translates to enhanced student achievement. Collaborative engagement among educators significantly contributes to the refinement of instructional strategies, enabling the sharing of effective practices and resources. Within Professional Learning Communities (PLCs), teachers have the opportunity to observe and discuss diverse pedagogical approaches, fostering a collective growth mindset that enhances instructional quality.

Despite the potential benefits of PLCs, several challenges in the study area could have hindered effective teacher participation. One significant barrier is the lack of time allocated for collaborative activities. Teachers and Key informants reported being

overwhelmed by their existing responsibilities (due to heavy workloads) leaving little time for meaningful engagement in PLCs. Without adequate time for collaboration, the effectiveness of PLCs could have been compromised, limiting their potential impact on pupil learning outcomes. Additionally, varying levels of commitment among teachers can pose challenges to the success of PLCs. For PLCs to succeed, the must be a shared vision and collective commitment among teachers. When some teachers are less engaged or resistant to collaboration, it can undermine the collective efficacy of the group and limit the potential for meaningful change. In the current study, the Key informants and some head teachers admitted that many teachers had a poor attitude towards the whole PC process. This could have affected the results, particularly the scores attained in the PLC performance contract target.

4.12 Enhancement of Performance Contracting Target Achievement

The study sought to establish from the head teachers and the teacher's opinions on how PC target achievement could be enhanced to improve on learning outcomes. The results are presented in Tables 4.52.

Table 4.52: Headteachers' Opinions on Enhancement of Performance Contracting Target Achievement (N=82)

Teacher Performance Contracting target achievement can be enhanced by:	Level of agreement				
	Strongly disagree.	**Disagree.**	**Not sure**	**Agree**	**Strongly agree**
1. Timely feedback	-	**1** (1.2%)	**2** (2.4%)	**30** (36.6%)	**49** (59.8%)
2. Training Workshops	-	**10** (12.2%)	-	**31** (37.8%)	**41** (50%)
3. Involving the support staff	**26** (31.7%)	**31** (37.8%)	**5** (6.1%)	**11** (13.4%)	**9** (11%)
Regular teacher professional growth	**3** (3.7%)	**40** (48.8%)	**2** (2.4%)	**19** (23.2%)	**18** (22%)
Regular Teacher PC assessment	**6** (7.3%)	**1** (1.2%)	-	**29** (35.4%)	**46** (56.1%)

From table 4.52, it was observed that the head teachers agreed with most of the suggested strategies to enhance teacher PC target achievement with greater than 80% agreeing on strategies of timely feedback, training workshops and regular teacher PC assessment. However, more than two thirds of the Headteachers 63 (69.5%) disagreed with the suggestion of involving support staff. The Head teachers also felt that there was limited time for provision of meaningful feedback to allow for improvement. One Head teacher had this to say:

'Most of the strategies that are suggested are viable, however, the major problem would be the time factor, to discuss them, implement and even monitor their implementation. As we speak, most of our schools are understaffed and teachers are overwhelmed. It is very difficult to get time during the normal working time to sit with teachers to discuss and execute some of these strategies. At any given time, the teachers are in class due to heavy workloads' (Head teacher, 2023).

Table 4.53: Teachers opinions on Enhancement of Performance contracting target achievement (N=82)

Teacher Performance Contracting target achievement can be enhanced by:	Level of agreement				
	Strongly disagree.	Disagree.	Not sure	Agree	Strongly agree
1.Timely feedback	3 (3.7%)	9 (11%)	3 (3.7%)	18 (22%)	49 (59.8%)
2.Training Workshops	5 (6.1%)	12 (14.6%)	3 (3.7%)	20 (24.4%)	42 (51.2%)
3.Involving the support staff	44 (53.7%)	20 (24.4%)	6 (7.3%)	7 (8.5%)	5 (6.1%)
Regular teacher professional growth	-	11 (13.4%)	4 (4.9%)	34 (41.5%)	33 (40.2%)
Regular Teacher PC assessment	44 (53.7%)	18 (19.5%)	3 (3.7%)	10 (12.3%)	9 (11%)

From table 4.53, it was observed that the teachers agreed with most of the proposed strategies to enhance teacher PC target achievement with greater than 80% agreeing on strategies for timely feedback, training workshops and regular teacher PC assessment just like the head teachers. The teachers also disagreed involving support staff 64 (78.1%). However, unlike the head teachers, most teachers 62 (73.2%) disagreed on the strategy of regular teacher PC assessment. As one of the teachers put it:

'PC assessment takes a lot of time. It involves a lot of paperwork and filling. If we have regular PC assessment, where will we get the time to complete the syllabus, and revise for national examinations?' **(**Female teacher in one of the Selected schools, 2023)

The CSOs, the Sub-County Director of TSC and the County Director of TSC also confirmed that most teachers did not like PC assessment. The teachers had developed

a negative attitude towards the programme. The County Director of TSC had this to say:

'Teachers have looked at the whole PC process as a mere routine procedure. It is only recently that teachers started taking PC as serious when the Teachers Service Commission stated using the PC scores in promotion interviews. But even then, most teachers appearing for interviews could not recall what was being assessed on the TPAD tool' (Kakamega County TSC Director,2023)

4.12.1 Variation in teachers' performance contracting target achievement and pupils' learning outcomes

The study sought to establish from the head teachers and the teachers the cause of variation in teachers' performance contracting target achievement scores and pupils' learning outcomes. The results are presented in Table 4.56

Table 4.54: Headteachers opinions on cause of variation in teachers' performance contracting target achievement (N=82)

Cause of Variation in teacher target achievement in PC and pupil learning Outcomes	**Level of agreement**				
	Strongly disagree.	Disagree.	Not sure	Agree	Strongly agree
Poor supervision of the PC process	**27** (32.9%)	**51** (62.2%)	**1** (1.2%)	**2** (2,4%)	**1** (1.2%)
Poor understanding of the PC process by teachers	**32** (39%)	**49** (59%)	-	**1** (1.2%)	-
Limited ICT knowledge by teachers	**22** (26.8%)	**51** (62.2%)	**1** (1.2%)	**8** (9.8%)	-
Negative attitude towards the PC process	**2** (2.4%)	**3** (3.7%)		**47** (57.3%)	**30** (36.6%)
Failure by teachers to attach value to the PC benefits	-	**3** (3.7%)	-	**44** (53.7%)	**35** (42.7%)

From the results in Table 4.54, it was observed that the head teacher's opinion was that negative attitude towards the PC process and failure by teachers to attach value to the PC benefits were the major cause of variation in teachers' performance contracting target achievement. They felt that there was good supervision, good understanding of the PC process and adequate ICT knowledge required by the PC process.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary, conclusions and recommendations of the study.

5.1 Sociodemographic results

The study established that majority 98.8% of the public primary schools were day schools**.** Most (74.4%) of the head teachers were male. The age of the head teachers ranged from 36 years to 59 years. A majority (74.3%) of the head teachers had more than five years' experience as head teachers. A majority (98.8%) of the public schools sampled were mixed primary with more than 98.8% having done KCPE examinations for a period more 10 years. The number of male teaching staff in the schools ranged from 6 to 16. The number of female teaching staff in the schools ranged from 5 to 13. The total number of TSC teaching staff per school ranged from 14 to 27. Most (54) 65.9% of the schools were understaffed. The age of the teachers ranged from 28 years to 56 years. The teachers experience ranged from 4 years to 32 years. The age of the Key informants ranged from 41years to 54 years. The Key informants had over 6 years' experience.

5.2 Teachers Achievement of PC and Pupils learning outcomes

5.2.1 Teachers' achievement Professional Knowledge and practice target.

The study found that in the achievement in professional knowledge and practice target, the highest score in the means was 75.90 in the year 2020, while the lowest score in the

means was 72.84 in the year 2021.The annual mean scores in the professional knowledge and practice target were significantly different (F=8.716, p-value <0.001). Only 39% of the scores were in the category of good. There was no statistically significant association between between headteacher age category and achievement in professional knowledge and practice target scores. The association between headteacher years of service and professional knowledge and practice target score was not statistically significant (P>0.05). The association between total number of teachers and achievement in the professional knowledge and practice target scores was not statistically significant (P>0.05). There was no statistically significant association between staffing levels of teachers and achievement in the professional knowledge and practice target scores (P>0.05). There was a very weak positive insignificant correlation between professional knowledge/practice target achievement and KCPE performance. There was a weak and non-significant association between Professional knowledge and practice target achievement and pupil retention rates. There was also a weak association between teachers' Professional knowledge and practice target achievement and pupil completion rates. Key informants' data revealed that the questions used in appraisal were inadequate and, in some cases, irrelevant and that many teachers had a poor attitude towards the PC process. The major constraints to achieving high scores in this target were time, heavy workloads and financial constraints

5.2.2 Teachers' achievement of the Comprehensive Learning Environment target

In the Comprehensive Learning Environment target, the lowest annual score was in the year 2018 (65%) while the year 2020 had the highest score (89%). Further analysis was carried out to establish if the means of the Comprehensive Learning Environment target

achievement scores were significantly different using ANOVA. The means of scores achieved by teachers in Comprehensive Learning Environment target were significantly different (F=10.426, p-value <0.001). More than half (53.7%) of the comprehensive learning environment target scores achieved by teachers were in the category of poor. The association between Headteacher age category and achievement in the comprehensive learning environment target scores is not statistically significant (P>0.05). The association between Headteacher years of service and achievement in the comprehensive learning environment target scores is not statistically significant (P>0.05). There was no statistically significant association between total number of teachers in school and achievement in the PC comprehensive learning environment target scores. There was no statistically significant association between understaffing and achievement in the PC comprehensive learning environment target scores. There was a weak positive correlation between teachers' comprehensive learning target achievement and KCPE performance (r = 0.295); this relationship is not statistically significant (P>0.05).There is a moderate positive relationship between teachers' comprehensive learning target achievement and pupil retention rates (r=0.630); however, this relationship was not statistically significant (P>0.05).There was a weak positive association between teachers achieving their comprehensive learning targets and pupil completion rates (r=.326); The association is not statistically significant (P>0.05). Key informants' opinion was that it was difficult to attain an optimum comprehensive learning environment in schools; it was also difficult to evaluate some aspects of the comprehensive learning environment. The major constraints to achieving high scores in this target were time, heavy workloads and financial constraints

5.2.3 Teachers' achievement of the professional development PC target

In the professional development PC target, the lowest annual score was 72.61 in the year 2020 while the highest score was 75.66 in the year 2019. The means of PC Professional development target scores achieved by teachers were significantly different (F=5.057, p-value <0.001. Only 29.3% of the Teachers' PC professional development scores were in the category of good. The association between the head teacher age category and Professional development PC target scores is not statistically significant. The association between headteachers years of service and achievement of Professional development PC target scores was not statistically significant. The association between total number of teachers and achievement of Professional development PC target scores is not statistically significant (P>0.05). The correlation between teachers' achievement in professional development performance contracts achievement scores and pupils' KCPE examination performance was negligeable. There was also a negligible negative correlation between teachers' achievement in professional development performance contracts and pupil retention rates. There was a moderate positive correlation (r = 0.609) between professional development pupil completion rates; However, this association was not significant (P>0.05). The Key informants revealed that there was limited feedback on the training needs for teachers' professional development and that training workshops and seminars were expensive and in certain times, leading to failure by head teachers to send teachers to attend the seminars or workshops. The time available for teachers to attend professional trainings was limited and most of the time the teachers were given pamphlets to go and read.

5.2.4 Teachers' achievement of the teacher conduct and professionalism PC target

In the teacher conduct and professionalism PC target, the lowest annual score of achievement was 65% while the highest was 87%. The means of scores in the teacher conduct and professionalism PC target (2018-2023) were not significantly different (F=0.641, p-value = 0.668). The association Headteacher age category and Teacher conduct and professionalism target scores was not statistically significant. There was no statistically significant association between Head Teachers years of service and teacher conduct and professionalism target score achievement (P>0.05). There was no statistically significant association between total number of teachers and Teacher conduct and professionalism target score achievement(P>0.05). There was no statistical association between understaffing and teacher conduct and professionalism target score achievement (P>0.05). There was a strong positive correlation between Teacher Conduct and Professional Development and KCPE performance. Regression analysis showed that there was a statistically significant association between Teacher Conduct and Professional Development target achievement scores and KCPE performance (OR= 2.429; C.I,0.876-6.733, p-value = 0.048). There was a weak positive correlation between Teacher conduct and professionalism target scores and the learning outcome of pupil retention rates; the correlation is not statistically significant (P>0.05). There was a moderate positive correlation between with Pearson correlation coefficient between Teacher Conduct and Professional Development with Completion Rates is 0.536; however, the corelation was not statistically significant (P>0.05).

The Key informants were of the opinion that teachers were more sensitive to the teacher conduct and professional development target indicators than any other targets on the PC tool. The teachers were keen on the code of conduct and ethics for teachers to

defend themselves in case of discipline cases. The major constraints to achieving high scores in this target were time, heavy workloads and financial constraints.

5.2.5 Teachers' achievement of the professional learning community PC target

The results showed that teacher's achievement in the professional learning community PC target scores had 65% as the lowest score and 87% as the highest score. The professional learning community PC target scores achieved by teachers were not significantly different (F=1.447, p-value = 0.206). Only 18.3% were in the category of good. The association between headteacher age and learning community PC target scores achievement was not statistically significant. The association between Head teachers' years of service and learning community PC target scores achievement was not statistically significant. There was no statistically significant association between total number of teachers and learning community PC target scores achievement. The association between understaffing and achievement in the Professional learning community PC target was not statistically significant. There was a very weak positive correlation (.097) between teachers' professional learning community PC targets achievement and KCPE performance; this association was not statistically significant. There was a very weak positive correlation (0.080) between Teachers' participation in professional Learning community PC target achievement and pupil retention rates the association was also not statistically significant (p=0.880). There was a weak positive correlation (0.241) between professional Learning community PC target and the learning outcome of pupil completion rates. This result was however not statistically significant (p= 0.646). Key informants said that Professional Learning Community program suffered two major setbacks including limited resources (time and finance) as well as poor teachers' attitude towards Professional Learning Community programs.

5.3 Conclusions

The study made the following conclusions;

5.3.1 Effect of Teachers' achievement Professional Knowledge and practice on Pupils learning outcomes

Teachers' achievement Professional Knowledge and practice target had no effect on learning outcomes of pupils in public primary schools in Kakamega County.

5.3.2 Effect of Teachers' achievement in the Comprehensive on Pupils Learning Environment on learning outcomes

Teachers' achievement in the Comprehensive Learning Environment target had no effect on learning outcomes of pupils in public primary schools in Kakamega County.

5.3.3 Effect of Teachers' achievement in professional development on Pupils Learning Environment on learning outcomes

Teachers' achievement in the professional development PC target had no effect on learning outcomes of pupils in public primary schools in Kakamega County.

5.3.4 Teachers' achievement in the teacher conduct and professionalism on Pupils Learning Environment on learning outcomes

Teachers' achievement in the teacher conduct and professionalism PC target had a positive effect on KCPE performance but not on pupil completion and retention rates in public primary schools in Kakamega County.

5.3.5 Effect of Teachers' achievement in the professional learning community on Pupils Learning Environment on learning outcomes

Teachers' achievement in the professional learning community PC target had no effect on learning outcomes of pupils in public primary schools in Kakamega County.

5.4 Recommendations

i. The TPAD tool should include aspects of Pedagogy to improve on teachers Professional Knowledge and practice target.
ii. The government should provide adequate resources for effective implementation of the Comprehensive Learning Environment in Public primary schools
iii. The Government should provide adequate finance to support training, workshops and seminars to improve professional development for the teachers in public primary schools
iv. The Teachers Service Commission and the government should increase financial support to support more teachers to attend workshops and provide more training in professional development and hire more teachers to reduce the heavy teaching workloads respectively.
v. The policy on PC should improve teacher sensitizations, resource allocations and reduction of teaching workloads to improve in the the Professional Learning Community

5.5 Suggestions for further research

i. There is need for further research to explore the effect of teacher achievement in PC targets on other learning outcomes such as communication skills, creativity, problem-solving and critical thinking skills.

ii. A lager study in three more counties to carried out to establish the effect of PC target achievement on pupil learning outcomes.

iii. A similar study could be carried out in secondary schools and tertiary institutions establish the effect of PC target achievement on learning outcomes.

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APPENDICES

APPENDIX I

QUESTIONNAIRE FOR HEAD TEACHERS

My name is Caroleen Saya, a postgraduate student at Masinde Muliro University of Science and Technology in the department of Education planning and Management. The aim of this study is to establish the effect of PC on learning outcomes. The findings of this study will be helpful in improving PC target achievement for quality education. I kindly request for your participation in this study. Your information will be kept with utmost confidentiality and used for research purposes only.

Respondents Consent: I have been explained to the above and have understood and I am willing to participate in this study.

I consent (…….) Do not consent (……) Date: _____

SECTION A: Demographic Data
Please indicate by use of an ('X') appropriately in the space provided.

1. Indicate the type of school 1. Day [ ] 2. Boarding [ ]
2. Indicate your sex 1. Male [ ] 2. Female [ ]
3. Indicate your age in completed years [ ]
4. How long have you been serving as a Headteacher? ----------
5. Indicate category of your school 1. Mixed [ ] 2. Boys [ ] 3. girls [ ]
6. Indicate for how long the school has done the KCPE examination.

   1. Less than 5 Years 2. [ ] 5-9 years[ ] 3. 10-14years [ ] 4. Above 15 years

7. Indicate the number of Male TSC teaching staff [ ]
8. Indicate the number of Female TSC teaching staff [ ]
9. Indicate the total number of TSC teaching staff [ ]

10. Indicate the understaffing level as per the CBE)1. Below 3 [ ] 2.4-6 [ ] 3. 7-10[ ] 4.11-14 [ ] 5, Above 15[ ]

SECTION B: PC Scores

Kindly state the annual percentage scores for the school in the following PC Targets over the stated years.

Target	**School Percentage Score**						
	2018	2019	2020	2021	2022	2023	Average Score
11. Professional Knowledge and Practice							
12. Comprehensive Learning Environment							
13. Teacher Professional Development							
14. Teacher Conduct & Professionalism							
15. Participation in Professional Learning Community							
16. a Pupils mean score in KCPE							
a. Learner Retention rates							
b. Learner Completion							

Enhancement of performance contracting

In the following statements, rate your agreement with each statement on how you think each of the following can enhance teacher target achievement in Performance Contracting by ticking in the space provided appropriately as:

Teacher Performance Contracting target achievement can be enhanced by:	Level of agreement				
	Strongly disagree.	Disagree.	Not sure	Agree	Strongly agree
17. Timely feedback					
18. Training Workshops					
19. Involving the support staff					
20. Regular teacher professional growth					
21. Regular Teacher PC assessment					

Variation in teachers' performance contracting target achievement and pupils' learning outcomes

In the following rate on what you feel is are the causes of variation in teacher target achievement in PC and pupil performance in the KCPE examination by ticking in the space provided appropriately.

Statement on Causes of variation in teacher target achievement in PC and pupil learning outcomes	Level of agreement				
	Strongly disagree	disagree.	Not sure	Agree	Strongly agree.
22. Poor supervision of the PC process					
23. Poor understanding of the PC process by teachers					

24. Limited ICT knowledge by teachers					
25. Negative attitude towards the PC process					
26. Failure by teachers to attach value to the PC benefits					

Factors Influencing teachers' achievement of performance contracting Target scores

Rate your agreement with each statement on what you feel affects teachers in the achievement of maximum scores in the PC targets by ticking in the space provided appropriately

	Level of agreement				
Statement	Strongly disagree.	Disagree.	Not sure	Agree	Strongly agree.
27. I have access to adequate resources (financial, material, human) to effectively carry out tasks related to performance contracting					
28. The teaching staff I work with are cooperative and supportive in implementing performance contracting initiatives					
29. I have sufficient access to ICT facilities (computers, internet, software) to support performance contracting activities.					
30. The tasks involved in performance contracting require an excessive amount of time and effort."					
31. I have a clear understanding of the performance contracting process and its requirements					

32. Which of the following challenges do you encounter from PC in your endeavour to:
    a) Achieve 100% performance contracting targets?
        1. PC involves a lot of work
        2. I do not understand the PC concept fully

3. Low motivation towards PC
4. Lack of adequate resources
5. PC process lack meaning

b) Achieve a mean above 450 marks in KCPE examination?
   1. PC involves a lot of work
   2. I do not understand the PC concept fully
   3. Low motivation towards PC
   4. Lack of adequate resources
   5. PC process lack meaning

33. What would be the solutions to:

a) 32 (a)?

……

……

……

b) 32 (b)?

Thank you for your co-operation.

APPENDIX II

QUESTIONNAIRE FOR TEACHERS

My name is Caroleen Saya, a postgraduate student at Masinde Muliro University of Science and Technology in the department of Education planning and Management. I am undertaking a study on Teacher Performance Contracting (PC) target achievement. The aim of this study is to establish the effect of PC on learning outcomes. The findings of this study will be helpful in improving PC target achievement for quality education. I kindly request for your participation in this study. Your participation will involve you allowing me to access your personal information like the school type, age, experience, and scores of target achievement in PC

Respondents Consent: I have been explained to the above and have understood and I am willing to participate in this study.

Signature: …… Date: _____

Demographic Data

Please indicate by use of an ('X') appropriately in the space provided.

1. Indicate the type of school 1. Day [ ] 2. Boarding [ ]
2. Indicate your gender 1. Male [ ] 2. Female [ ]
3. Indicate your age in completed in years [ ]
4. How long have you been serving as a teacher in years? ----------
5. Indicate category of your school 1. Mixed [ ] 2. Boys [ ] 3. girls [ ]
6. Indicate for how long the school has done the KCPE examination.

   1.[ ] Less than 5 Years 2. [ ] 5-9 years[ ] 3. 10-14years [ ] 4. Above 15 years

   Enhancement of performance contracting

In the following statements, rate your agreement with each statement on how you think each of the following can enhance teacher target achievement in Performance Contracting by ticking in the space provided appropriately as:

Teacher Performance Contracting target achievement can be enhanced by:	**Level of agreement**				
	Strongly disagree.	Disagree.	Not sure	Agree	Strongly agree

7. Timely feedback					
8. Training Workshops					
9. Involving the support staff					
10. Regular teacher professional growth					
11. Regular Teacher PC assessment					

Variation in teachers' achievement of performance contracting and pupils' learning Outcomes

In the following questions, rate on what you feel is/ are the causes of variation in teacher target achievement in PC and pupil learning outcomes by ticking in the space provided appropriately.

Statement on **Variation in teacher target achievement in PC and pupil learning Outcomes is due to:**	**Level of agreement**				
	Strongly disagree	disagree.	Not sure	Agree	Strongly agree.
12. Poor supervision of the PC process					
13. Poor understanding of the PC process by teachers					
14. Limited ICT knowledge by teachers					
15. Negative attitude towards the PC process					
16. Failure by teachers to attach value to the PC benefits					

Factors influencing teachers' achievement of performance contracting target scores

Rate your agreement with each of the following statements on how each could be affecting you in the achievement of maximum scores in the PC targets by ticking in the space provided appropriately

Statement	Level of agreement				
	Strongly disagree.	Disagree.	Not sure	Agree	Strongly agree.
17. I have access to adequate resources (financial, material, human) to effectively carry out tasks related to performance contracting					
18. The teaching staff I work with are cooperative and supportive in implementing performance contracting initiatives					
19. I have sufficient access to ICT facilities (computers, internet, software) to support performance contracting activities.					
20. The tasks involved in performance contracting require an excessive amount of time and effort."					
21. I have a clear understanding of the performance contracting process and its requirements					

22. What other challenges do you encounter in your endeavour to:

a) Achieve 100% performance contracting targets?
   1. PC involves a lot of work
   2. I do not understand the PC concept fully
   3. Low motivation towards PC
   4. Lack of adequate resources
   5. PC process lack meaning

b) Achieve a mean above 450 marks in KCPE examination?
   1. PC involves a lot of work
   2. I do not understand the PC concept fully
   3. Low motivation towards PC
   4. Lack of adequate resources
   5. PC process lack meaning

23. What would be the solutions to:

a) 23 (a)?

……
……
……
b) 23 (b)?
……
……
……

Thank you for your co-operation.

APPENDIX III

INTERVIEW SCHEDULE FOR (CURRICULUM SUPPORT OFFICERS (CSO) AND THE SUB-COUNTY TSC DIRECTOR

1) Which are the learning outcomes that the Ministry of Education seeks to achieve through the primary school learning experiences? Kindly explain further.
2) Which are the PC targets that the Teachers service Commission hopes to attain so as to improve the pupil learning outcomes?
3) After teachers receive feedback on teaching based on lesson observations, which are the programs to help them improve on areas of weakness noted? How is the feedback normally given?
4) What are the challenges of attaining a comprehensive learning in the public primary schools?
5) Which are the avenues available for professional development/teacher conduct plan for your sub county? Please give details if any.
6) Which are the networks supporting teacher professional development that teachers participate in? Please give details if any
7) What are the challenges of attaining the Proffesional Learning Community for the teachers in Public primary schools?
8) Please comment on the extend of teacher PC target achievement and its effect on pupil learning outcomes in the following target areas in your area of Jurisdiction.

    1. Professional Knowledge and Practice
    2. Comprehensive Learning Environment
    3. Teacher Professional Development
    4. Teacher Conduct & Professionalism
    5. Participation in Professional Learning Community

8.What suggestions would you give to enhance implementation of PC target achievement for better learning Outcomes?

Thank you for your co-operation.

APPENDIX IV

TEACHER PERFORMANCE APPRAISAL AND DEVELOPMENTTOOL (PRIMARY AND SECONDARY INSTITUTIONS)

Targets		**Termly Rating Scale (1-5) for each Target**								
		Appraisee Rating			**Appraiser Rating**			**Agreed Rating**		
1.0	**Professional Knowledge and Practice (wt. 3) (Max 24)**	T1	T2	T3	T1	T2	T3	T1	T2	T3
(i)	Demonstrate mastery of the subject content and use appropriate instructional methods (Wt-3)									
(ii)	Undertake lesson observation at least once a term (Wt-3)									
(iii)	Utilize teaching/ learning resources effectively(Wt-3)									
(iv)	Prepare professional documents based on the current syllabus/designs(wt-3)									
(v)	Ability to identify learners' capability and learning styles (Wt-3)									
(vi)	Ability to identify and nurture learners' talents (Wt-3)									
(vii)	Ability to access, retrieve and integrate ICT in teaching and learning(Wt-3)									
(viii)	Ability to carry out learner assessment, feedback and reporting on learners' learning (Wt-3)									
	Sub total									
2.0	**Comprehensive Learning Environment (wt. 3) (Max 12)**									
(i)	Ability to create child friendly school/class environment through planned activities to demonstrate respect, equity,									

	inclusion and moral values(Wt-3)									
(ii)	Ability to create child friendly school/class environment through planned activities to demonstrate respect, equity, inclusion and moral values(Wt-3)									
(iii)	Ability to ensure safety of learners (Wt-3)									
(iv)	Ability to manage learners conduct and behavior(Wt-3)									
	Sub total									

Targets		**Termly Rating Scale (1-5) for each Target**								
		Appraisee Rating			**Appraiser Rating**			**Agreed Rating**		
3.0	**Teacher Professional Development (Wt-3) (Max 9)**	T1	T2	T3	T1	T2	T3	T1	T2	T3
(i)	Prepare Self Professional Development Support Plan (Wt-3)									
(ii)	Identification of professional gaps(Wt-3)									
(iii)	Engage in continuous and relevant career growth and development activities(Wt-3)									
	Sub total									
4.0	**Teacher Conduct & Professionalism (Wt-6) (Max 30)**									
(i)	Ability to act in the best interest of the learner and maintain high standardsof ethics and professional requirements within and outside the institution (Wt-6)									
(ii)	Demonstrate knowledge on the legal requirements in education (Wt-6).									
(iii)	Comply with the professional requirements in teaching and learning (Wt-6).									
(iv)	Ability to observe punctuality in lesson attendance, performance of duty and									

	preparation of professional documents (Wt-6)									
(v)	Timely syllabus coverage and meeting of deadlines (Wt-6)									
	Sub total									
5.0	**Participation in Professional Learning Community** (W									
(i)	Join Professional Learning Community(PLC) (Wt-5)									
(ii)	Collaborate with colleagues and the broader professional learning community to support teaching and learning (Wt-5)									
(iii)	Collaborate with parents/guardians and other stakeholders (Wt-5)									

APPENDIX IV: Nacosti License